MINNEHAHA CREEK
WATERSHED DISTRICT
QUALITY OF WATER, QUALITY OF LIFE

Meeting: Board Meeting
Meeting date: 10/20/2022
Agenda Item #: 11.1
Item type: Permit Amendment Review

Title: Permit 22-016 Amendment: Morningside Flood Risk Reduction Project

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Past Board Action Items: Permit 22-016 Approval at the April 14th, 2022 Board Meeting

Purpose:
Present permit amendment for the Morningside Flood Risk Reduction Project permit (22-016) and provide update on feasibility work pursuant to cooperative agreement.

Executive Summary:
The City of Edina (Applicant) has applied for a permit amendment for the Morningside Flood Infrastructure Project (Project), permit 22-016.

The District Board of Managers approved Permit 22-016 on April 14, 2022, with conditions. The Applicant is proposing to alter the approved plans to reflect grading changes within Weber Pond, which requires Board approval. The updated plans have been reviewed by staff and District engineer.

As a condition of the permit approval, Applicant entered into a cooperative agreement with the District and the Minneapolis Park and Recreation Board (MPRB), pursuant to which Barr Engineering, retained by Applicant, has reviewed structural and non-structural approaches to produce an annual Total Phosphorus (TP) loading reduction, at the point of Project discharge into Bde Maka Ska, of no net increase, when compared to the existing condition (or 8lbs compared to the 60% design plans). The Project feasibility study is complete and the report is being finalized. Based on modeling results, the Applicant is proposing to meet this requirement through the aforementioned grading and certain modifications to the originally proposed pumping regime. In its permit approval, the Board delegated to the Administrator the authority to approve the monitoring and operating plan for the Project. However, the Board must approve the proposed change to the configuration of Weber Pond.

The District, the Applicant, and the MPRB are still assessing opportunities identified in the feasibility study to further improve water quality at Bde Mka Ska. These results will be shared when the feasibility report is complete.

Project and Permit Background:
Applicant will accomplish the Project's principal goal of reducing flood risk for the Morningside Neighborhood by excavating and expanding two stormwater detention ponds in the Lynn/Kipling and Weber Park areas. During flood events, water will flow from Lynn/Kipling to Weber Pond. Weber Pond will be fitted with a pumping system to manage water levels in the pond and create storage by moving water downstream before, during, and after storm events, while not exacerbating downstream flood risk. Water conveyed downstream from the Project passes through the municipal storm sewer system of St. Louis Park, before entering the City of Minneapolis storm sewer system and discharging into stormwater ponds constructed in the 1990s by the MPRB, the City of Minneapolis and the District adjacent to Bde Maka Ska in the City of Minneapolis.

However, a consequence of the proposed pumping at Weber Pond is a decrease in efficiency in these downstream, stormwater ponds, due to their receiving a larger annual volume of water under the proposed project conditions. Therefore, as approved by the Board in April, while providing upstream water quality improvements, the Project would

have the unintended effect of increasing TP loading to Bde Maka Ska on the order of 8 lb annually and increasing total suspended solids (TSS) on the order of 1900 lb annually to Bde Maka Ska. This represents roughly 1% of the annual watershed phosphorus load to Bde Maka Ska.

To mitigate that impact, the Board of Managers approved Permit 22-016 with a condition that Applicant enter into a cooperative agreement with the District to separately provide for a no net increase (an 8 lb TP reduction from 60% plans) to Bde Maka Ska pursuant to a feasibility review by Applicant's engineer, Barