CITY OF HANOVER
PLANNING COMMISSION MEETING
DECEMBER 19, 2019
AGENDA

CHAIR	**BOARD MEMBERS**
STAN KOLASA	**JIM SCHENDEL**
	MICHAEL CHRISTENSON
COUNCIL LIAISON	**MICHELLE ARMSTRONG**
DOUG HAMMERSENG	**DEAN KUITUNEN**

1. **Call to Order and Pledge of Allegiance: 7:00 p.m.**

2. **Approval of Agenda**

3. **Approval of Minutes from November 25, 2019, Regular Meeting**

4. **Citizen's Forum**

5. **Public Hearing**

6. **Unfinished Business**
   a. **Interim Use Permit for the Expansion of the Mahler Aggregate Mine**

7. **New Business**
   a. **Planning Commission Meeting Dates and Deadlines**

8. **Reports and Announcements**
   a. **Planning Commission Reports**
   b. **Liaison Report**
   c. **Staff Reports: Sign 2019 Time Sheets**

9. **Adjournment**

CITY OF HANOVER
PLANNING COMMISSION MEETING
NOVEMBER 25, 2019
DRAFT MINUTES

Call to Order/Pledge of Allegiance
Stan Kolasa called the November 25, 2019, Planning Commission Meeting to order at 7:00 pm. Members present were Stan Kolasa, Jim Schendel, Michelle Armstrong, Dean Kuitunen, and Mike Christenson. Also present City Planner Cindy Nash, Council Member Doug Hammerseng and Administrative Assistant Amy Biren. Guest present: Chad Libby.

Approval of Agenda
MOTION by Schendel to approve the agenda, seconded by Armstrong.
Motion carried unanimously.

Approval of Minutes from the October 28, 2019, Regular Meeting
MOTION by Christenson to approve the October 28, 2019, minutes, seconded by Armstrong.
Motion carried unanimously.

Citizen's Forum
Chad Libby, 1315 Oakwood Lane: He is not opposed to the expansion of the Mahler Aggregate Mine, but is concerned with the status of 15th Street. He believes that it should be brought up to a 10-ton road. He expressed concern about the safety of kids and residents as they use that road to connect to the trails on either end of it. There is no shoulder and it is dangerous. He continued asking what is the plan for the infrastructure and that should be considered before the expansion of the mine. He thanked the Board for the work they are doing.

Public Hearing
Amendments to the Zoning Ordinance

Kolasa closed the Planning Commission meeting and opened the Public Hearing at 7:05 pm.

Nash reminded the Board that they had reviewed the majority of the changes at the last meeting and directed them to the memo proposing additional changes to the fence portion of the ordinance and the requirement for a land survey for some building projects.

Nash explained that the City requires a fence permit for any type of fence. A chain link fence is an administrative permit that is issued over the counter and any other fence six feet or higher is required to pull a building permit. The building permit fence is inspected by Metro West. She went on to say that fence permits do take up staff time to administer them and would the Board consider not requiring fence permits rather having a hand out similar to the one included in the packet that is from the City of Maple Grove.

Kuitunen said some people do not understand what their lot looks like, particularly if the lot is pie shaped, and can see issues arising without having a permit.

Christenson asked if it was possible to get signatures from owners of the neighboring lots in order to start a conversation and notify them that a project is planned. He said that sometimes people can be spiteful.

Hammerseng said that the Board has gone to the effort to fine-tune the fence ordinance and believes that it is worth the effort to have a permit. It also gives an opportunity to educate the resident and give the proper information.

Christenson mentioned that invisible fencing often crosses property lines and would like to see something added to the fence ordinance regarding this type of fencing. Nash said she would look for language regarding invisible fencing.

Kuitunen agreed with Hammerseng and does not want to have problems in the future.

Hammerseng asked if the $50 charged for the administrative fence permit would be enough to cover the cost of inspection by Metro West and asked that it be confirmed.

Turning to the survey requirement for building projects, Nash explained that building permits required the project be located on a survey. Some of the surveys in the address files are older and have conflicting information from what the property owner would have on the building project plans. Examples of this include a proposed location of the home in relationship to where it was actually built and the location of well and septics on larger lots. The new developments now require an as-built survey showing the exact location of the foundation of the home. Requiring a new survey may be costly for the homeowner.

Nash explained that under certain circumstances, a survey does not need to be a requirement and explained the examples listed in the memo which showcased a deck being added to a house where the lot was wider in the rear yard than the front yard or an accessory building permit in the rural residential or agricultural districts.

Christenson asked the cost of a survey and Nash replied that it varies and depends on what is needed.

Armstrong said these cases seem reasonable.

Hammerseng said that it makes sense and it would seem punitive for some cases.

Nash said that scenarios would be created for easy guidance.

Hammerseng returned to the fence ordinance and said he would like to see some language in the fence ordinance that indicates that the City approval of the permit does not indicate that the survey was verified or the location of the fence.

Libby gave the example of his neighbor coming over to let him know they were building a fence. He said that sometimes a fence permit could be two neighbors combining fencing to the benefit of both neighbors.

Armstrong would like to see the phrase regarding covenants used in the Maple Grove hand out also included in the Hanover hand out.

Kolasa closed the Public Hearing and re-opened the Planning Commission meeting at 7:40 pm.

MOTION by Armstrong to accept the changes presented including the survey requirement exception and retaining fence permits and to send it forth to Council for final approval, seconded by Christenson.
Motion carried unanimously.

Unfinished Business

None

New Business

None

Reports and Announcements

Schendel thanked Public Works for painting the curb in Downtown and putting up the signs. He asked about a light for the public parking lot.

Christenson asked if the River Town Villas were done hauling dirt from the site. Schendel said they still had a lot of dirt to haul.

Hammerseng said that 15th Street was discussed at the Council meeting the previous week and no decisions were made. Kolasa added the comment that 16th Street in St. Michael is the designated haul road. Christenson said that other types of trucks are also using 15th Street. Hammerseng said that City Engineer Justin Messner indicated that the foundation of 15th Street is solid.

Biren asked that the Board members review the time cards in front of them so that the information may be entered for payroll.

The December meeting is scheduled for December 23rd and did the Board want to schedule it a different day? The Mahler Aggregate Mine Expansion is slated to be on the agenda. Nash said that earlier dates in December gave her and Messner a shorter time period to review the information if it came in. She would prefer keeping it on the 23rd or having it on December 30th. Board members decided to keep it on the date scheduled but to change the start time to 4 pm in the afternoon.

Armstrong told the Board that she is not applying for the position again and that she has enjoyed being a member.

Kolasa wished everyone a Happy Thanksgiving.

Adjournment

MOTION by Schendel to adjourn, seconded by Kuitunen.

Motion carried unanimously.

Meeting adjourned at 8:01 pm.

ATTEST:

_____

Amy L. Biren
Administrative Assistant

Collaborative Planning, LLC

MEMORANDUM

TO:	Planning Commission
FROM:	Cindy Nash, AICP, City Planner
DATE:	December 12, 2019
SUBJECT:	**Mahler Aggregate Mine Expansion** for (1) Interim Use Permit
APPLICANT:	Fehn Companies
LOCATION:	Generally located east of River Road
COMP PLAN:	Multi-Family Residential
DEADLINE:	January 25, 2020 (has already been extended 60 days)

Description of Request

Fehn Companies has submitted an application for an Interim Use Permit to permit aggregate mining. The mining operations consists of approximately 155 acres and is located east of River Road.

Documents Reviewed

The following documents were reviewed in preparation of this staff memo:

Mahler Aggregate EAW (available on City website)
IUP Narrative
Site plans prepared by Civil Engineering Site Design dated 12/02/19
Dust Control Plan
Concept Lot Plan
Wetland Notice of Decision
Soil Borings
Water Table Data
Mahler Pit Berm Vegetation Seed Mix
Viewshed Analysis

Item 1: Interim Use Permit

Public Hearing: October 28, 2019 Planning Commission

Request

The Developer is requesting an Interim Use Permit to allow mineral extraction on property zoned R-1. Mineral Extraction may be permitted as an interim use in all zoning districts, and is regulated under Section 10.72 of the Zoning Ordinance.

Property owners within ¼ mile were notified of the public hearing as required by ordinance.

Analysis

The proposed plans were reviewed by the City Engineer and City Planner for compliance with the City ordinances. If the plans are revised to address the comments in the memos prepared by the Engineer and the Planner, the plans would be substantially compliant with City ordinances.

There are several items that should be discussed by the Planning Commission and/or City Council however, while the plans are being revised:

1. 15th Street – Fehn companies has proposed within their narrative that the City utilize funding that was previously received by or will be received in the future from Fehn Companies related to fees for the use of roads. The existing Interim Use Permit Agreement contains the following language:

   > J. Property Owner shall pay a Haul Fee of $.08 ($.03 collected through Wright County and $.05 paid directly to the City) per yard of material that is hauled by truck over City streets. Repairs to 15th Street NE shall be funded by said Haul Fee and shall be conducted by the City upon completion of the mining operation or earlier based on the recommendation of the City Engineer. Said Haul Fee shall be used for any and all necessary repair to streets caused by or resulting from the mining operation and for any other lawful purpose as determined by the City.

   The city currently has approximately $95,000 in this fund. At their November 19th meeting, the City Council had a preliminary discussion on 15th Street and safety improvements and directed the City Engineer to investigate various options for improvements and to bring back more information to them. Additional discussion is anticipated to occur at the January 7th City Council meeting regarding potential improvements to the road consisting of the pavement section, trail, and turn lanes.

2. Screening/Berming – Full review of the adequacy of the screening/berming will be completed when revised plans are submitted that contain the information on stockpile heights as well as a landscape plan. Based on the viewshed analysis, stockpile heights would be 30 feet high, so a maximum height has been added as a proposed condition. In addition, due to the difficulty of growing trees on the top of berms, the developer will be proposing that the berm and outside perimeter of the site consist of a prairie grass mix. This item can be preliminarily discussed now, but will require additional information before a full review can occur.

3. Concept and End Use Plan – This plan is meant to be purely conceptual, and is not necessarily how the site will redevelop in the future. However, by comparing this to the reclamation grades one can make some preliminary assumptions about how feasible redevelopment of the site will be. Since the October Planning Commission meeting, the Developer has coordinated with the City Engineer to adjust reclamation grades to better meet the intent of the City's ordinances.

Recommendation

The items contained in the comment memos from the City Engineer and City Planner can be addressed by the applicant. However, the plans as they are today are not recommended to be approved by the City Council without first addressing those comments.

The Planning Commission has the following options:
1. Recommend approval with conditions.
2. Table to a future meeting. This option is not recommended as the City Council must make a decision on the project in January to comply with Minnesota Statutes.
3. Recommend denial.

Staff is recommending the Planning Commission make a recommendation on this proposed application to the City Council so that the City Council may begin review at their January 7th meeting.

Conditions on an Interim Use Permit can mitigate for many of the impacts that a development may have on the community. A draft list of potential conditions for review and discussion are as follows:

I. GENERAL CONDITIONS

A. Legal Compliance:

1. Prior to the start of any activities and initial work at the Subject Property and prior to the start of each year's operations, Fehn Companies, Inc. and _____ hereinafter "Operator," "Permittee," or "Permit Holder" shall obtain any required Federal, State, County, City and other local permits for each operation and/or construction activity, including, but not limited to, from the Minnesota Pollution Control Agency ("MPCA"), Minnesota Department of Natural Resources ("DNR"), Minnesota Department of Health ("MDH"), City, and any other applicable government agency, as applicable to each operation and/or construction activity. Operator shall submit evidence of having obtained all required permits to the City for its review and approval, prior to any Mining Operations (as hereinafter defined).

   Further, prior to the start of each year's operations, the City shall review Mining Operations to determine continued compliance with specific IUP requirements. If the City reasonably determines that work on the Subject Property does not comply with specific IUP requirements, the City shall provide written notice to the Permit Holder specifying any asserted non-compliance and the Permit Holder shall have twenty-one days from the date of such notice to cure any asserted non-compliance. In the event the City reasonably determines that Permit Holder has not remedied the specified non-compliance upon expiration of such cure period, then the City may, at its option, refuse to allow continued Mining Operations under this IUP until the Permit Holder so complies and/or take any other action allowed by law. Upon the City's demand, the Permit Holder shall cease all work until there is compliance as reasonably determined by the City. All costs of the City associated with any permit review and submission of monitoring reports to the City shall be the sole responsibility of the Permit Holder.

2. Permit Holder shall comply with all applicable Federal, State, and City ordinances, statutes, rules, regulations and permits including, but not limited to, those of the U.S. Army Corps of Engineers ("Corps"), Environmental Protection Agency ("EPA"), MPCA, MDH, DNR, and other regulations and standards applicable to the mining operation ("Regulatory Authorities").

3. The IUP for aggregate mining and processing operations shall comply with the plans and mining narrative collectively referred to as the "Approved Plans" which are all incorporated herein by reference. The Operator shall have the right to request modifications, as appropriate, to the Approved Plans so long as such modifications continue to substantially comply with the Approved Plans. All modification requests must be made to the City in writing. City staff shall have the authority to determine whether changes requested by the Operator substantially comply with the Approved

Plans. If the Approved Plans vary from the written terms of this IUP, the terms that are the most conservative and restrictive shall control unless otherwise agreed to in writing by City staff. The Approved Plans are as follows:

{INSERT LIST OF APPROVED PLANS}

B. Permit Review:

1. This IUP shall be reviewed periodically, as provided by the City Zoning Ordinance and may be amended at any time as allowed by applicable laws, ordinances, and regulations in the event that the City Council, through the proper public hearing process as provided for in the Zoning Ordinance, reasonably determines that the actual operations of the mine on the Subject Property present a material adverse impact to health and/or human safety that relates specifically to the Mining Operations on the Subject Property and is not able to be addressed or mitigated through the Approved Plans identified above or the provisions of this IUP.

2. Prior to February 1 each year, Operator shall prepare an Annual Certificate of Permit Compliance for the mine on the Subject Property for submission to the City.

3. Any Operator proposed modifications to Approved Plans required in this IUP shall be included in the Annual Certificate of Permit Compliance and shall not take effect until such proposed modifications to the Approved Plans are approved in writing by the City

C. Incorporation of Environmental Assessment Worksheet & Environmental Impact Statement:

1. The Environmental Assessment Worksheet ("EAW") and comments related to the use of the Subject Property for Mining Operations and impacts on the Subject Property and surrounding areas received were reviewed by the City Council on September 17, 2019. The City Council considered the comments and staff response to comments and the proposed Findings of Fact and Conclusions and determined that the EAW was adequate and approved a negative declaration on the need for an Environmental Impact Statement. The EAW, comments, staff responses to comments, and Finding of Fact and Conclusions presented to and adopted by the Board on September 17, 2019 are hereby incorporated by reference to be used as an evidentiary document that outlines potential traffic and environmental issues.

The Operator will use these documents as a resource when working with the appropriate agencies in permit applications and in the event that any findings outlined in the documents become realized.

D. Costs:

All costs associated with permit review and testing and preparation for and submission of monitoring reports to the City and any other Regulatory Authority requesting monitoring reports shall be the sole responsibility of the Operator. All costs associated with remediation activities and development and operation of the site in compliance with the Approved Plans shall also be the sole responsibility of the Operator.

Operator shall reimburse the City for all administrative, legal, planning, engineering and other professional costs incurred in the creation, administration, execution and approval of this IUP prior to any Mining Activities commencing on the Subject Property. Further, Operator shall reimburse all reasonable engineering expenses incurred by the City in designing, approving, constructing, installing, and inspecting the road rights-of-way and other infrastructure improvements described in the Approved Plans.

All unpaid EAW or IUP escrows owed to the City, if any exist, shall be paid prior to any Mining Activities commencing on the Subject Property. The Operator shall maintain a $5,000 escrow to cover City staff time reviewing and responding to all monitoring reports and testing throughout the duration of this IUP.

Any invoice from the City shall be paid by the Operator within 30 days of invoice date.

E. General Conditions:

1. Operator shall identify in writing an officer within the company, together with his or her title and 24-hour contact information, for the City or for any Regulatory Authorities to contact regarding concerns regarding the operations of the mine, or this IUP. The assigned person shall respond to all non-emergency inquiries during normal business hours, within 48 hours of being notified of the inquiry. Inquiries deemed to be an emergency by the City shall be responded to immediately.

2. This IUP is issued specifically to Fehn Companies, Inc and _____.

3. Mining, for the purposes of this IUP, will be limited to dirt moving, berm construction, pond construction, overburden removal, drilling, stripping, filling, digging, dredging, crushing, screening, processing of mined aggregate as defined in MS § 298.75, subd.

(a) , processing and stockpiling of recycled concrete and asphalt, loading and on-site movement of materials, clearing, sodding, mobilization of equipment, and sale and removal of sand and aggregate material ("Mining Operations"). Any activity not included in the prior sentence shall require prior written approval of the City. Mining Operations does not include the initial starting of equipment to warm it up.

4. All signage on the Subject Property shall conform to the City Zoning Ordinance.

5. The Subject Property shall be maintained in a neat and orderly manner.

6. All mobile equipment, vehicles and miscellaneous storage associated with the Mining Operations on the Subject Property shall be screened from view of surrounding properties . Only equipment used in the Mining Operations shall be allowed to be stored on the Subject Property.

7. Stockpiled topsoil shall remain on the property in an amount sufficient to re-spread not less than six (6) inches across the entire property.

8. The Operator shall provide to the Wright County the appropriate quarterly reports and payments due for aggregate production tax "gravel tax" in accordance with MS §298.75. Any report and payment not received by Wright County, within fourteen days following the end of each quarter, shall be subject to penalties pursuant to MS § 298.75, subd. 5.

9. The Operator shall pay a Haul Fee of $.05 per cubic yard of material directly to the City. This fee shall be paid for all material exported from the site, and shall also be paid round-trip for material brought to the site for recycling and crushing. Repairs to 15th Street shall be funded by said Haul Fee and shall be conducted by the City following completion of the mining operation or earlier based on the recommendation of the City Engineer. Said Haul Fee shall be used for any and all necessary repair to streets caused by or resulting from the mining operation and for any other lawful purpose as solely determined by the City.

10. A hazardous waste license shall be obtained if required by Wright County. Best Management Practices shall be implemented limiting onsite maintenance of equipment.

11. Truck traffic shall comply with the haul route approved, which shall be 15th Street to CSAH 19. 15th Street shall meet a 10-ton standard as required by the Zoning Ordinance. Any improvements to 15th Street shall be constructed at the sole expense of the Operator. {Note: This would be in compliance with the ordinance but is not

consistent with the narrative provided by the applicant. The City Council will need to determine how to proceed with this item if the IUP is approved by the City Council.} Such construction shall occur prior to commencing Mining Operations unless otherwise agreed to in writing by the City.

12. Prior to accepting fill material onto the Subject Property, the Operator will identify the source of imported material and assess the potential for contamination. This assessment will include contacting the source site owner/operator to ascertain whether any known contamination exists and reviewing available environmental documents (Phase I ESA, etc.). If the history of imported soil is not so documented, sampling and laboratory analysis of the soil will be required to demonstrate compliance with the Soil Reference Value (SRV) limits prior to the material being unloaded at the Subject Property. [SRVs are numerical values representing the amount of chemical in soil that is safe for people who use the site. These values are determined by the MPCA using calculations provided by the US EPA]. The reclamation fill cannot contain chemical constituents of concern that exceed the limits specified for the MPCA's Tier I SRV. Documentation of investigation and test results of imported fill will be provided to the City within ten days of the Operator receiving the environmental review documents or test results.

13. Excavated soils and imported soils to be used for site reclamation will be required to be stockpiled outside of the 100-year floodplain and protected from erosion to preclude sediment impacts on the Crow River.

14. All solid or hazardous waste generated on the Subject Property shall be properly disposed of per the requirements of Regulating Authorities. No dumping of solid or hazardous waste materials will be allowed at the Subject Property.

15. Prior to commencement of Mining Operations, Operator shall install screening, approved by the City, which includes vegetation and berms as shown on the Approved Plans where necessary to screen the Mining Operations from public view. Installation of screening shall be as set forth in the Approved Plans so as to screen Mining Operations from public view to the extent reasonably possible. The screening shall remain in place at all times until Mining Operations cease.

16. At such time as adjacent properties are being developed for residential purposes (if this occurs), the perimeter berms shall be installed within one year of the date the City of Hanover executes a development agreement for an adjacent property. Stockpiles shall not exceed 30 feet in height and shall be maintained in such locations that they are not visible from public roadways or adjacent residential properties.

17. This IUP does not authorize the production of asphalt or concrete on the Subject Property.

18. Issuance of this IUP does not preclude the City from, in the future, adopting ordinances, rules and standards which are more stringent than those in place as of the issuance of this IUP and enforcing such ordinances, rules and standards.

19. If any provision(s) of this IUP is determined to be unenforceable by a court of competent jurisdiction, the remaining provisions shall remain valid and enforceable.

20. Issuance of this IUP does not release the Operator, its successors and assigns, from any applicable obligation, duty, liability, or penalty imposed by law, statute, ordinance, rule, or regulation, except the obligation to obtain this IUP.

21. The issuance of this IUP does not create, and the City does not assume, any liability for damages to persons, property or the environment caused by the activities of the Operator, its successors and assigns, on the Subject Property, including any activities or operations undertaken pursuant to this IUP.

II. MINE OPERATIONS

A. Setbacks:

Mining Setbacks: For the Subject Property, Mining Operations, including removal of overburden, shall be setback a minimum distance as described below, except for where the City has approved a lesser distance on the northern border of the subject property to blend the Mining Operations into the existing Mining Operations in the City of St. Michael**.**

1. Material processing including recycled concrete and asphalt shall not be conducted within 250 feet from a property line nor within 500 feet to any residential structure.

2. Mining Operations shall not be conducted closer than two hundred (200) feet to any residence or residential zoning district boundary existing on the approval date of the Interim Use Permit.

3. Mining Operations shall not be conducted within one hundred (100) feet of any property line, or within one hundred (100) feet of the right-of-way line of any existing or proposed street. Side slopes of the Mining Operations shall be in conformance with the Approved Plans.

B. Hours of Operation:

1. All Mining Operations on the Subject Property and entry and exit of trucks hauling materials shall be permitted on Monday through Friday from 7:00 A.M. to 7:00 P.M. {Note this is in compliance with the ordinance but is different than requested by the applicant in their narrative.}

2. Mitigation measures necessary to control fugitive dust and other nuisances may be conducted at any time, including weekends and holidays and in accordance with the Approved Plans.

C. Noise:

3. The Operator shall obtain a noise analysis by a third-party qualified noise consultant approved by the City at the request of the City after Mining Operations begin and when processing equipment is less than five hundred (500) feet from a noise receptor to ensure that State noise standards are met. The City may require additional noise analysis at Operator's expense, but not more than twice annually. The noise analysis will be submitted to the MPCA and the City.

4. Use of all production equipment in the Mining Operations at the Subject Property will be designed to meet the Federal and MPCA noise standards at the nearest receptor. The Operator will be notified in the event City staff receives a complaint regarding noise generated by Mining Operations. The Operator shall address all noise violations within 24 hours and report back to the City.

5. Operator shall exercise its best efforts to control noise to minimum practical levels. Backup horns, bells, strobe lights, and other warning devices shall be adjusted to the minimum level required by law. Further, Operator shall use broadband or white noise backup alarms on all of its mobile equipment.

D. Air Emissions Permit:

If required by the MPCA, a Total Facility Operating Permit for Mining Operations located on the Subject Property shall be secured before Mining Operations commence. Operator shall comply with all terms and conditions of such permit.

E. Inspections:

The Subject Property and Mining Operations shall be available for inspections by the City, within normal company working hours (7:00 A.M. to 7:00 P.M. Monday through Friday) upon eight-hour advance notice to the Operator. Any inspectors must identify themselves to an employee of the Operator before entering onto the Subject Property and must be escorted by an employee of the Operator at all times to ensure the safety of the inspectors. Inspectors shall receive hardhats, safety glasses and reflective vests from the Operator upon arrival. Inspectors will be required to provide all other safety equipment they may desire or that may be required in compliance with the applicable State and Federal laws and regulations.

III. SURFACE WATER QUALITY AND QUANTITY

A. Surface Water Quality:

1. Operator shall comply with all provisions of their National Pollutant Discharge Elimination System (NPDES) Permit (as amended, replaced or renewed by the MPCA) for the Subject Property and the Mining Operations thereon. A copy of the current construction storm water and/or industrial storm water/NPDES permit(s) shall be provided by Operator to the City to be kept on file for review by City officials or the public.

2. Storm water runoff from the Subject Property to surrounding properties shall not exceed predevelopment runoff rates based on 2, 10, and 100-year storm events. All areas used to convey storm water runoff shall be covered by permanent, dense vegetative cover or other permanent structural controls.

3. Operator shall implement, during all phases of the project, all applicable Best Storm Water Management Practices (BMPs), as may be necessary, to protect surface water quality. These BMPs include, but are not limited to, the following:

    a. All berms shall be seeded with vegetation as defined in the approved RMP & NPDES permit in a timely manner after completion of berm construction.

    b. Reclamation shall proceed in accordance with the Approved Plans in a continuous manner consistent with the phasing of Mining Operations on the Subject Property.

c. Stormwater ponds and infiltration areas shall be constructed within the mining area as identified in the RMP.

IV. WATER QUALITY AND QUANTITY

1. Dewatering of the mine is not allowed.

2. Mining Operations shall not be closer than ten feet to the water table except for construction of stormwater ponding as shown on the Approved Plans.

3. Operator shall provide a copy of the Annual Report required in the Industrial Stormwater permit to the City by February 1 of each year.

4. Petroleum or chemical storage tanks and equipment.

   a. No diesel or petrochemical powered dredging equipment shall be located in the flood plain to prevent contamination from diesel leaks, spills, and exhaust.

   b. No petroleum based or chemical products shall be stored in the 100-year flood plain including petroleum fuel tanks on mobile equipment.

   c. Fueling stations, vehicle maintenance stations, petroleum and chemical storage shall be located on an impervious or paved surface.

   d. Above ground petroleum tanks shall be equipped with secondary containment structures or double-walled tanks as approved by the MPCA. An impervious surface shall be provided for parking of any mobile refueling trucks or trailers. All spills must be reported to the City, Wright County and the MPCA.

   e. Below ground petroleum or chemical storage tanks shall be prohibited.

5. All waste oil products shall be properly recycled.

6. All minimum setbacks, as prescribed by the MPCA and the MDH shall be observed between water wells and petroleum or chemical storage tanks or other potential contaminant sources.

V. RECLAMATION

A. Reclamation Plan:

1. Reclamation shall be in substantial conformance with the Approved Plans.

2. When mining is complete or Mining Operations have ceased for 180 consecutive days in any phase, a registered civil engineer, retained at Operator's expense, shall certify to the City that the Subject Property has been restored in accordance with the Reclamation Plan included within the Approved Plans.

3. Operator shall be ultimately responsible for all means and methods utilized in the implementation of all mining, processing and reclamation plans. Reclamation fill within areas designated as building pads and roadways will be compacted in lifts to at least 95 percent of Standard Proctor maximum dry density.

4. At the conclusion or interruption of the Mining Operations for more than 180 consecutive days, all processing facilities and equipment shall be removed from the Subject Property. Security for reclamation, as increased over time to reflect inflation or decreased over time to reflect completed reclamation activities, shall remain in place until all processing facilities and equipment are removed.

B. Reclamation Standards:

1. Reclamation shall be conducted in the general sequence and manner as described in the Approved Plans

2. Reclamation shall be on-going with back filling of areas and establishment of vegetation proceeding as soon as practical after a mining area has been completed.

3. Operator shall report all reclamation activities in the Annual Certificate of Permit Compliance. Reclamation security will be reviewed annually and can be amended based on inflation or reclamation activities.

4. Operator shall, at its expense, engage a geotechnical engineer to design and periodically observe the reclamation backfilling and monitoring processes for future building sites. The geotechnical engineer shall provide reports on such activities to the Operator and City.

5. At the conclusion of the reclamation process the Operator's geotechnical engineer must perform a post reclamation evaluation and certify to the City that the reclaimed areas are suitable for the future end use, as defined in the Reclamation Plan included in the Approved Plans for the Subject Property. In the case of future building sites and roadways, the geotechnical engineer must provide certification to

the Operator and City that settlements shall not exceed 95 percent of Standard Proctor maximum dry density.

VI. FINANCIAL SECURITIES

The Operator shall provide security for site reclamation in an amount initially established as $_____. The City shall require this security as a Letter of Credit in a form and content reasonably acceptable to the City in its determination. The amount of the security shall be reviewed annually and can be amended based on inflation or reclamation activities as determined by the City.

VII. PERMIT EXPIRATION

A. IUP Expiration:

This IUP shall expire at the earliest event listed below:

1. This IUP is issued to a specific operator/owner. If the operator/owner changes from Fehn Companies, Inc. and _____, this IUP shall become void.

2. This IUP shall expire one (1) year from the date of issuance if the permit is not utilized.

3. This IUP shall expire upon the termination of Mining Operations and all reclamation conditions listed in Condition _____ have been completed to the satisfaction of the City.

4. This IUP shall expire if the NPDES Permit expires, or is revoked or terminated for cause by the MPCA.

5. This IUP shall expire if the IUP is revoked by the City for violations of the IUP's terms and conditions.

6. This IUP shall expire at the conclusion or interruption of the Mining Operations for more than one year and all reclamation conditions listed in Condition _____ have been completed to the satisfaction of the City.

7. This IUP shall expire twenty (20) years from the date of issuance.

Collaborative Planning, LLC

MEMORANDUM

To: Brian Hagen, City Administrator

From: Cindy Nash, City Planner

Date: December 12, 2019

Subj: Planning Review Comments – Mahler IUP
Plans dated December 2, 2019

I have reviewed the final plat and plans and narrative dated December 2, 2019 and have the following comments.

1. Engineering comments will be included within a separate memo.

2. The City Council will need to have discussions related to whether they are interested in participating in the improvement of 15th Street under terms such as those included in the narrative from the applicant.

3. The notes for the buffer should be on Sheet C2.0 should be amended to state that construction of the other perimeter buffers shall be constructed not later than within one year of the date the City enters into a development agreement for adjacent property to be developed.

4. Location and maximum height of stockpiles need to be shown on the plan, storage for concrete awaiting recycling/crushing, as well locations where equipment that has the potential for significant noise will be located (such as a crusher).

5. A landscape plan should be submitted.

6. An access easement on adjacent property will be required for the existing haul road out of the site. Please provide documentation that an easement exists.

cc: Justin Messner, WSB

Memorandum

To: ***Cindy Nash – Hanover City Planner***

From: ***Justin Messner, PE – Hanover City Engineer***

Cc: ***Brian Hagen – Hanover City Administrator***

Date: ***December 12, 2019***

Re: ***Mahler Mining Pit Expansion Plan Review***
WSB Project No. 014135-000

As requested, we have reviewed the Mahler Mining Pit Expansion documents as prepared by Civil Engineering Site Design Inc., dated December 2, 2019 and have comments below;

Narrative/Misc. Documents

1. As shown in the memorandum prepared by Haugo GeoTechnical Services, the material underneath the bituminous surface of 15th Street NE does not meet the requirements for MnDOT Class 5 material. As a result, the reduced Granular Equivalency (GE) provided by this material would impact the effective GE for the full depth reclamation (FDR) materials resulting in a lower than expected GE. Please see the attached memorandum titled "Pavement Design Recommendation Mahler Mine Expansion, 15th Street NE, Hanover".

2. Based on the above comment, provide a detailed engineer's estimate for the proposed street improvements costs for 15th Street NE.

3. Provide the earthwork calculations for expected aggregate material yield in order to justify the future deposit into the Street Improvement Fund.

4. The reclamation costs provided appear to include quantity for 4" of topsoil where a minimum 6" of topsoil is required.

5. The reclamation costs do not include mulch across the site, disking, or erosion control blanket on the steep slopes as called out in the Vegetation Ground Cover Schedule on the End Use Plans.

6. The quantity or unit cost of seeding should be increased to account for re-seeding areas that fail to germinate.

7. The reclamation costs do not include costs to construct the additional stormwater ponding under the transmission wires.

Stormwater Management

1. A NPDES Nonmetallic Mining/ Associated Activities General Permit will be required prior to the start of any mining activities per the EAW.

178 E 9TH STREET | SUITE 200 | SAINT PAUL, MN | 55101 | 651.286.8450 | WSBENG.COM

2. An operations and maintenance plan for the stormwater management system should be provided.

3. As noted in the EAW, the site will be required to meet the City's rate control requirements. The subwatershed discharging to the northwest must not exceed 0.1 cubic feet per second per acre of drainage for the 1-, 10-, and 100-year 24-hour MSE 3 storm events, and the 100-year 10-day snowmelt event. Although the existing discharge from this area may exceed this level, the improvements made to the site necessitate conformance to City rate control requirements.

4. The cells of the proposed infiltration basin noted as a stormwater pretreatment basin are shown to infiltrate in the HydroCAD model. Although this basin may provide infiltration potential based on the underlying soils, the nature of a pretreatment basin is to capture particulates. This area should not be shown to infiltrate in the HydroCAD model.

5. Add pipe information for FES-C to FES-B to the operations phase storm sewer plan sheet.

Proposed Operations Plans

1. Proposed grading contours are shown extending onto the adjacent property to the north. Provide approval from the adjacent property owner to the north for the proposed grading and coordinate proposed grading operations with the adjacent property owner as described in the note on sheet C2.0.

Memorandum

To: Nick Preisler

From: Thomas Wood

Date: December 10, 2019

Re: Pavement Design Recommendation Mahler Mine Expansion, 15th Street NE, Hanover MN

WSB Project No. 014135-000

The following existing pavement structure is based on information supplied by Haugo GeoTechnical Services. The existing pavement structure has an average of 5.6 inches of bituminous pavement over an average of 6.3 inches of silty sand with one boring showing clayey sand. Civil Engineering Site Design, LLC provided a proposed pavement section design recommending 4 inches for new bituminous pavement over 12 inches of full depth reclamation (FDR), which they believe would supply a Granular Equivalency (GE) of 21 exceeding the GE requirements (19.7) for this roadway.

We have the following concerns. The aggregate underneath the existing bituminous does not meet the requirements for MnDOT Class 5 material and is classified as silty sand with areas of clayey sand. If 12 inches of reclamation is performed, there is a chance of introducing underlying materials that could contaminate the reclaimed material thus reducing the structural value of the pavement. Having not being able to review the cores taken in order to identify the amount of aggregate in the existing bituminous mix and amount of crushing present. We are basing our assumption that this mix was made using either the MnDOT's 2331 or 2350 specification, which did not have strict requirements for crushing. Hence, if the material underlying the aggregate layer is being included in the 12 inches of FDR, there could be stability issues. This could reduce the effective GE for the FDR materials causing the pavement to possibly fail prematurely.

There are two pavement designs that we would recommend. The first design would be to perform a 10-inch FDR with an application of 2 inches of Class 6 material to increase the amount of crushed material in the FDR. The total section of the FDR would be 12 inches, and with 4 inches of bituminous this should yield a total GE of 21. Another alternative would be to conduct a 9-inch FDR and increase the bituminous thickness to 5 inches, which yields a GE of 20.25.

Feel free to contact me to discuss this memo or any other issues.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

09/26/2019

Fehn Companies
Gary Fehn
5050 Barthel Ind. Dr
PO Box 256
Albertville, MN 55301
763-497-2428

Project Narrative for Mahler Aggregate Mine Expansion

The project is an expansion of an existing mining operation initially approved by the City of Hanover under an Interim Use Permit (IUP) issued to Mahler Enterprises, LLC for a 37-acre parcel in 2006. The IUP was originally scheduled to expire on December 31, 2012. The Hanover City Council amended the IUP in 2011, 2018, and 2019 with time extensions. The current IUP will now expire December 31, 2019.

Fehn Companies (or associated entity) is in process of acquiring additional adjacent properties resulting in a combined total property area of 184.9 acres, and proposes to expand the existing gravel mine from 25 acres up to 155 acres. The properties and surrounding lands are known for aggregate resources and surface soils are typically sandy loams. The 130-acre mining expansion area is mostly cropland that has been under agricultural use for decades. The eastern boundary of the property abuts the Crow River. Land adjacent to the Crow River will remain unchanged and includes areas of floodplain, natural vegetation, and wetlands. No mining excavation or stockpiling of materials will occur in the floodplain or shoreland area.

Expansion of the existing aggregate mine will be phased over 15 to 20 years, depending on the demand for aggregate and market conditions. All phases of mining will ultimately cover up to 155 acres. Each of five phases will cover about 25 to 40 acres. The number of phases and mining pace will be determined by market demand for mining materials. Mining will generally be phased from the existing mine to the west and then to the south. Stormwater management basins will be constructed as part of first phase excavation and will be configured to remain in place through all phases and reclamation after mining is complete.

Mining is expected to eventually remove approximately 5.5 million cubic yards of aggregate material over the 15- to 20-year project lifespan. Mining will remove sand and gravel to depths between 20 feet and 26 feet. The bottom of the mine surface will be at least 10 feet above the groundwater level. Stormwater ponds, infiltration basins, and wash ponds may be located lower, but will be at least 3 feet above corresponding groundwater levels. A 345-kV overhead transmission line runs diagonally northwest-southeast through the site. Existing transmission line poles will remain in place with mining excavation sloped around poles to maintain support as allowed by Xcel Energy Company. Slopes at edges of mined areas will be as steep as 3:1, but these slopes will be flattened to 5:1 or flatter during reclamation.

Vehicles will access the mine from 15th Street NE, at the intersection of 15th Street and River Road NE/Lander Avenue NE. Traffic generated by the project include employee passenger

vehicles and trucks hauling earthen material. Haul routes will follow county and state roadways that are collectors and arterials as much as possible. The Traffic Study completed as part of the EAW process concluded that area intersections operate at acceptable Levels of Service under existing and proposed (year 2020) conditions. The project is expected to have minimal impact on the area roadway network.

Aggregate mining will be conducted using front-end loader extraction. Material processing may include screening, crushing, washing, and stockpiling. Crushing and screening equipment will be staged in proximity to the mining activity. Material stockpiles will also be created in proximity to the mining activity. Crushing/screening equipment and material stockpiles will move across the site with excavation operations. Material stockpiles will typically be 30-foot maximum height.

The washing operation will recycle with excavated ponds that will typically be filled with 3 to 4 feet of water pumped from an onsite well. The wash plant will include three ponds: an initial pond to catch fine native soil materials and two secondary ponds for water quality treatment and infiltration. Water from the third pond will be reused in wash operations.

Concrete recycling will occur intermittently, about twice per year during the construction season and is not expected to exceed 50,000 cubic yards of recycled material per year. Portable crushing machinery will be positioned at relatively low elevations in the gravel pit to maximize the vertical distance and buffer from neighboring land uses.

Measures to reduce noise and increase screening from neighbors will include 200-foot setbacks from residential zoned property lines, creation of 10-foot high topsoil berms that will deflect noise and provide a visual screening barrier, and placement of the portable crusher equipment at lower elevations. Topsoil stockpiles and berms will be seeded and stabilized to prevent erosion.

There are no permanent structures existing on the property and none are proposed. Temporary structures will be utilized at the site for storage of equipment and operations activities (ie. scale shack, etc.). All temporary structures will be removed at the time of reclamation. Employee vehicle parking will be located adjacent to the temporary structures.

Reclaimed mined areas will be planted to temporary grassland as part of reclamation. Best Management Practices (BMPs) will be implemented to protect water quality and reduce the potential for soil erosion and sedimentation.

Hours of mining operation are proposed as follows:

- Monday through Friday
  - 6:30 am to 7:00 am:
    - employee arrival
    - equipment warmup
    - staging of materials and prepare for loading
  - 7:00 am to 7:00 pm:
    - excavation and crushing production

loading of materials
trucking off-site

Saturday

6:30 am to 7:00 am:

employee arrival
equipment warmup
staging of materials and prepare for loading

7:00 am to 2:00 pm

limited operations to loading and trucking off-site (periodically needed due to construction weather delays during the week)
no crushing, screening, or washing operations

Existing 15th Street is in poor condition and needs improvement. The city of Hanover collects an aggregate tax at a rate that equates to $0.135 per cubic yard ($0.05/cy Fehn to City; $0.085/cy Fehn to Wright County to City) of material mined and hauled off-site. City of Hanover Fund #409 Mahler Pit – 15th Street Improvement Fund has a collected balance of $94,832.55. An additional $15,000 +/- is anticipated to be deposited for 2019 resulting in a fund balance of approximately $110,000.00.

It is estimated that mine expansion will yield 5.5 million cy resulting in future deposit of $742,500.00 (5.5M x $0.135) to 15th Street Improvement Fund. Total aggregate tax collected to end of mining operations would then be $852,500.00 ($110,000.00 + $742,500.00).

Improvement of 15th Street between River Road NE/Lander Avenue NE and Wright Co Hwy 19 is proposed as follows:

- Spring or early summer 2020; Fehn Companies undertake reclaim existing bituminous and pave with new 5" depth bituminous pavement (design and costs as approved by city engineer)
- Reclaim/repave estimate $200,000.00
- City contribute $100,000.00 from 15th Street Improvement Fund
- Fehn Companies contribute $100,000.00 +/- balance
- City refund aggregate tax collected on annual basis to Fehn Companies until $100,000.00 construction cost amount is repaid

At end of mining operations, a balance of $652,500.00 is estimated to be available in the 15th Street Improvement Fund for future reconstruction of the road.

Please contact us with any questions. We appreciate your consideration.

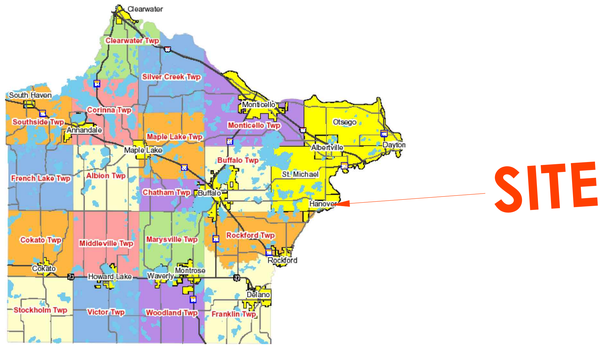
Gary Fehn

MAHLER AGGREGATE

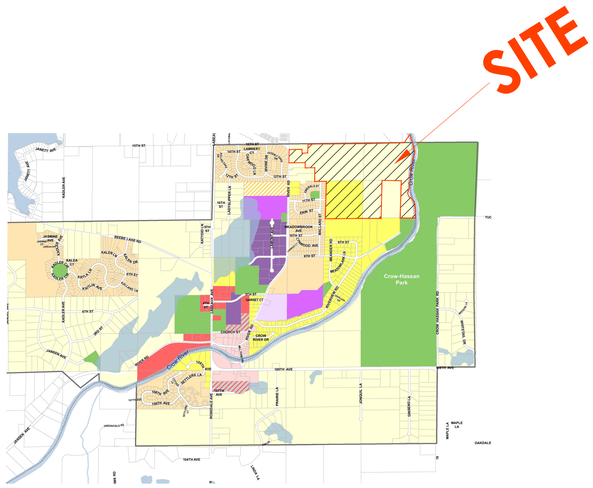
MINE EXPANSION

CITY OF HANOVER, MN

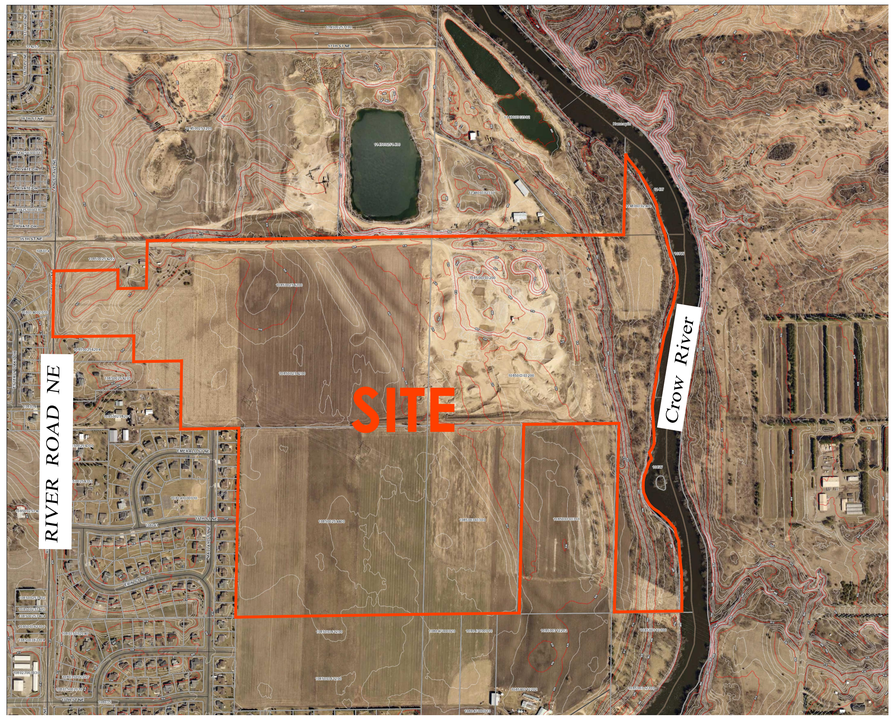
MINNESOTA



WRIGHT COUNTY



CITY OF HANOVER, MN



PROJECT LOCATION

INDEX OF CIVIL SITE DRAWINGS:

C0	PROJECT LOCATION PLAN
C1.0–C1.8	EXISTING CONDITIONS & CROSS SECTION
C2.0–C2.4	PROPOSED OPERATIONS
C3.0–C3.4	END USE PLAN
C4.1–C4.2	STORM WATER POLLUTION PREVENTION PLAN
C5.1–C5.2	STORM SEWER PLAN

FEHN COMPANIES

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Gary Fehn
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gfehn@fehncompanies.com

MAHLER AGGREGATE
MINE EXPANSION
SE Quad 15th Street and River Road
Hanover, MN 55341

PROJECT LOCATION PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
P.O. Box 1929
Monticello, Mn. 55362
Phone: 763-271-0929
www.civilsd.com

REVISIONS
11/22/19 END USE CONTOUR MODIFICATIONS
12/02/19 END USE CONTOUR MODIFICATIONS

DATE	09/25/19
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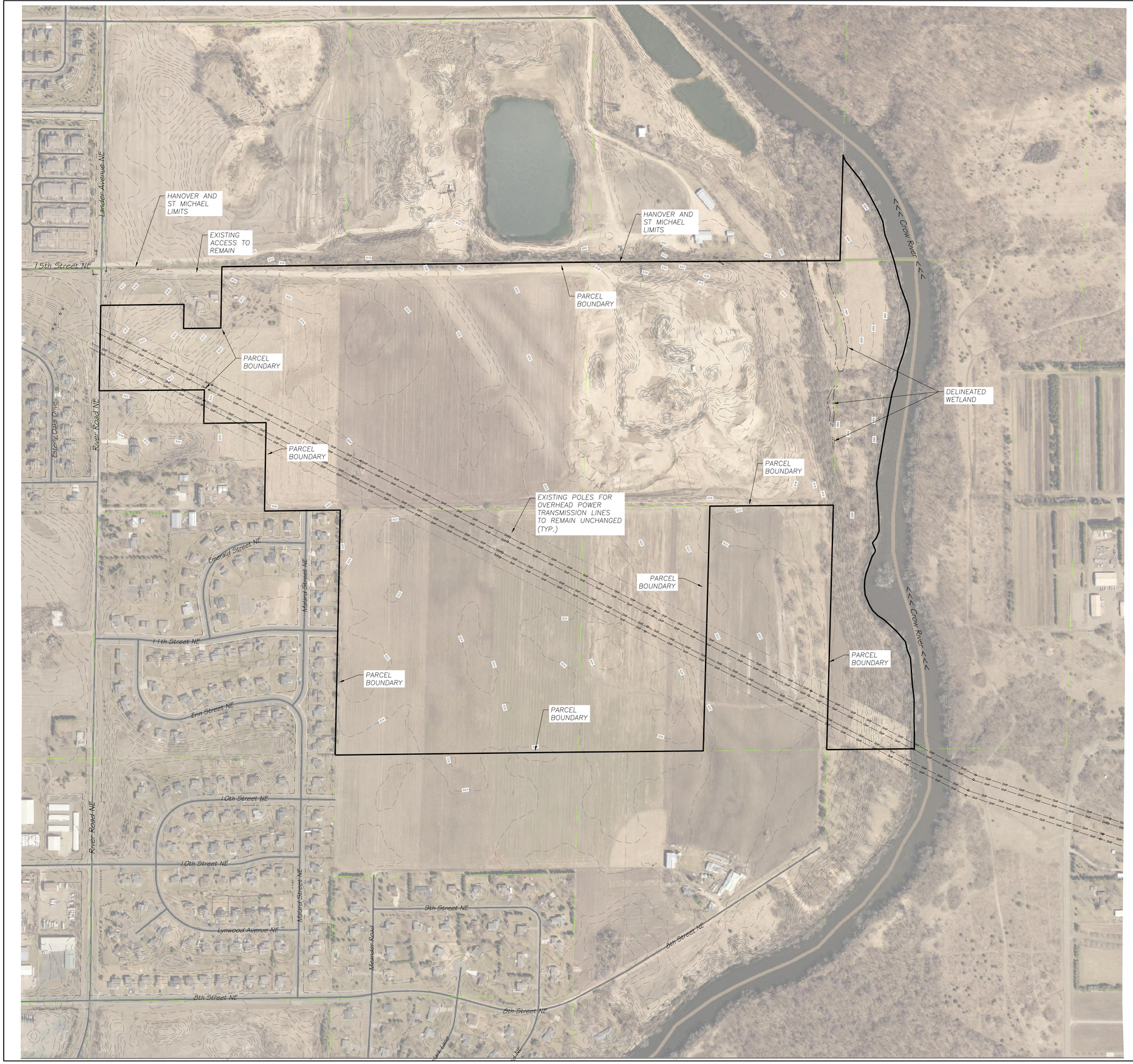
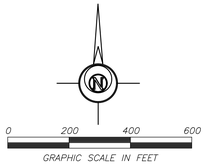
DESIGNED BY	SD
CHECKED BY	SD

FILE NO. 00722

C0

Project Location Plan





EXISTING P.I.D. #S

108-500-303-200	HANOVER
108-500-254-200	HANOVER
108-500-254-400	HANOVER
108-500-303-300	HANOVER
114-800-302-400	ST MICHAEL

APPROXIMATE GROSS AREA

184.9 ACRES

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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
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EXISTING CONDITIONS
OVERALL LAYOUT

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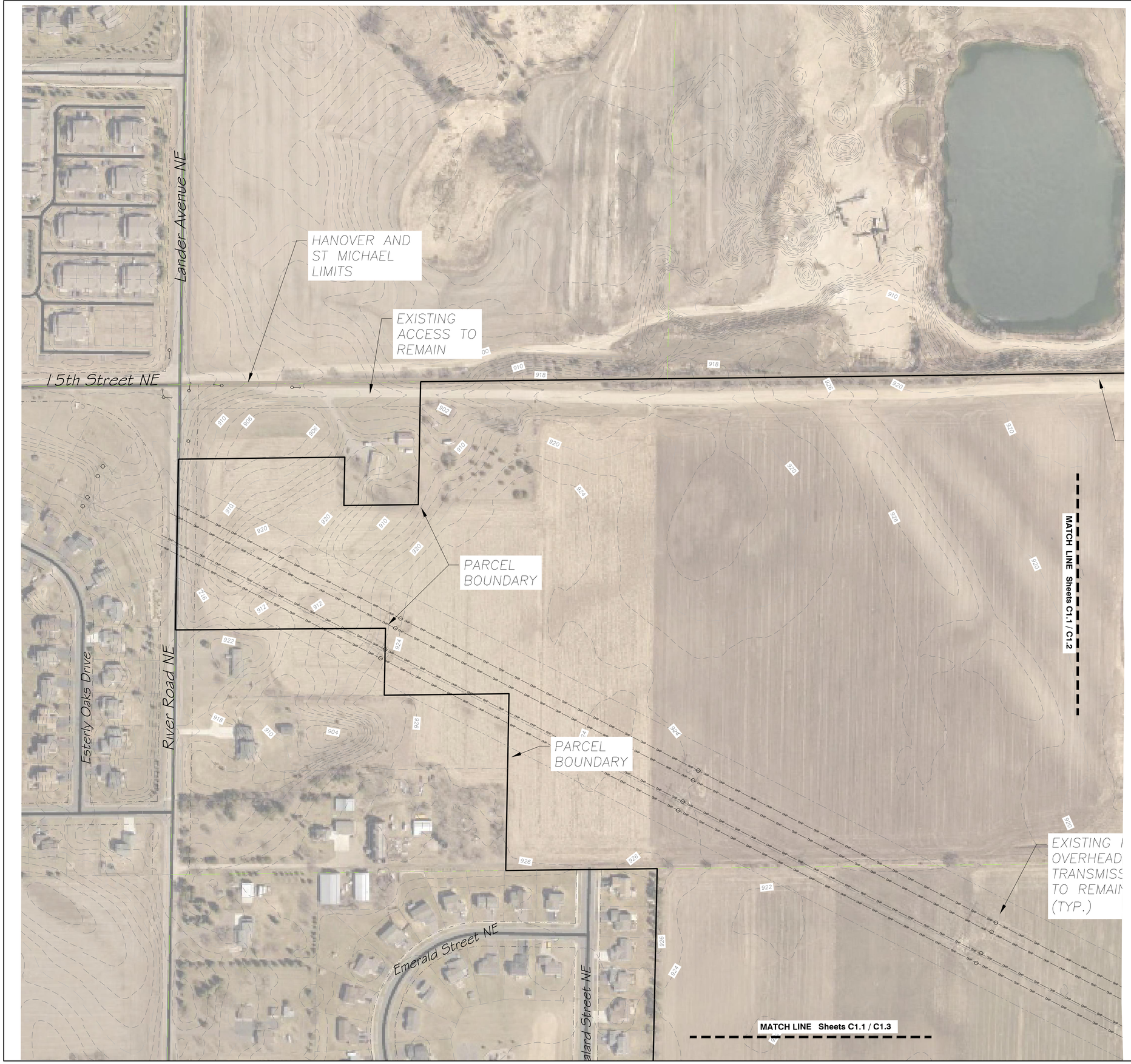
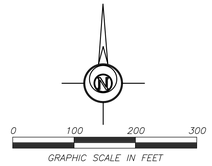
C1.0

Existing Conditions
Overall Layout





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APPROXIMATE GROSS AREA

184.9 ACRES

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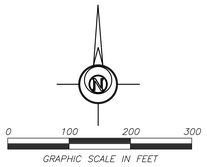
C1.1

Existing Conditions



EXISTING P.I.D. #S

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108-500-254-400	HANOVER
108-500-303-300	HANOVER
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APPROXIMATE GROSS AREA

184.9 ACRES

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FILE NO. 00722

C1.2

Existing Conditions

0 100 200 300
GRAPHIC SCALE IN FEET

EXISTING P.I.D. #S

108-500-303-200	HANOVER
108-500-254-200	HANOVER
108-500-254-400	HANOVER
108-500-303-300	HANOVER
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APPROXIMATE GROSS AREA

184.9 ACRES

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FILE NO. 00722

C1.3

Existing Conditions

0 100 200 300
GRAPHIC SCALE IN FEET

EXISTING P.I.D. #S

108-500-303-200	HANOVER
108-500-254-200	HANOVER
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108-500-303-300	HANOVER
114-800-302-400	ST MICHAEL

APPROXIMATE GROSS AREA

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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

EXISTING CONDITIONS

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Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN

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Phone 763-271-0929
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REVISIONS
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12/02/19 END USE CONTOUR MODIFICATIONS

DATE	09/25/19
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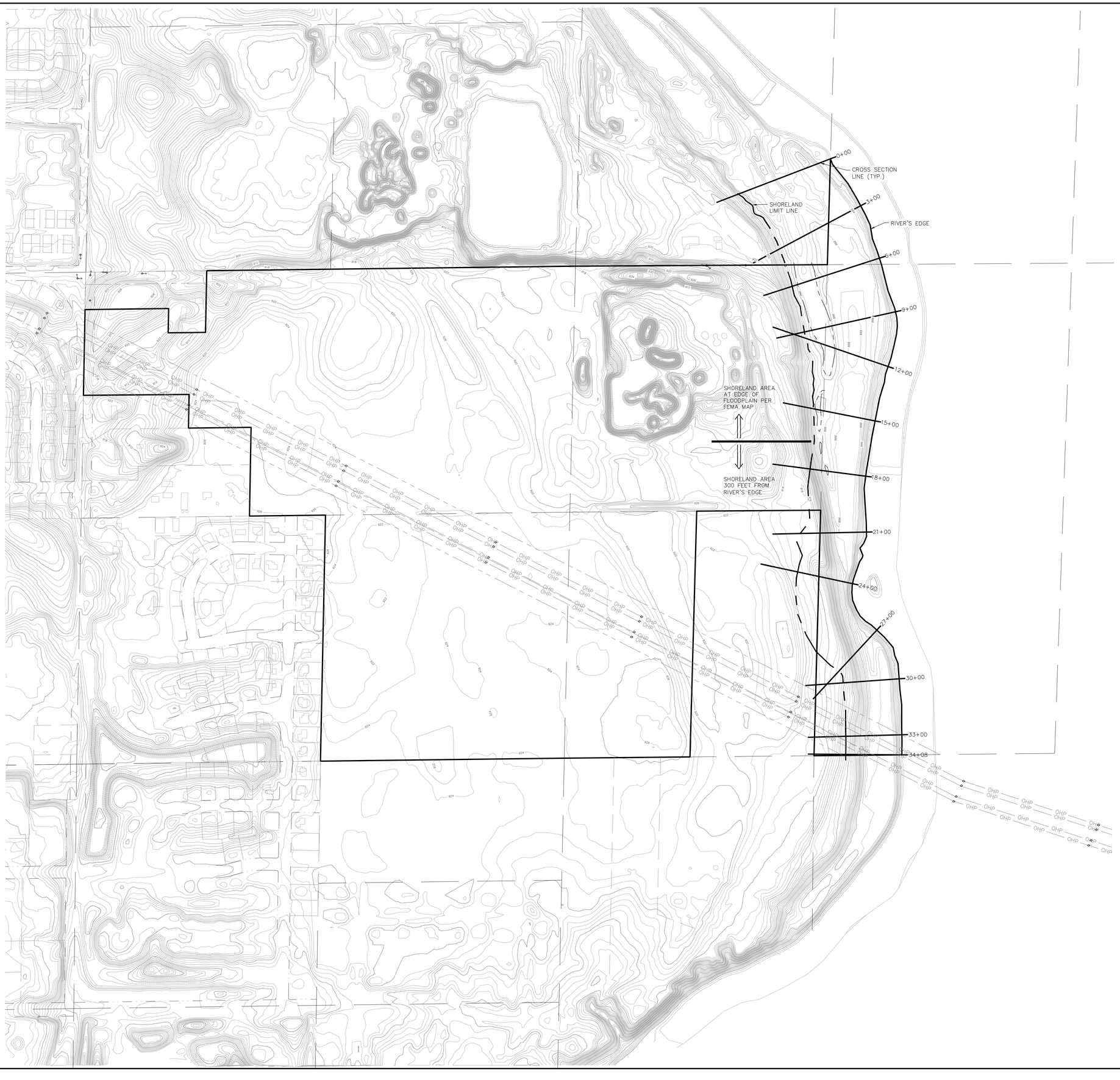
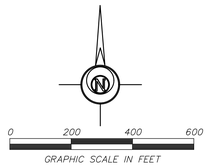
FILE NO. 00722

C1.4

Existing Conditions





SUMMARY OF EVALUATION CRITERIA

TO BE CONSIDERED A BLUFF, ALL OF THE FOLLOWING CRITERIA MUST BE MET:

ANY PART OF BLUFF MUST BE LOCATED WITHIN THE SHORELAND AREA.

TOE OF BLUFF: THE LOWER POINT OF OF A 50-FOOT SEGMENT WITH AN AVERAGE SLOPE EXCEEDING 18 PERCENT OR OHWL, WHICHEVER IS HIGHER.

THE SLOPE RISES AT LEAST 25 FEET ABOVE THE TOE OF THE SLOPE.

THE GRADE OF THE SLOPE ANYWHERE ABOVE THE TOE OF THE SLOPE TO A POINT 25 FEET OR MORE ABOVE THAT POINT AVERAGES 30 PERCENT OR GREATER; EXCEPT THAT AN AREA WITH AN AVERAGE SLOPE OF LESS THAN 18 PERCENT OVER A DISTANCE OF 50 FEET OR MORE IS NOT CONSIDERED PART OF THE BLUFF.

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FEHN COMPANIES

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Albertville, MN 55301

Gary Fehn
612-282-6542
gfehn@fehncompanies.com

MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

CROSS SECTIONS PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 12/2/19 Reg. No. 24348

PREPARED BY:

CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
P.O. Box 535
Monticello, Mn 55362
Phone: 763-314-0929
www.civilsitedesign.com

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FILE NO. 00722

C1.5

Cross Sections Plan

HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=10'

INDEX OF CIVIL SITE DRAWINGS:

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C3.0–C3.4	END USE PLAN
C4.1–C4.2	STORM WATER POLLUTION PREVENTION PLAN
C5.1–C5.2	STORM SEWER PLAN

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C1.6

Cross Sections

HORIZONTAL SCALE 1"=20'
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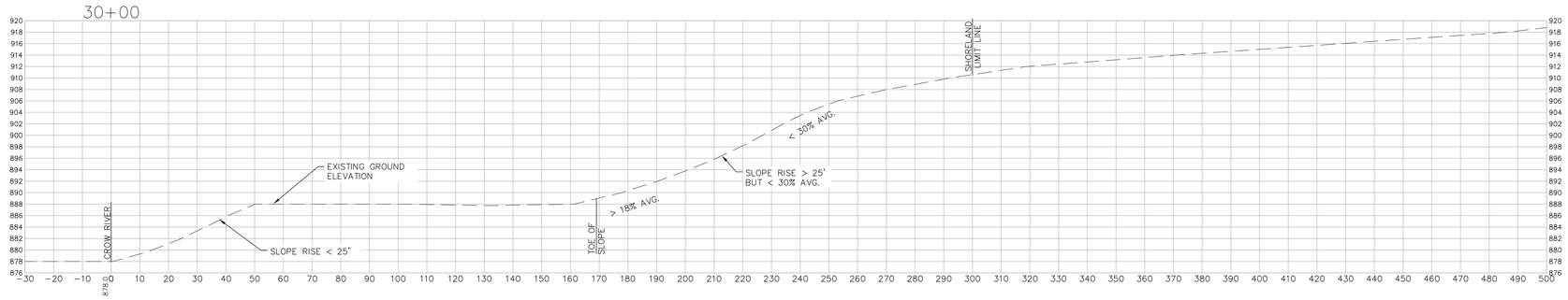

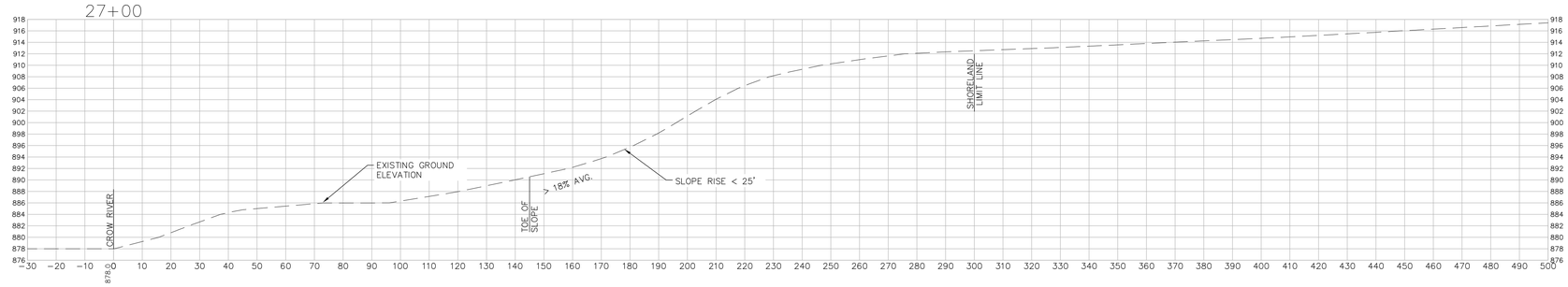

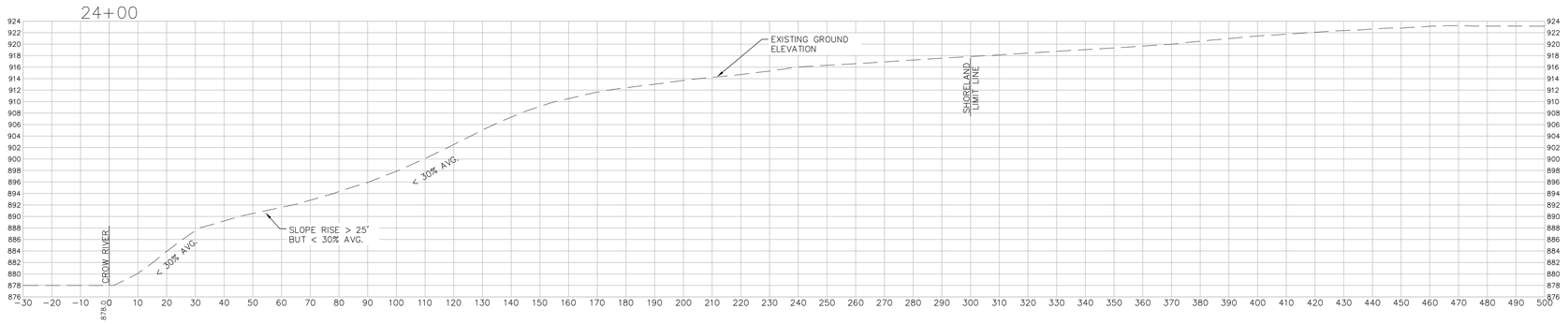

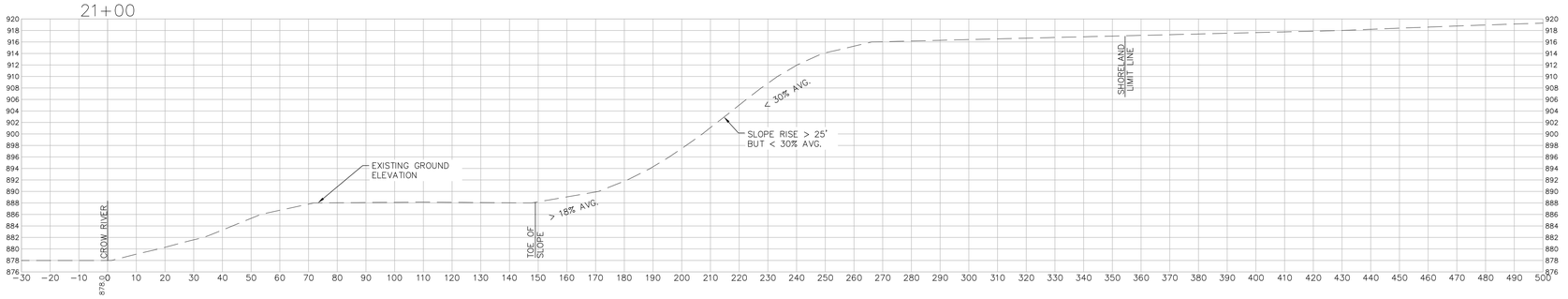

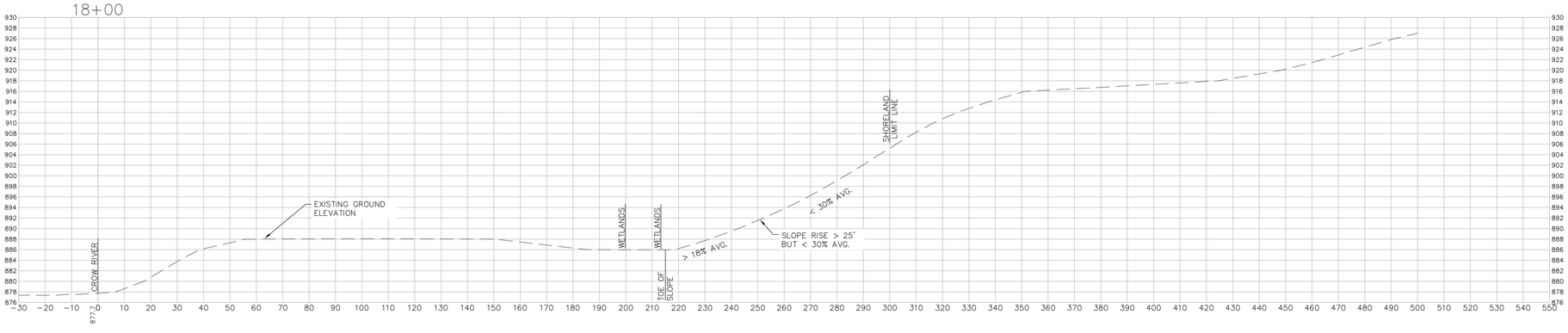

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C1.7

Cross Sections

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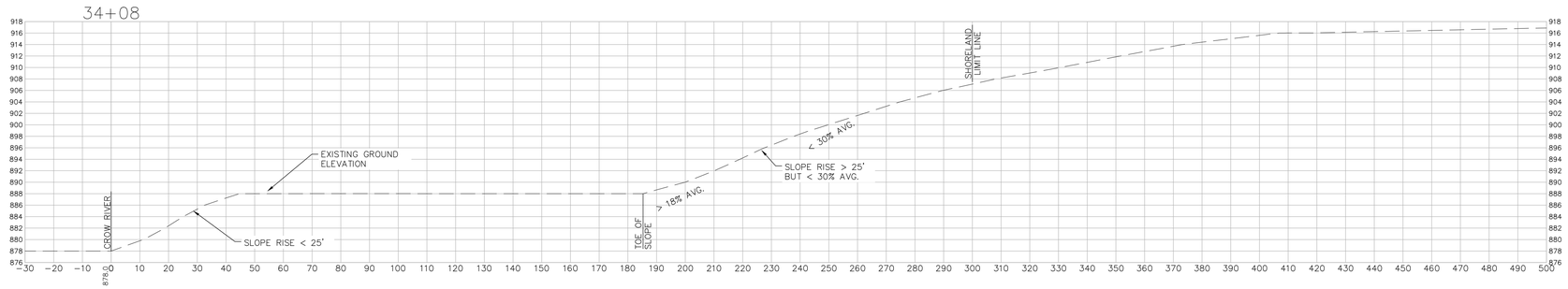

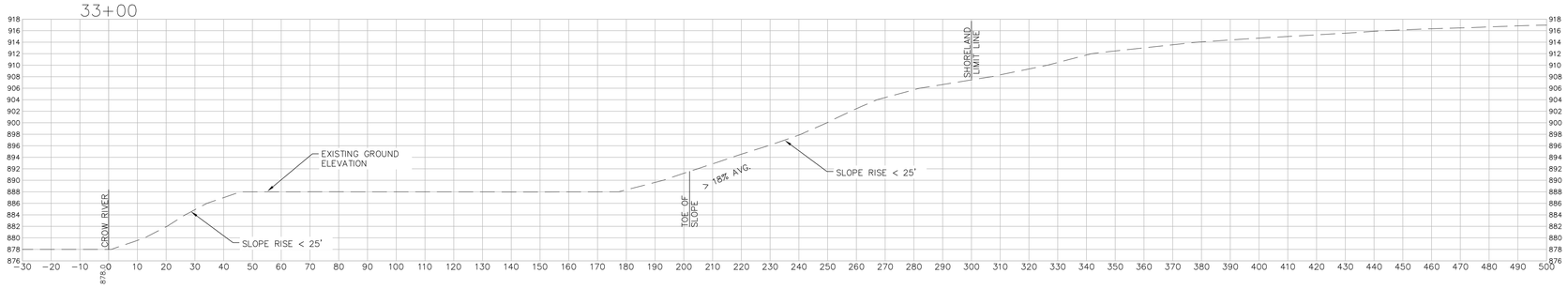

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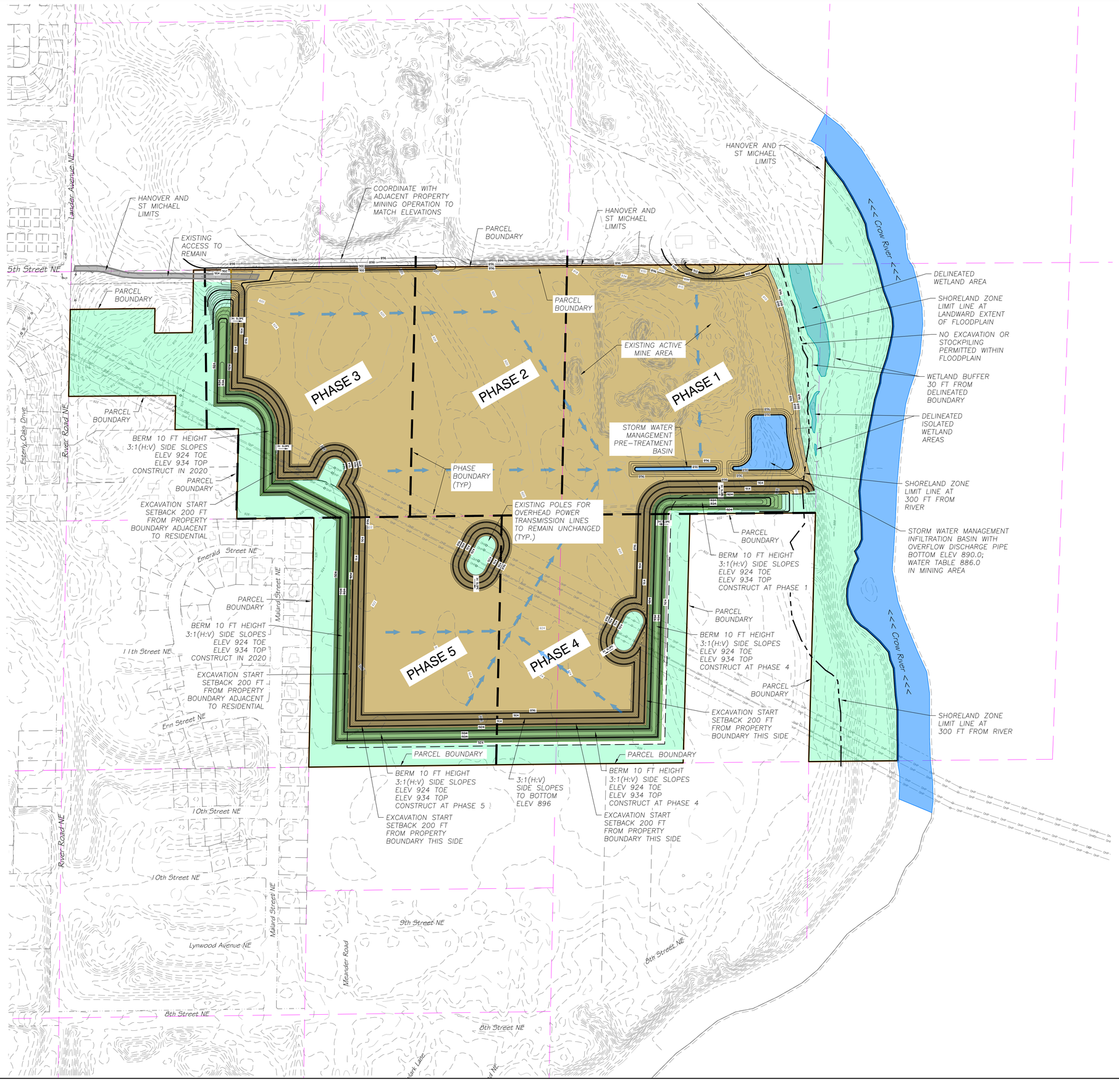
C1.8

Cross Sections



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GRAPHIC SCALE IN FEET

PAGE LAYOUT:

C2.1	C2.2
C2.3	C2.4

EXISTING P.I.D. #S

108-500-303-200	HANOVER
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APPROXIMATE GROSS AREA

184.9 ACRES

APPROXIMATE EXCAVATION AREA

133.9 ACRES

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PROPOSED OPERATIONS OVERALL LAYOUT

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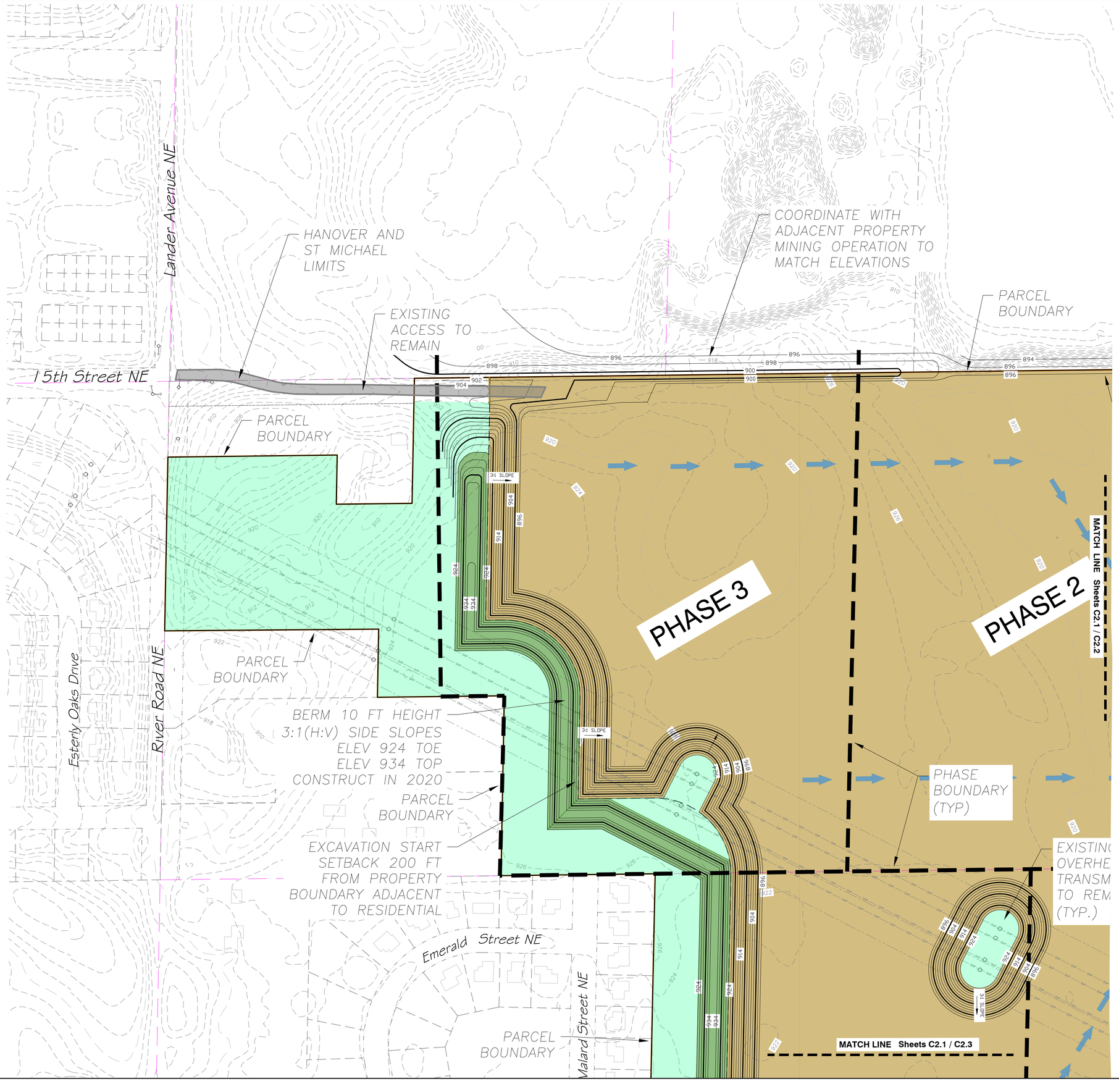
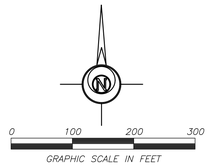
C2.0

Proposed Operations Overall Layout





PAGE LAYOUT:

C2.1	C2.2
C2.3	C2.4

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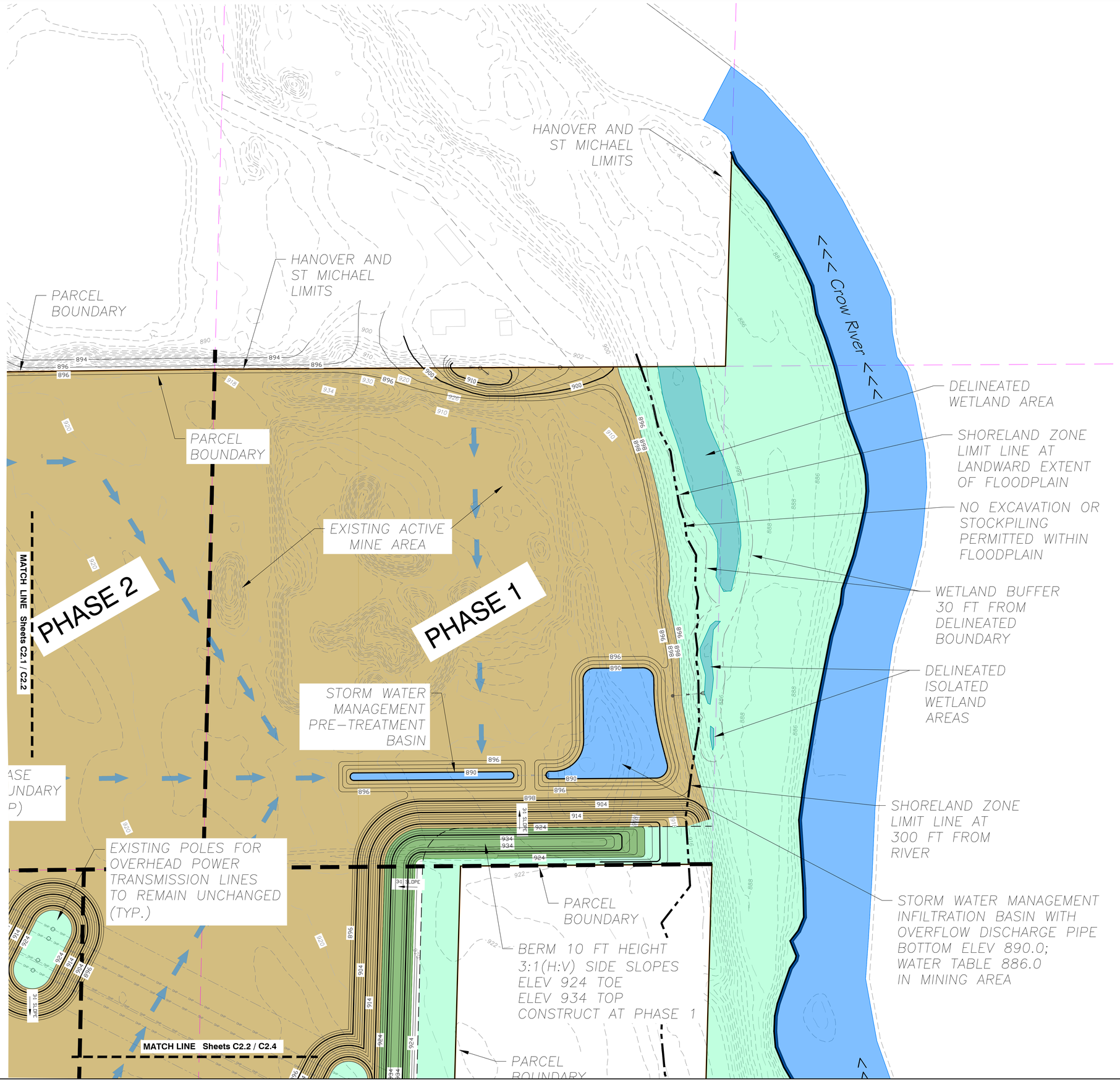
C2.1

Proposed Operations



PAGE LAYOUT:

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GRAPHIC SCALE IN FEET

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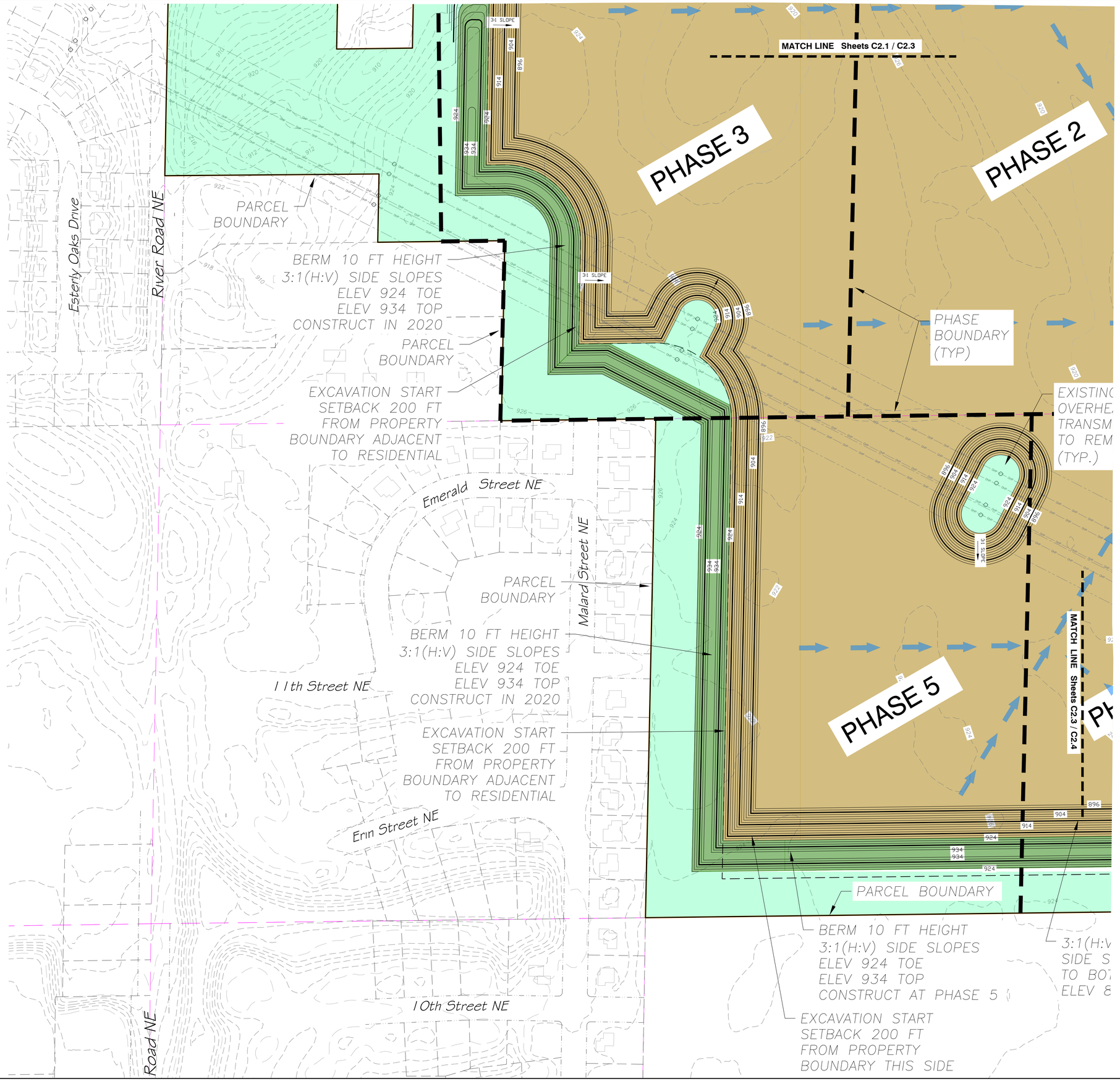
C2.2

Proposed Operations



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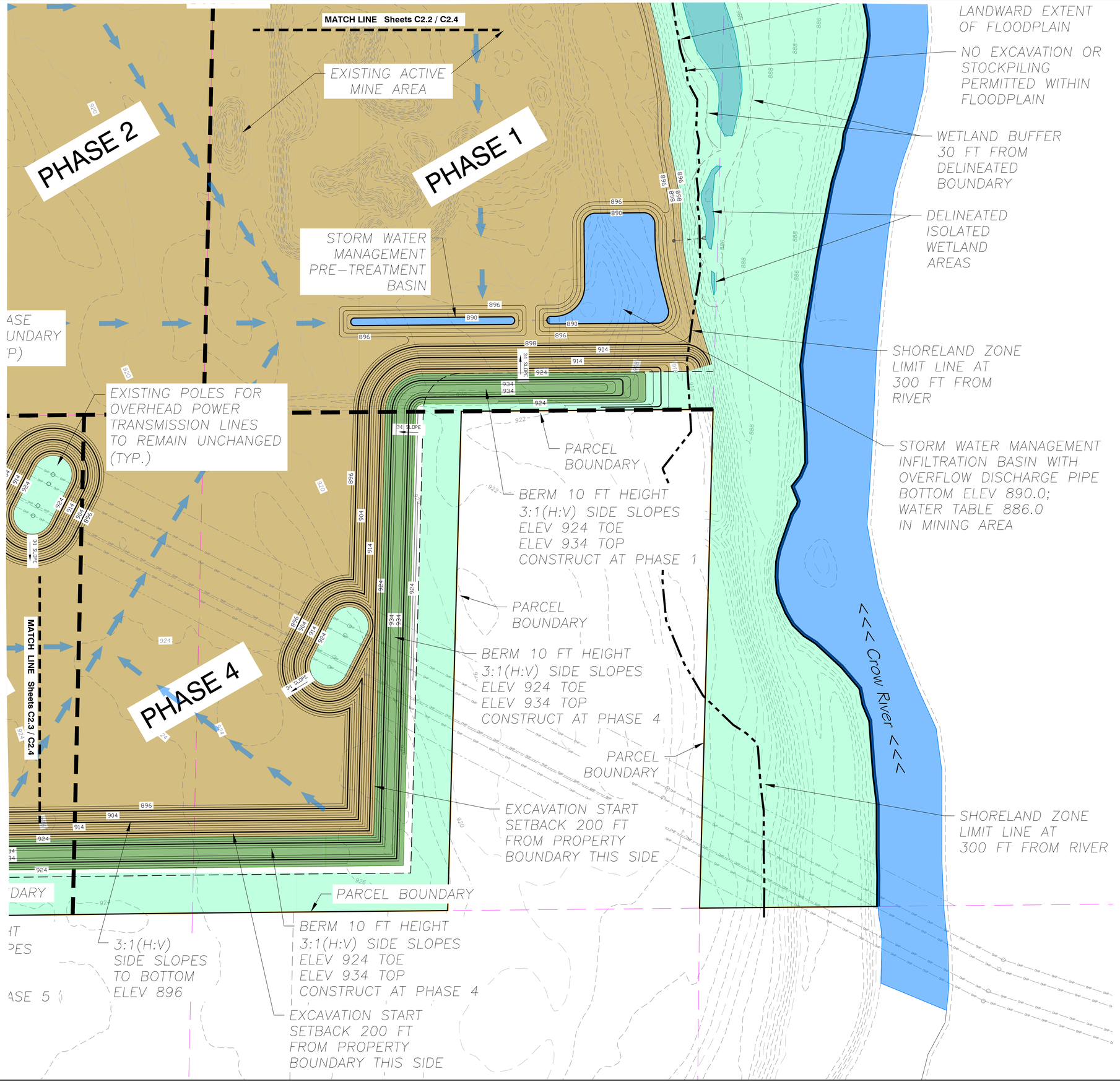
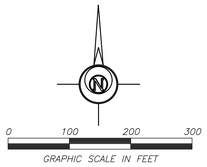
C2.3

Proposed Operations





PAGE LAYOUT:

C2.1	C2.2
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PHASE 3	31.2 AC	2025-2030
PHASE 4	29.9 AC	2031-2034
PHASE 5	29.9 AC	2035-2039

* PHASE 1 AREA INCLUDES EXISTING ACTIVE MINE OPERATIONS

SCREENING BERMS

10 FT HIGH BERMS TO BE CONSTRUCTED FOR SCREENING AND NOISE ABATEMENT. BERMS TO BE REPOSITIONED IN CONJUNCTION WITH EXCAVATION PHASE, EXCEPT BERM ADJACENT TO WEST BOUNDARY EXISTING RESIDENTIAL SHALL BE CONSTRUCTED IN 2020 AND REMAIN IN PLACE FOR DURATION OF MINE OPERATIONS.

VEGETATION COVER OF BERMS AND NON-FARM AREAS TO BE ESTABLISHED AT TIME OF BERM CONSTRUCTION WITH MNDOT 35-221 SEED MIX

EXCAVATION SETBACK

200 FEET TO A RESIDENCE OR RESIDENTIAL ZONING DISTRICT

100 FEET TO NON-RESIDENTIAL ZONING DISTRICTS OR AS APPROVED BY CITY

EXCAVATION ELEVATION DATA

MINE EXCAVATION BOTTOM ELEV 896.0

STORM WATER MANAGEMENT BASIN BOTTOM ELEV 890.0

WATER ELEVATION DATA

MINE AREA WATER TABLE ELEV 886.0

CROW RIVER TYPICAL WATER ELEV 876.0

CROW RIVER FEMA 100YR FLOOD ELEV 889.0

LEGEND:

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- EXISTING CONTOUR INDEX
- EXISTING CONTOUR INTERMEDIATE
- PROPOSED CONTOUR INDEX
- PROPOSED CONTOUR INTERMEDIATE
- PROPOSED DRAINAGE DIRECTION
- STORM WATER MANAGEMENT BASIN
- CROW RIVER
- EXISTING WETLAND AREA
- BERM 10 FT HIGH
- MINE EXCAVATION AREA
- NON-MINED AREA
- ACCESS DRIVE
- PHASE LIMIT

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C3.0-C3.4	END USE PLAN
C4.1-C4.2	STORM WATER POLLUTION PREVENTION PLAN
C5.1-C5.2	STORM SEWER PLAN

FEHN COMPANIES

Fehn Companies, Inc.
5050 Barthel Industrial Dr.
Albertville, MN 55301

Gary Fehn
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gfehn@fehncompanies.com

MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

PROPOSED OPERATIONS

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Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
P.O. Box 1929
Monticello, MN 55362
Phone: 763-271-1929
www.civilsd.com

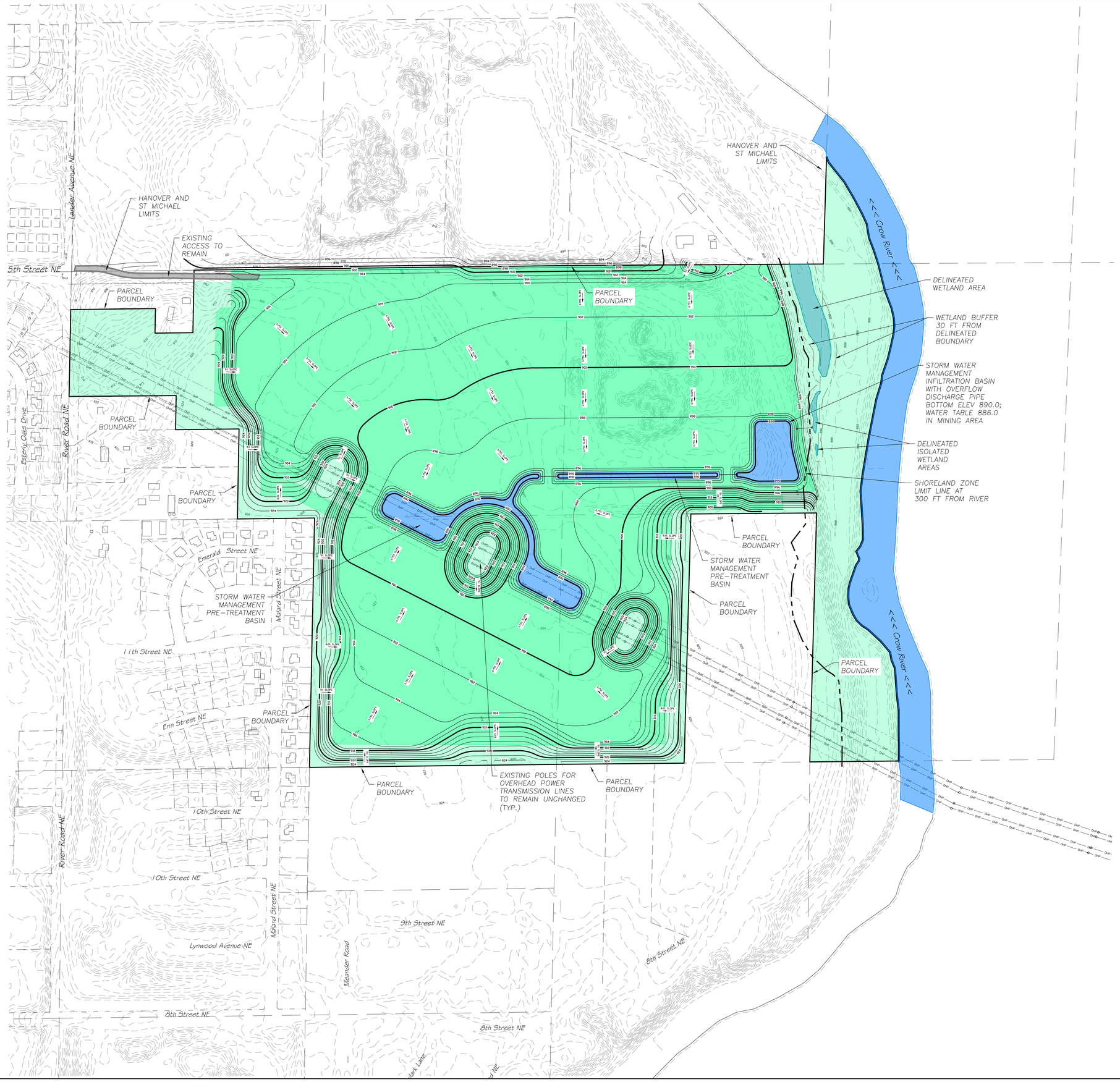
REVISIONS
11/20/19 END USE CONTOUR MODIFICATIONS
12/02/19 END USE CONTOUR MODIFICATIONS

DATE	DRAWN BY	DESIGNED BY	CHECKED BY
09/25/19	SD	SD	SD

FILE NO. 00722

C2.4

Proposed Operations



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C3.3	C3.4

EXISTING P.I.D. #S

108-500-303-200 HANOVER
108-500-254-200 HANOVER
108-500-254-400 HANOVER
108-500-303-300 HANOVER
114-800-302-400 ST MICHAEL

APPROXIMATE GROSS AREA

184.9 ACRES

APPROXIMATE EXCAVATION AREA

138.2 ACRES

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MAHLER AGGREGATE MINE EXPANSION

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END USE PLAN
OVERALL LAYOUT

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09/25/19	SD	SD	SD

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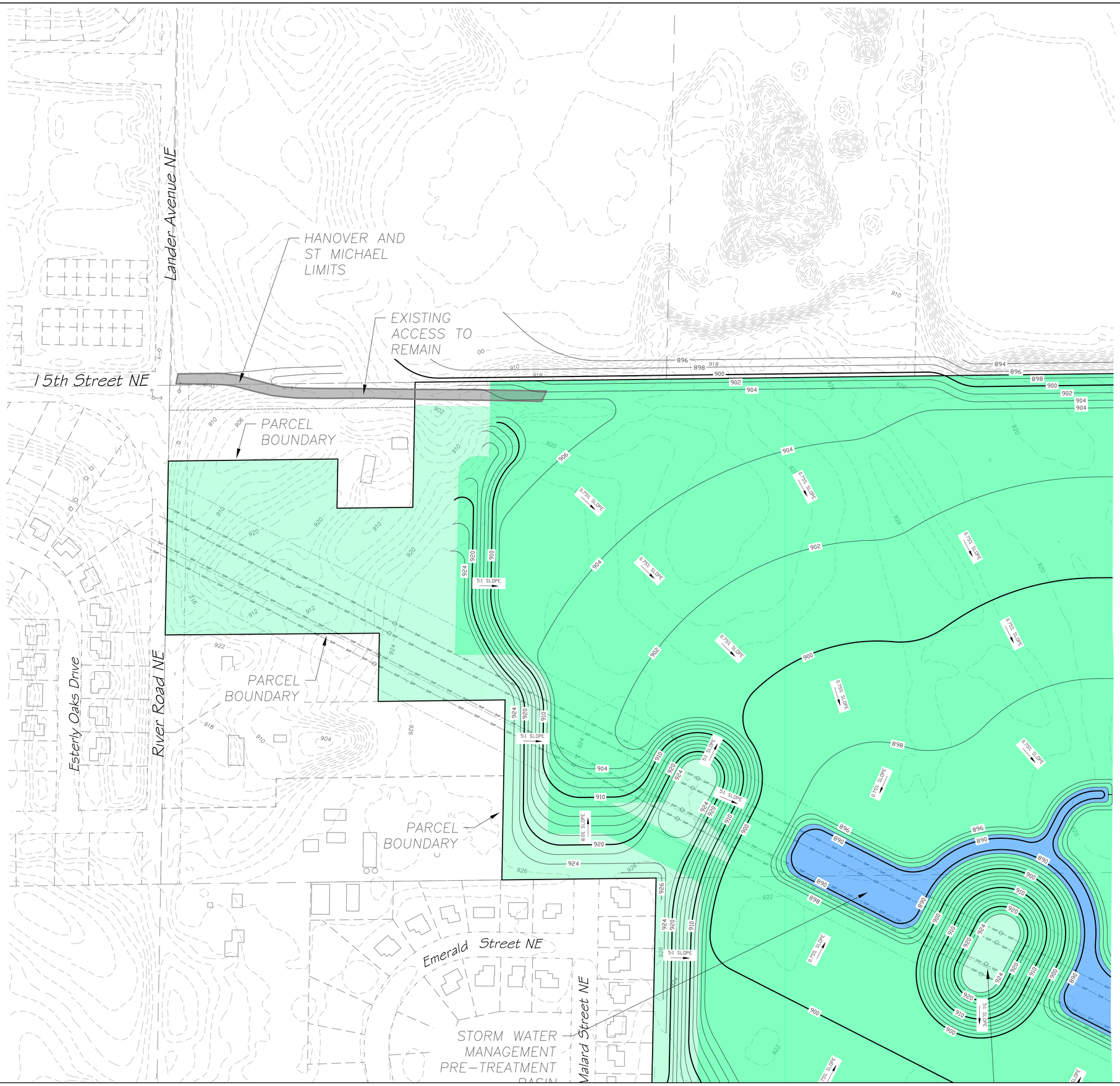
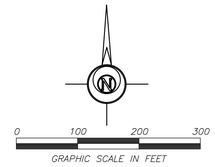
C3.0

End Use Plan
Overall Layout





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C3.1	C3.2
C3.3	C3.4

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APPROXIMATE GROSS AREA

184.9 ACRES

APPROXIMATE EXCAVATION AREA

138.2 ACRES

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END USE PLAN

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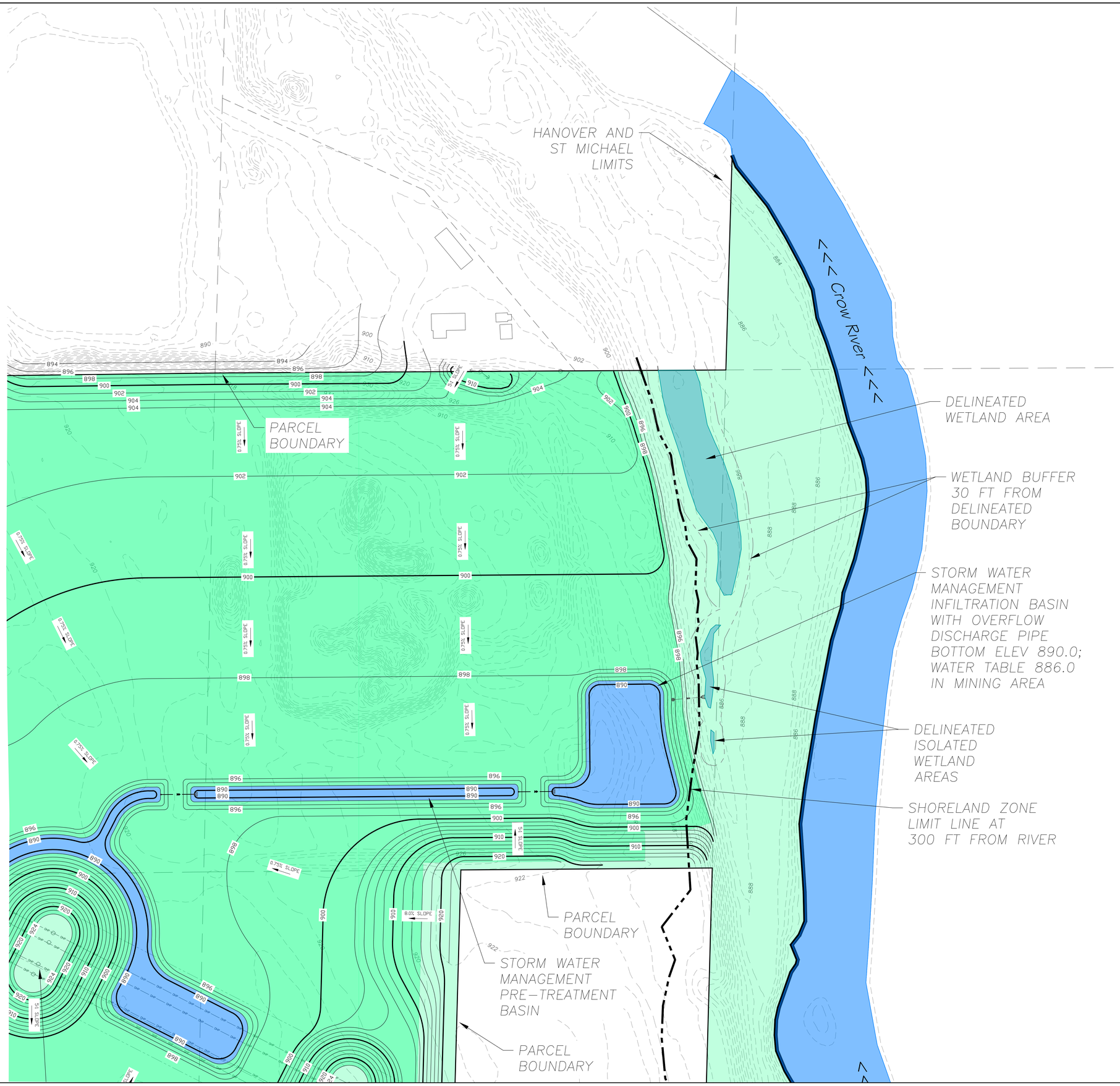
09/25/19	SD	SD	SD

FILE NO. 00722

C3.1

End Use Plan



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APPROXIMATE GROSS AREA

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END USE PLAN

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REVISIONS
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DATE	DRAWN BY	DESIGNED BY	CHECKED BY
09/25/19	SD	SD	SD

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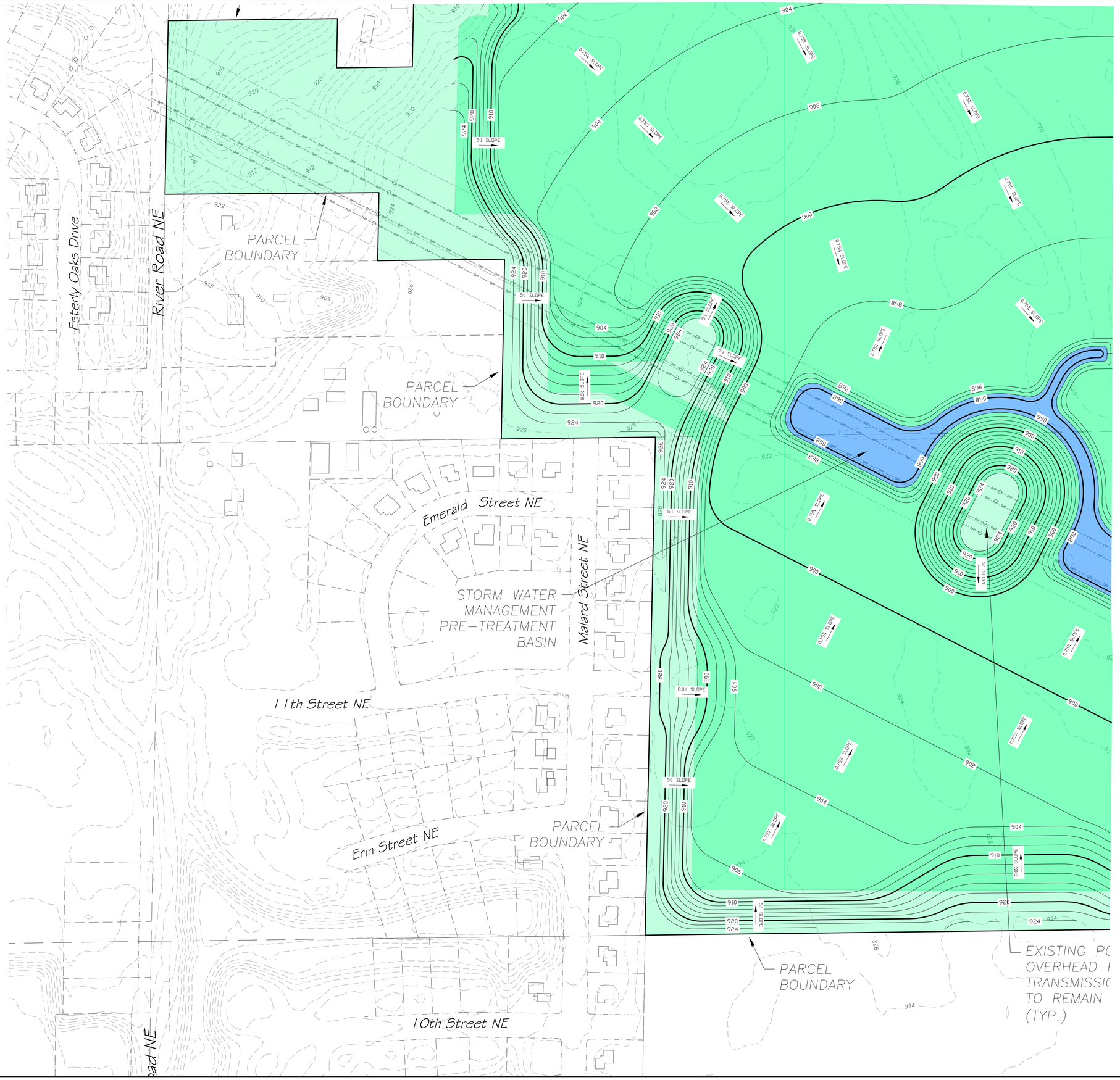
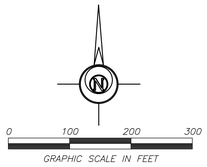
C3.2

End Use Plan





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DATE	09/25/19
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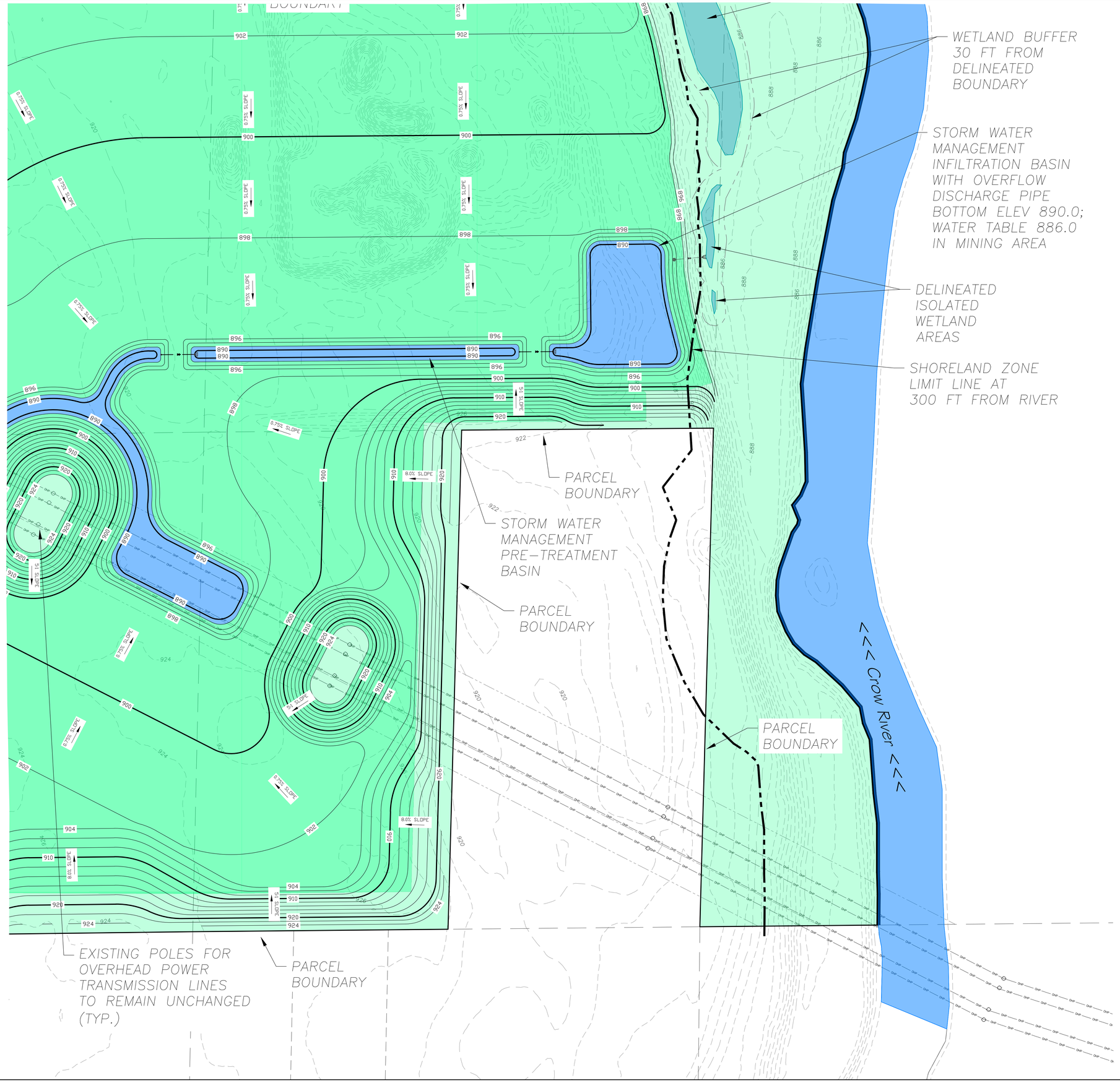
DESIGNED BY	SD
CHECKED BY	SD

FILE NO. 00722

C3.3

End Use Plan



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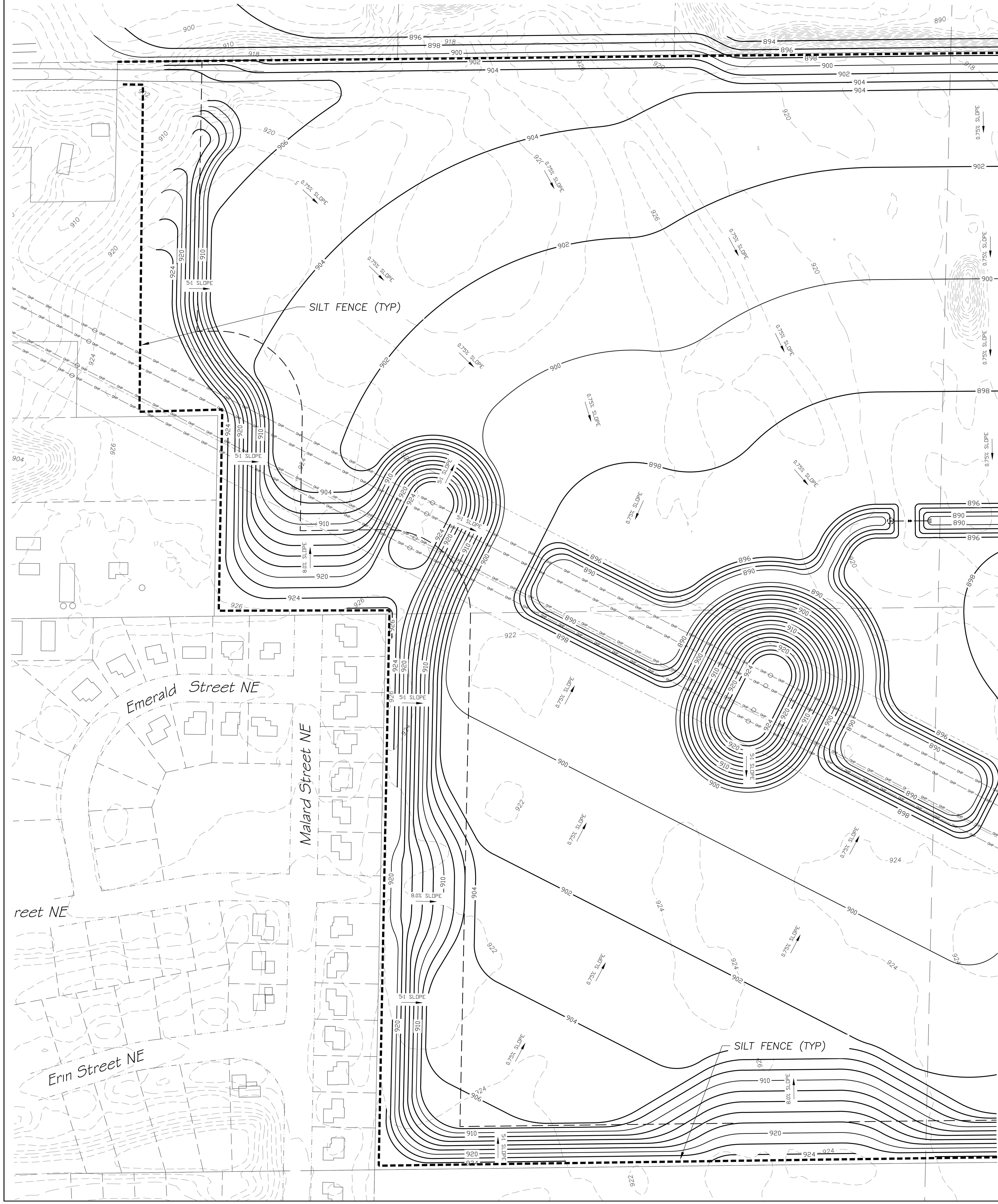
C3.4

End Use Plan



SWPP NARRATIVE

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First, perimeter silt fence is to be installed. Then site work shall commence. The contractor shall dispose all debris off–site within 24 hours. Then the site can be graded, final grade tolerance, and landscape final stabilization. Once final grade is established and certified, the site shall be stabilized with seed and mulch or sod. Once vegetation is established, temporary erosion control measures shall be removed.

POLLUTION PREVENTION NOTES

Solid waste: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction debris and other wastes must be disposed of properly off–site and must comply with MPCA requirements.

Hazardous materials: oils, gasoline, paint, and any hazardous substance must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal must be in compliance with MPCA regulations.

External washing of trucks or other construction vehicles is not allowed on site. No engine degreasing is allowed on site. No concrete washouts are allowed on site.

Concrete truck washout is not to be allowed on site unless washout waste is contained with no discharge to ground surface or site drainage facilities. Containment systems are to be located a minimum 50 feet away from drainage facilities and watercourses. Containment systems shall have an impermeable liner. Containment system shall be clearly marked with signage.

All sanitary waste must be collected from portable toilet units on site by a licensed waste management contractor. The units must be secured and shall be maintained on a regular basis as needed to prevent overfilling.

DESIGN CALCULATIONS

Design calculations, including soil types are on file with: Civil Engineering Site Design

SWPPP Designer: Scott Dahlke (Expires 2022)

RESPONSIBLE PARTY

Contact information for the responsible party for erosion control is:

Owner: Fehn Companies, Inc.
5050 Barthel Industrial Drive
Albertville, MN 55301

Contractor: Fehn Companies, Inc.
5050 Barthel Industrial Drive
Albertville, MN 55301

Manager: Gary Fehn
763–497–2428

EROSION CONTROL NOTES

1. All devices necessary to control erosion and sediment (I.E. perimeter silt fence, rock construction entrances, swales, ponds, berms, ETC.) shall be installed prior to any other construction operations.
2. After completion of final grading, exposed soils must be permanently stabilized within 7 days. Stabilization shall consist of disc–anchored seed & mulch, HECP with fiber reinforced matrix, erosion blanket with seed, or sod.
3. The site must be kept in a well drained condition at all times. The contractor shall be responsible for temporary ditches, or other means necessary to ensure proper drainage. The building pad must be provided with a positive outflow. This work shall be incidental to the grading contract.
4. Entering/exiting of the site shall occur only at rock construction entrance to reduce tracking of dirt onto paved streets. Sediment tracked onto streets during working hours must be reclaimed via street scraping and sweeping at the end of each working day.
5. Stormwater discharge pipe outlet energy dissipation shall be provided by rip–rap with size, quantity, and placement in accordance with City standards. Rip–rap installation shall be within 24 hours of pipe installation.
6. Install silt fence around all temporary inactive stockpiles which are not place within existing silt fence area or other perimeter erosion controls.
7. Stabilization of temporary or permanent drainage ditches that drain water from the construction site must be initiated within 24 hours of connecting the drainage ditch to any storm water conveyance system and must be completed using erosion blanket.
8. Sufficient personnel, equipment, and materials shall be mobilized within 24 hours of written order (ie. email) by the owner or owners representative to conduct corrective work and install temporary erosion control work in the case of an emergency.

EROSION CONTROL INSTALLATION SCHEDULE

1. Silt fence shall be installed or restored prior to any construction. Silt fence shall be located as shown to intercept runoff. The area located beyond the perimeter silt fence shall not be disturbed during construction.
2. Rock Construction Entrance shall be installed prior to grading operations.
3. All storm sewer inlets shall have inlet protection inserts installed. Inserts shall be "Road rain–Top Slab" or "Road Drain–Curb & Gutter" inlet protection devices as manufactured by WIMCO (or approved equal) and installed per manufacture's recommendations.
4. All erosion control installations shall remain in place and be maintained in good condition by the contractor until the site has been re–vegetated, at which time it shall be removed by the contractor. For proposed paved surface areas, the contractor may remove necessary silt fencing to construct roadway, while maintaining adequate erosion control in adjacent areas.
5. Sufficient topsoil shall be stockpiled to allow for the replacement of 6" topsoil for disturbed areas to be re–vegetated.
6. The contractor shall schedule site grading, utility installation and roadway construction so that the general site can be mulched and re–seeded soon after disturbance. Areas that will not be subject to construction traffic for 14 days shall be seeded and mulched or sodded within 7 days of final grading.

EROSION CONTROL MAINTENANCE SCHEDULE

1. Erosion control measures shall be inspected by the contractor's representative and maintained by the contractor every Friday and within 24 hours after any rainfall event larger than 1/2" until the project is completed. Maintenance requirements are as follows: silt fence – 1/3 height of fence or damaged, remove sediment and/or repair fence within 24 hours; rock entrance – refresh as necessary to conform to detail; inlet protection inserts – remove sediment after each rain event, clean or replace filter when clogged; surface water – drain and stabilize, within 7 days of discovery; and street sweeping – remove all sediment tracked onto paved surfaces within 24 hours or as directed by City Engineer.
2. Replacement – Fabric shall be replaced promptly when it decomposes or becomes ineffective before the barrier is no longer necessary.
3. Any sediment remaining in place after silt fence is no longer required shall be dressed to conform with the existing grade, prepared, and seeded with appropriate seed mix, as directed by the engineer.
4. Removal of the silt fence– Silt fences shall be removed when they have served their useful purpose, but not before the upward sloping area has been permanently stabilized.

VEGETATION GROUND COVER SCHEDULE

1. Stabilization of all exposed soil areas must be initiated immediately but in no case completed later than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased. Seeding and mulching shall conform to the latest NPDES requirements for installation schedule with regards to grading.
2. Permanent turf ground cover shall include all disturbed areas be covered with a minimum 6" topsoil and seeded as allowed by City, or as proposed on City approved landscape plan for the project. If not otherwise specified, turf seed to be MnDOT mix 25–121 applied at 61 lbs/ac. Infiltration basin seed to be 33–261 applied at 35 lbs/ac with bottom of basin mulched with clean grain straw (Mn/DOT Type 3) applied at 2 tons/ac. MnDOT Type 1 mulch shall be applied at 2 tons/ac and disc anchored in areas not covered by erosion blanket. Seeding and mulching shall conform to the latest NPDES requirements for installation schedule with regards to grading.
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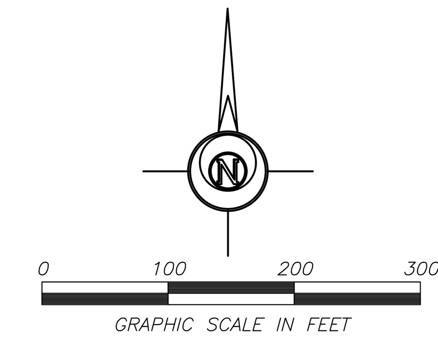
4. Fertilizer for turf shall be MnDOT Type 3 22–5–10 and applied at 350 lb/ac. Disc fertilizer into top 3" of soil. Specification reference is MnDOT 2574.
5. Dormant seed mix shall be used after November 1 or when temperatures do not exceed 40° F, using same rates specified above. No seed shall be placed on snow or ice greater than 2" in depth.
6. Any seeded areas that do not become established with vegetation shall be re–seeded at Contractor's expense.
7. Erosion blanket shall be installed in seed areas with ground surface slopes of 4H:1V or steeper.

INFILTRATION BASIN NOTES

1. Iniltration area shall be staked off during construction to restrict heavy equipment traffic from compacting native soils.
2. Install appropriate temporary erosion control devices to prevent sediment from entering the practice during construction.
3. Grading of the infiltration basin shall be accomplished using low impact earth–moving equipment to prevent compaction of the underlying soils. Small tracked dozers and skid–steers with runner tracks are recommended.
4. In the event that sediment is introduced into the BMP during or immediately following excavation, this material will need to be removed from the basin prior to initiating the next step in the construction process.
5. Install sediment control around basin after completion of basin grading.
6. Seeding and installation of erosion control shall be completed within 48 hours of final grading of basin.



APPROXIMATE GROSS AREA

184.9 ACRES

APPROXIMATE EXCAVATION AREA

133.9 ACRES

PAGE LAYOUT:

C4.1	C4.2

LEGEND

- Existing Contours
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- Proposed Contours
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- Proposed Riprap

PROJECT LOCATION

PART OF W½ OF SECTION 30, TOWNSHIP 120, RANGE 23,
AND PART OF SE¼ OF SECTION 25, TOWNSHIP 120, RANGE 24,
WRIGHT COUNTY, MINNESOTA.

EROSION CONTROL QUANTITIES:

ITEM:	QUANTITY	UNIT
SILT FENCE	11,550	LF
WOOD FIBER LOG	1,150	LF
INLET PROTECTION	1	EA

INDEX OF CIVIL SITE DRAWINGS:

C0	PROJECT LOCATION PLAN
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C3.0–C3.4	END USE PLAN
C4.1–C4.2	STORM WATER POLLUTION PREVENTION PLAN
C5.1–C5.2	STORM SEWER PLAN

FEHN COMPANIES

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Gary Fehn
612-282-6542
gfehn@fehncompanies.com

MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

STORM WATER POLLUTION PREVENTION PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

[signature]

Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
PO Box 566
Monticello, Mn 55362
Phone: 763–314–0929
www.civilesd.com

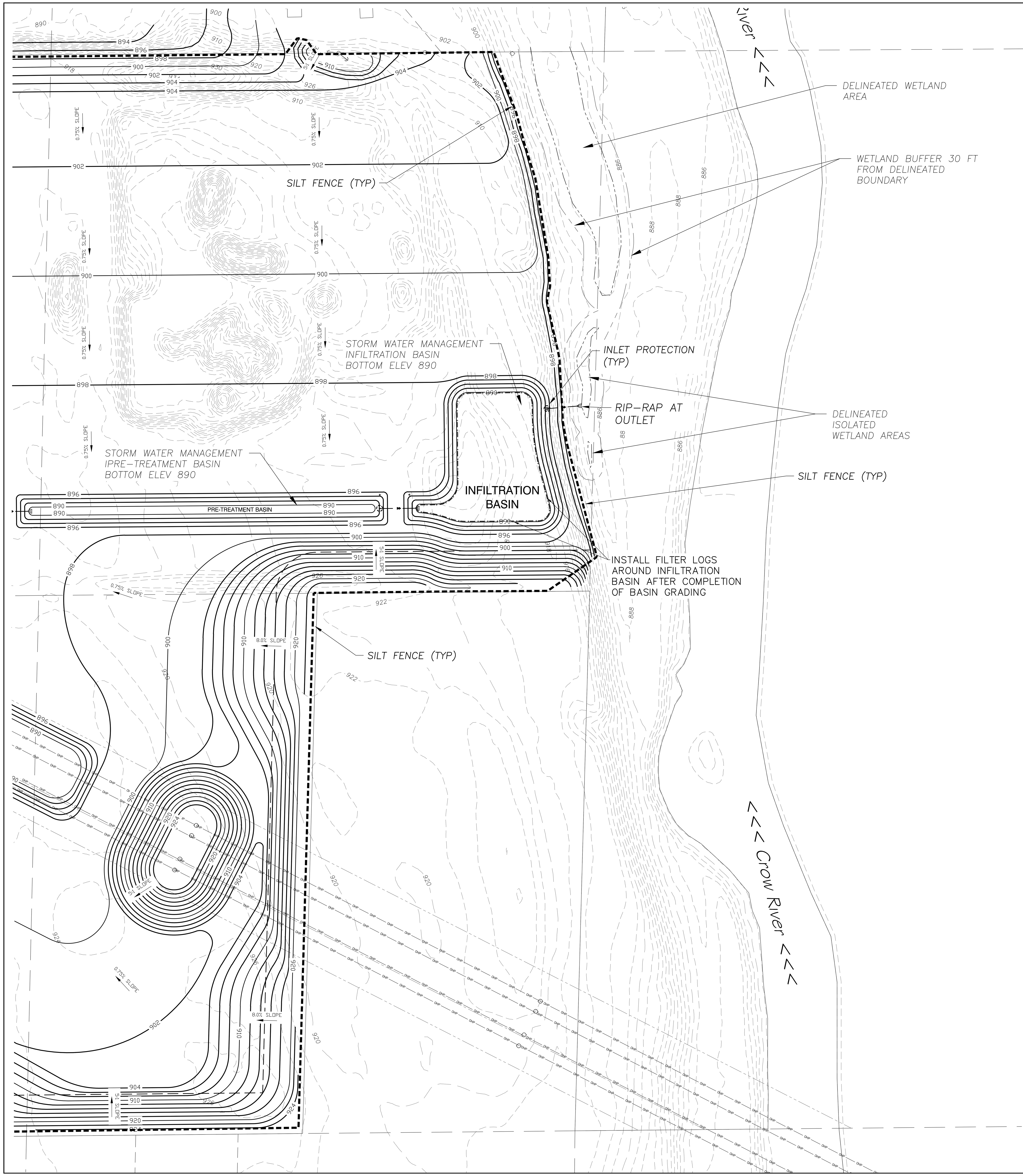
REVISIONS
11/20/19 END USE CONTOUR MODIFICATIONS
12/02/19 END USE CONTOUR MODIFICATIONS

DATE 09/25/19
DRAWN BY SD
DESIGNED BY SD
CHECKED BY SD

FILE NO. 00722

C4.1

Storm Water Pollution Prevention Plan



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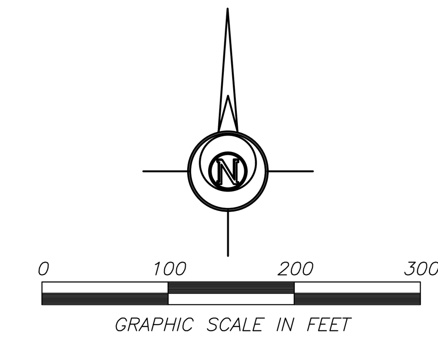

APPROXIMATE GROSS AREA
184.9 ACRES

APPROXIMATE EXCAVATION AREA
133.9 ACRES

PAGE LAYOUT:

C4.1	C4.2

LEGEND

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PROJECT LOCATION

PART OF W½ OF SECTION 30, TOWNSHIP 120, RANGE 23,
AND PART OF SE¼ OF SECTION 25, TOWNSHIP 120, RANGE 24,
WRIGHT COUNTY, MINNESOTA.

EROSION CONTROL QUANTITIES:

ITEM:	QUANTITY	UNIT
SILT FENCE	11,550	LF
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INLET PROTECTION	1	EA

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FEHN COMPANIES

Fehn Companies, Inc.
5050 Barthel Industrial Dr.
Albertville, MN 55301

Gary Fehn
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gfehn@fehncompanies.com

MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road Hanover, MN 55341

STORM WATER POLLUTION PREVENTION PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
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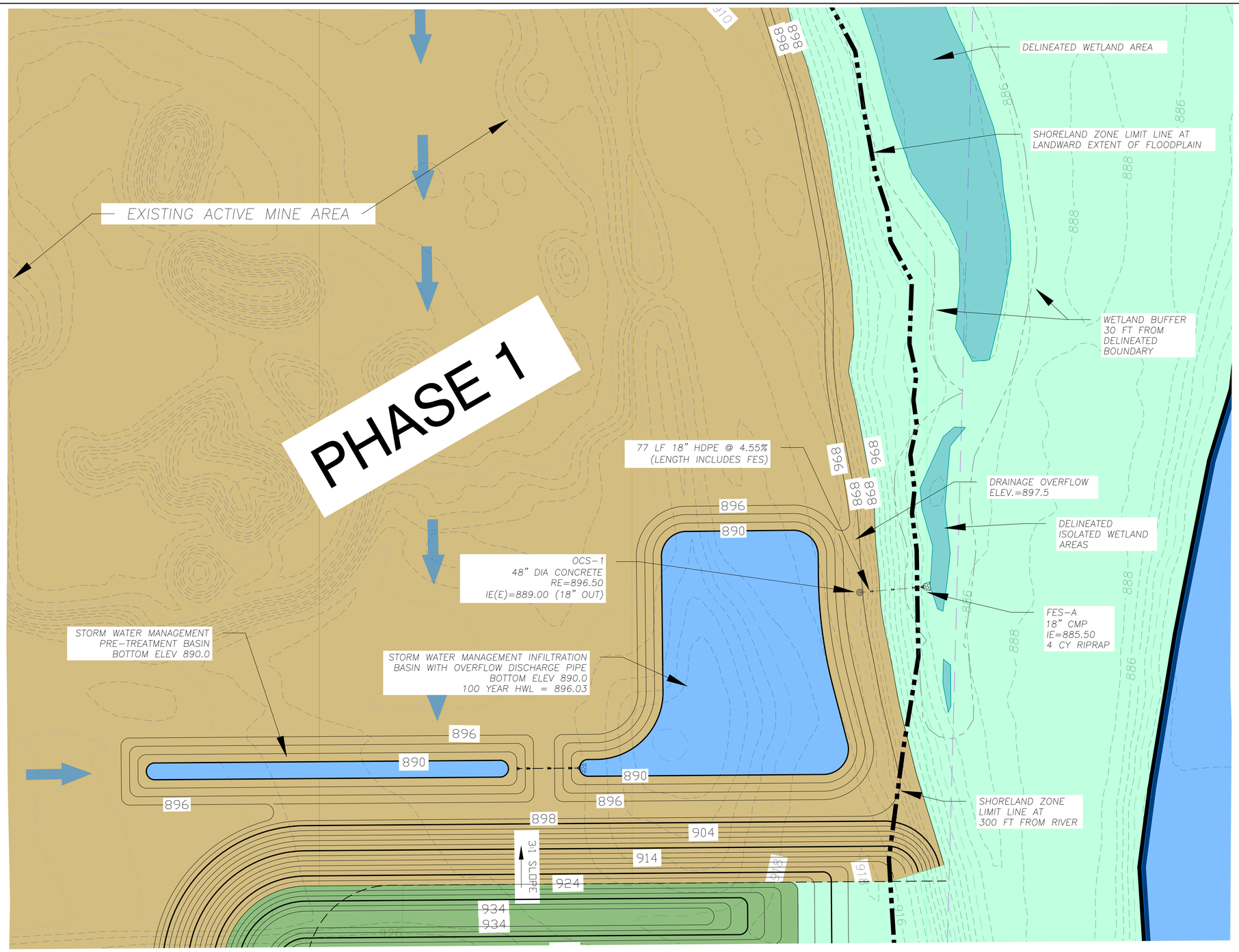
REVISIONS
11/20/19 END USE CONTOUR MODIFICATIONS
12/02/19 END USE CONTOUR MODIFICATIONS

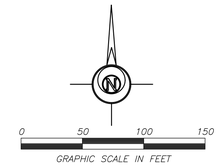
DATE 09/25/19
DRAWN BY SD
DESIGNED BY SD
CHECKED BY SD

FILE NO. 00722

C4.2

Storm Water Pollution Prevention Plan





WATER ELEVATION DATA

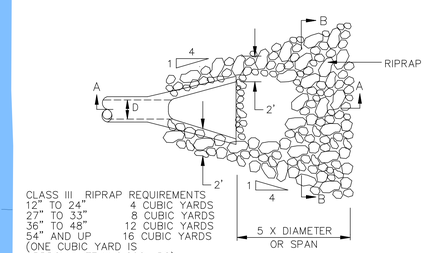
MINE AREA WATER TABLE ELEV 886.0

CROW RIVER TYPICAL WATER ELEV 876.0

CROW RIVER FEMA 100YR FLOOD ELEV 889.0

LEGEND:

- PROJECT PROPERTY BOUNDARY
- EXISTING CONTOUR INDEX
- EXISTING CONTOUR INTERMEDIATE
- PROPOSED CONTOUR INDEX
- PROPOSED CONTOUR INTERMEDIATE
- PROPOSED DRAINAGE DIRECTION
- STORM WATER MANAGEMENT BASIN
- CROW RIVER
- EXISTING WETLAND AREA
- BERM 10 FT HIGH
- MINE EXCAVATION AREA
- NON-MINED AREA



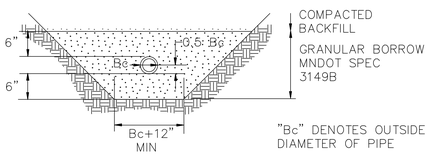
CLASS III RIPRAP REQUIREMENTS

12" TO 24"	4 CUBIC YARDS
27" TO 33"	8 CUBIC YARDS
36" TO 48"	12 CUBIC YARDS
54" AND UP	16 CUBIC YARDS

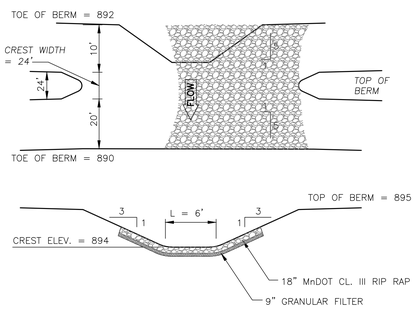
(ONE CUBIC YARD IS APPROXIMATELY 2,800 LBS)

NOTE: FILTER BLANKET REQUIRED UNDER RIPRAP OR 1 LAYER OF 500X "MIRAFI" FABRIC OR EQUAL

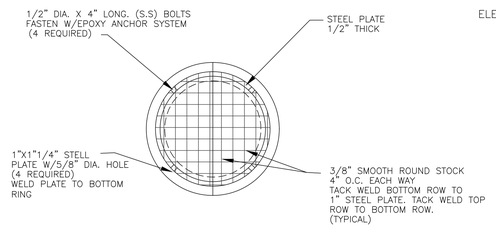
CLASS III RIPRAP AT OUTLETS

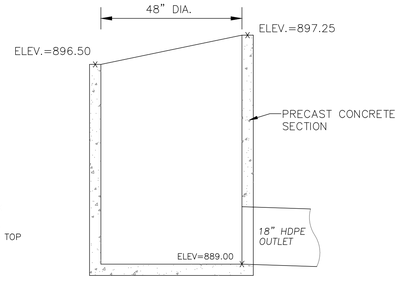


PIPE FOUNDATION & BEDDING IN GOOD SOILS



RIPRAP OVERFLOW





POND OUTLET CONTROL STRUCTURE (OCS-1)

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SE Quad 15th Street and River Road
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STORM SEWER PLAN
PROPOSED OPERATIONS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 12/2/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN

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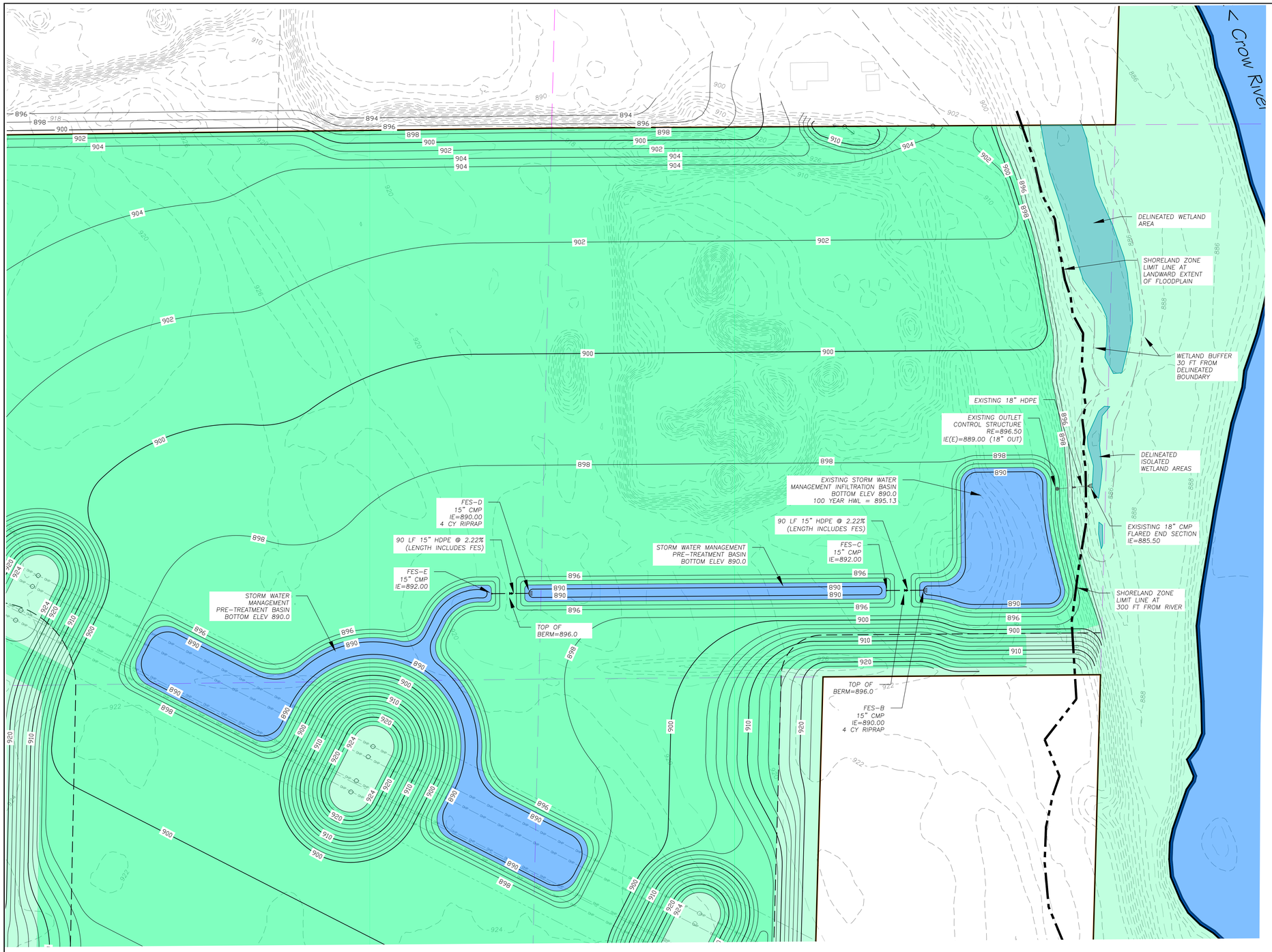
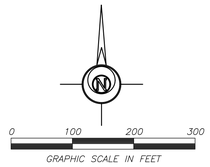
DATE	09/25/19
DRAWN BY	SD
DESIGNED BY	SD
CHECKED BY	SD

FILE NO. 00722

C5.1

Storm Sewer Plan
Proposed Operations





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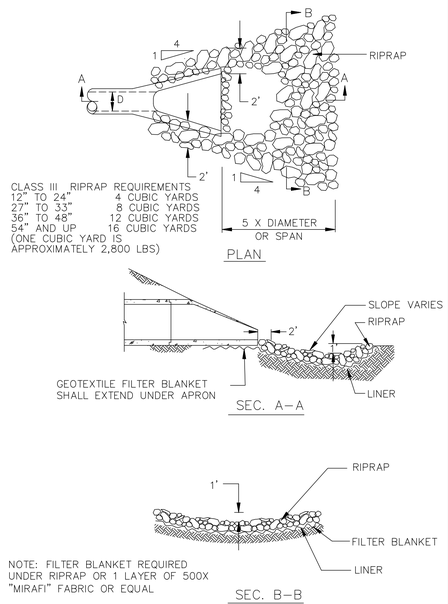
- RECLAIMED MINE EXCAVATION AREA
- NON-MINED AREA



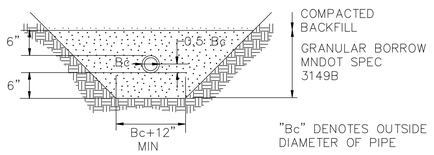
CLASS III RIPRAP REQUIREMENTS

12" TO 24"	4 CUBIC YARDS
27" TO 33"	8 CUBIC YARDS
36" TO 48"	12 CUBIC YARDS
54" AND UP	16 CUBIC YARDS

(ONE CUBIC YARD IS APPROXIMATELY 2,800 LBS)

NOTE: FILTER BLANKET REQUIRED UNDER RIPRAP OR 1 LAYER OF 500X "MIRAFI" FABRIC OR EQUAL

CLASS III RIPRAP AT OUTLETS



PIPE FOUNDATION & BEDDING IN GOOD SOILS

INDEX OF CIVIL SITE DRAWINGS:

C0	PROJECT LOCATION PLAN
C1.0-C1.8	EXISTING CONDITIONS & CROSS SECTION
C2.0-C2.4	PROPOSED OPERATIONS
C3.0-C3.4	END USE PLAN
C4.1-C4.2	STORM WATER POLLUTION PREVENTION PLAN
C5.1-C5.2	STORM SEWER PLAN

FEHN COMPANIES

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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

STORM SEWER PLAN
END USE PLAN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: 12/12/19 Reg. No. 24348

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
P.O. Box 1146
Monticello, Mn 55362
Phone: (763) 271-0929
www.civilsd.com

REVISIONS
11/20/19 END USE CONTOUR MODIFICATIONS
12/03/19 END USE CONTOUR MODIFICATIONS

DATE	DRAWN BY	DESIGNED BY	CHECKED BY
09/25/19	SD	SD	SD

FILE NO. 00722

C5.2

Storm Sewer Plan
End Use Plan

Dust Control Plan

Mahler Aggregate Mine

City of Hanover, Wright County, Minnesota

Prepared for
Fehn Companies, Inc.

by
Kjolhaug Environmental Services Company, Inc.
(KES Project No. 2019-012)

June 12, 2019

Dust Control Plan

Mahler Aggregate Mine

City of Hanover, Wright County, Minnesota

TABLE OF CONTENTS

1. PROJECT DESCRIPTION 1
2. PROJECT LOCATION AND SURROUNDING LAND USE 1
3. PLAN PURPOSE 1
4. STATE AND FEDERAL REQUIREMENTS 1
5. DUST ASSESSMENT 2
6. DUST MITIGATION MEASURES 2
7. CONCLUSIONS 3

Dust Control Plan

Mahler Aggregate Mine

City of Hanover, Wright County, Minnesota

1. Project Description

The Mahler Aggregate Mine is proposing a 130-acre expansion of an existing 25-acre aggregate mine. The mine will be located on 184.9 acres of land in the City of Hanover. The operation will include sand and gravel mining, a wash plant, concrete recycling, and stormwater management. Expansion of the existing aggregate mine will start in September of 2019 and be phased over 15 to 20 years, depending on the demand for aggregate and market conditions.

2. Project Location and Surrounding Land Use

The project is located in Section 30, T120N, R23W , and Section 25, T120N, R24W. The project area is bordered on the north by 15th Street NE, a separate aggregate mining operation, and the City of St. Michael. The project is bordered on the east by the Crow River; on the south by Riverside County Park and agricultural land; and on the west by single-family residential, rural residential, and River Road NE/Lander Avenue NE.

3. Plan Purpose

This dust control plan is prepared to identify practices that will be employed to control fugitive dust emissions at the Mahler Aggregate Mine. Aggregate mining has occurred at the project location since 2006. Mining is to be expanded to cover up to 155 acres, in five phases consisting of about 25 to 40 acres each over the next to 15 to 20 years.

This plan addresses fugitive dust emissions created by mining operations and reclamation activities related to the mine. This plan establishes methods to control fugitive dust emissions from vehicles traveling on unpaved roads, material handling, and wind erosion from disturbed areas. These measures will be implemented, as needed, for the duration of the project.

4. State and Federal Requirements

Minnesota Rule 7011.0150 (Preventing Particulate Matter from Becoming Airborne) does not allow the "handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne." It requires "reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the property line on which the emissions originate." The Minnesota Pollution Control Agency (MPCA) requires operators of crushed stone and sand and gravel plants to use dust control measures in their operations. The term "fugitive dust" when referring to emissions from aggregate processing, means the dust does

not come from an emission "smoke stack," but from areas exposed to wind such as unpaved roads, stockpiles, or transfer points between conveyors.

Aggregate processing equipment (crushers, screens, conveyors) are subject to the U.S. Environmental Protection Agency (EPA) Standards of Performance for Nonmetallic Mineral Processing Plants (40 CFR Part 60). This rule sets opacity limits for dust emissions from equipment. Opacity refers to the obstruction of light transmittance caused by plumes of dust or gases.

5. Dust Assessment

Sand and gravel mining processing operations include crushing, screening, size classification, material handling, storage operations, and truck loading/unloading. Portable crushing plants consist of an assortment of individual pieces of equipment that are used to physically reduce, size and/or separate earth materials. All of these processes can result in dust emissions. If not properly controlled, dust can be carried by into surrounding neighborhoods by wind.

Dust can become airborne by wind and/or machine movement. Emissions occur at conveyors and drop or transfer points from one conveyor to the next. Storage piles can emit dust under atmospheric conditions such as dry winds. Similarly, unpaved haul roads emit dust under windy conditions and during use by trucks and passenger vehicles. Factors affecting emissions include the amount of activity at the site (dumping, crushing, hauling), the amount of wind, and the moisture content of the aggregate material.

Wash plants do not generate substantial dust because the earthen material becomes wet and stops emitting dust at the start of the wash plant. The moisture content of washed material is high enough to control particulate emissions.

6. Dust Mitigation Measures

The project will prevent avoidable visible dust emissions beyond the property boundary by applying water, approved commercial dust suppressants (such as magnesium chloride), use of a reduced speed limit on haul roads (e.g., 15 mph), and/or tarping of truck loads prior to leaving the mining area. Allowing greater vehicle speeds on unpaved roads can increase the potential for dust generation. These measures are expected to reduce fugitive dust emissions to a reasonable level.

Application of water often provides sufficient dust suppression. Chemical suppression should be used if water does not reduce visible dust enough to keep it from crossing the site boundary. Gravel roads will be sprayed with water or chemical dust suppressants when warranted by dust emissions and site conditions (dry, frequent truck trips, etc.).

Fugitive dust from loading operations will be controlled primarily by spraying problem areas with water. Disturbed areas such as stockpiles and temporary roads are susceptible to wind-blown fugitive dust generation. Fugitive dust emissions from these areas will be limited by using

best management practices such as applying water or chemical dust suppressants, covering, and temporary seeding.

7. Conclusions

Mitigation of dust emissions from aggregate processing and handling operations includes two basic options:

1. reducing the number of processing and/or handling operations; and
2. applying dust control agents such as water or chemical dust suppressants.

Dust control measures to be considered include:

1. use of conveyors to transport aggregate material onsite;
2. limiting the number and distance of internal truck trips by using conveyors;
3. active reclamation to minimize exposed soil areas;
4. use of water (wet suppression) to minimize fugitive dust emissions;
5. covering truckloads prior to aggregate transport during dry or windy conditions;
6. chemical dust suppression; and
7. sequenced mining of smaller subphases.

These dust control measures are expected to reduce emissions of dust and particulate matter from the proposed mining operation.

Minnesota Native Landscapes
8740 77th Street NE Otsego, MN 55362

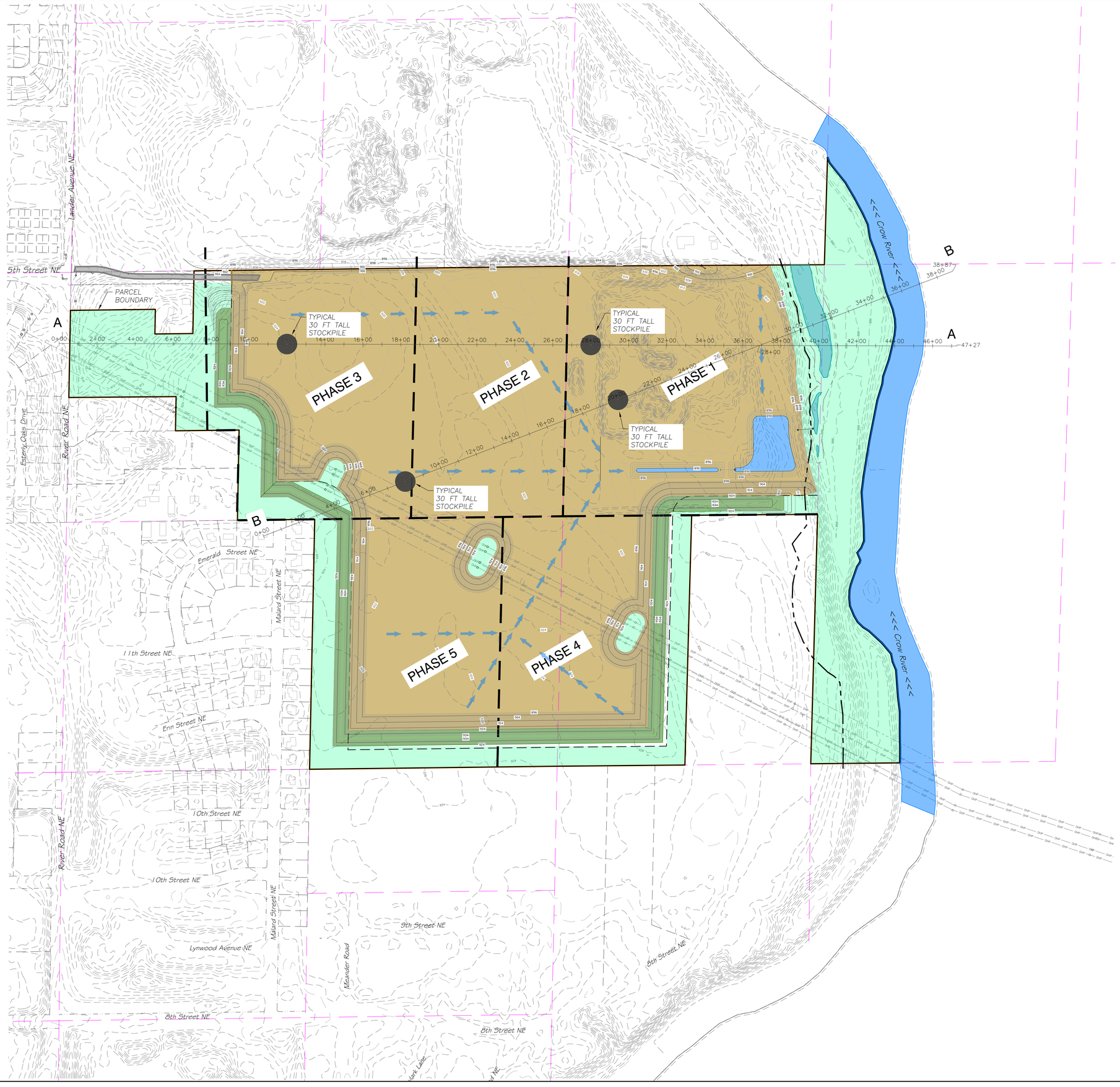
35-221
Dry Prairie General

	Scientific Name	Common Name	% of Mix	PLS lbs/ac	Seeds/SF
Grasses:	*Andropogon gerardii*	Big Bluestem	1.92	0.70	2.57
	Bouteloua curtipendula	Side-Oats Grama	8.22	3.00	10.96
	Bouteloua gracilis	Blue Grama	1.37	0.50	7.35
	Bromus kalmii	Prairie Brome	2.00	0.73	2.15
	Elymus canadensis	Canada Wild Rye	2.74	1.00	1.91
	Koeleria macrantha	Junegrass	0.68	0.25	16.07
	Schizachyrium scoparium	Little Bluestem	8.22	3.00	16.53
	Sorghastrum nutans	Indian Grass	1.92	0.70	3.09
	Sporobolus heterolepis	Prairie Dropseed	0.33	0.12	0.71
		Grasses Total:	**27.40**	**10.00**	**61.33**
Forbs:	*Agastache foeniculum*	Fragrant Giant Hyssop	0.16	0.06	1.98
	Amorpha canescens	Leadplant	0.25	0.09	0.53
	Asclepias tuberosa	Butterfly Milkweed	0.16	0.06	0.09
	Astragalus canadensis	Canada Milk Vetch	0.16	0.06	0.37
	Coreopsis palmata	Prairie Coreopsis	0.16	0.06	0.22
	Dalea candida	White Prairie Clover	0.16	0.06	0.42
	Dalea purpureum	Purple Prairie Clover	0.52	0.19	1.05
	Desmodium canadense	Canada Tick Trefoil	0.16	0.06	0.12
	Helianthus pauciflorus	Stiff Sunflower	0.16	0.06	0.09
	Liatris aspera	Rough Blazing Star	0.11	0.04	0.24
	Monarda fistulosa	Wild Bergamot	0.16	0.06	1.54
	Penstemon grandiflorus	Showy Penstemon	0.16	0.06	0.31
	Rudbeckia hirta	Black Eyed Susan	0.85	0.31	10.48
	Solidago nemoralis	Gray Goldenrod	0.11	0.04	4.41
	Solidago rigida	Stiff Goldenrod	0.16	0.06	0.90
	Symphyotrichum ericoides	Heath Aster	0.11	0.04	2.94
	Symphyotrichum laevis	Smooth Blue Aster	0.16	0.06	1.21
	Verbena stricta	Hoary Vervain	0.36	0.13	1.34
		Forbs Total:	**4.11**	**1.50**	**28.24**
Cover Crop:	*Avena sativa*	Oats	68.49	25.00	7.35
		Cover Crop Total:	**68.49**	**25.00**	**7.35**
		Totals:	100.00	36.50	96.91

Purpose:	General dry prairie mix for native roadsides, ecological restoration, or conservation program plantings
Planting Area:	Tallgrass Aspen Parklands, Prairie Parkland, and Eastern Broadleaf Forest Providences. Mn/DOT Districts 2(west), 3B, 4, Metro, 6, 7, & 8.

Shipping and Sales Tax added to all applicable orders. Prices are good for 30 days.

Wes@MNLcorp.com
8740 77th St NE Otsego, MN 55362
Office: (763) 295-0010
Fax: (763) 295-0025



0 100 200 300
GRAPHIC SCALE IN FEET

EXISTING P.I.D. #S

108-500-303-200	HANOVER
108-500-254-200	HANOVER
108-500-254-400	HANOVER
108-500-303-300	HANOVER
114-800-302-400	ST MICHAEL

APPROXIMATE GROSS AREA

184.9 ACRES

APPROXIMATE EXCAVATION AREA

133.9 ACRES

EXCAVATION PHASE DATA

PHASE 1	36.5 AC	2019-2021 *	
PHASE 2	24.2 AC	2022-2024	
PHASE 3	31.2 AC	2025-2030	
PHASE 4	29.9 AC	2031-2034	
PHASE 5	29.9 AC	2035-2039	

* PHASE 1 AREA INCLUDES EXISTING ACTIVE MINE OPERATIONS

NOTE: 10 FT HIGH BERM TO BE REPOSITIONED IN CONJUCTION WITH EXCAVATION PHASE

LEGEND:

- PROJECT PROPERTY BOUNDARY
- EXISTING CONTOUR INDEX
- EXISTING CONTOUR INTERMEDIATE
- PROPOSED CONTOUR INDEX
- PROPOSED CONTOUR INTERMEDIATE
- PROPOSED DRAINAGE DIRECTION
- STORM WATER MANAGEMENT BASIN
- CROW RIVER
- EXISTING WETLAND AREA
- BERM 10 FT HIGH
- MINE EXCAVATION AREA
- NON-MINED AREA
- ACCESS DRIVE
- PHASE LIMIT

Fehn Companies, Inc.
5050 Barthel Industrial Dr.
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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

VIEW SHED ANALYSIS
PLAN VIEW

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: _____ Reg. No. _____

PREPARED BY: CIVIL ENGINEERING SITE DESIGN
118 East Broadway St.
PO Box 653
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Phone 763-271-7929
www.civilesd.com

REVISIONS

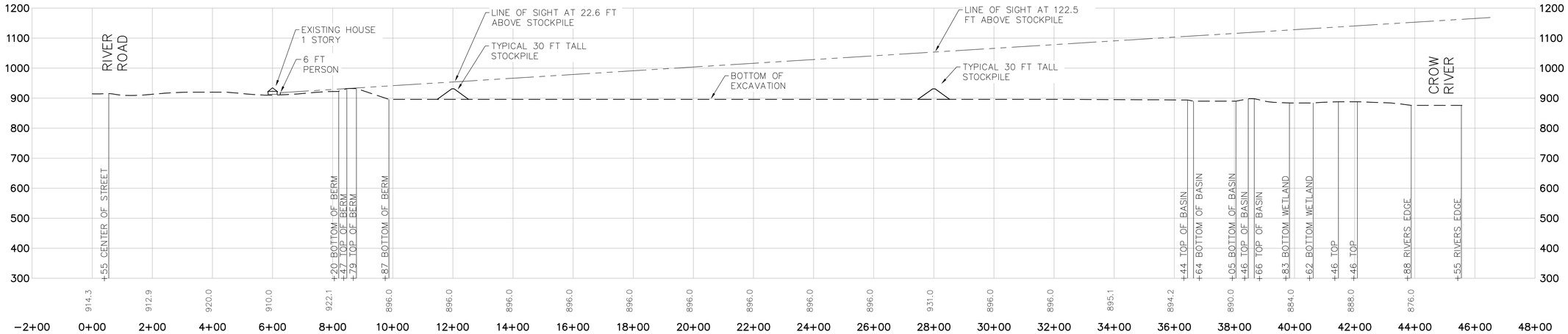
DATE 12/02/19	DRAWN BY SD	DESIGNED BY SD	CHECKED BY SD

FILE NO. 00722

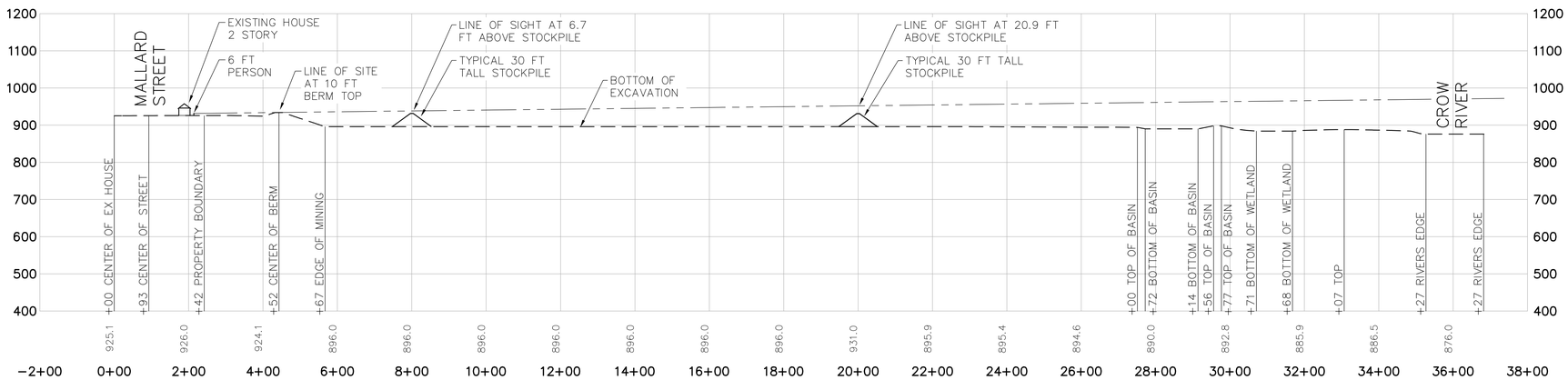
1/3

View Shed Analysis
Plan View

SECTION- A



SECTION- B



HORIZONTAL SCALE 1"=150'
VERTICAL SCALE 1"=150'

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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

VIEW SHED ANALYSIS SECTIONS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: _____ *Reg. No.* _____

PREPARED BY:

118 East Broadway St.
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Phone: 763-271-3600
www.polaris.com

REVISIONS

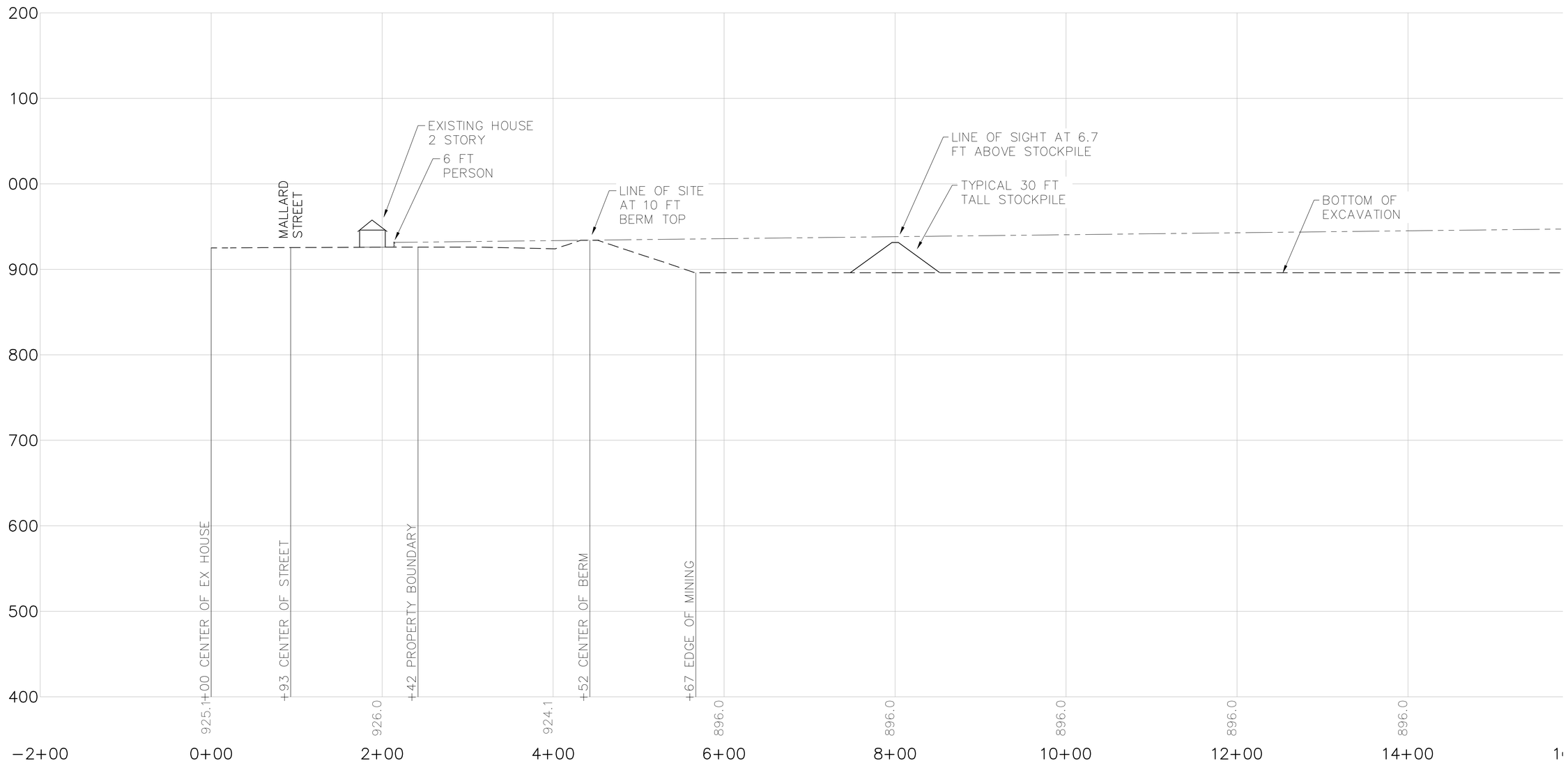
DATE 12/02/19	*DRAWN BY* SD	*DESIGNED BY*	*CHECKED BY*

FILE NO. 00722

2/3

View Shed Analysis Sections

SECTION- B
0+00 TO 14+00



HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=50'

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MAHLER AGGREGATE MINE EXPANSION

SE Quad 15th Street and River Road
Hanover, MN 55341

VIEW SHED ANALYSIS SECTIONS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date: _____ *Reg. No.* _____

PREPARED BY:

118 East Broadway St.
P.O. Box 1929
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Phone: 763-271-3237
www.pioneer.com

REVISIONS

DATE	*12/02/19*
DRAWN BY	*SD*
DESIGNED BY	
CHECKED BY	

FILE NO. *00722*

3/3

View Shed Analysis Sections

HANOVER PLANNING & ZONING
APPLICATION & MEETING SCHEDULE

The Planning Commission regular meeting is generally the fourth Monday of the month. The City Council generally reviews planning and zoning matters on the first Tuesday of the month. Planning Commission and City Council meetings begin at 7:00 p.m. Both meetings are held at City Hall. Legal notices are published in the Wright County Journal-Press at least 10 days prior to the meeting.

Applications must be deemed complete by City staff. Staff has 15 business days to review the application for completeness, and will notify the applicant/owner if additional information is required (MINN. STAT. 15.99). The City has up to 60 days to review the application before making a final decision, and the City may extend the review period to 120 days with written notice to the applicant/owner. The City has 120 days to review subdivision applications.

2020 Meeting Schedule

Planning Commission Regular Meeting	Permit Application Deadline	City Council Regular Meeting
January 27, 2020	December 27, 2019	February 4, 2020
February 24, 2020	January 24, 2020	To be determined
March 23, 2020	February 21, 2020	April 7, 2020
April 27, 2020	March 27, 2020	May 5, 2020
To be determined	To be determined	June 2, 2020
June 22, 2020	May 22, 2020	July 7, 2020
July 27, 2020	June 26, 2020	August 4, 2020
August 24, 2020	July 24, 2020	September 1, 2020
September 28, 2020	August 28, 2020	October 6, 2020
October 26, 2020	September 25, 2020	To be determined
November 23, 2020	October 23, 2020	December 1, 2020
December 28, 2020	November 25, 2020	January 5, 2021
January 25, 2021	December 24, 2020	February 2, 2021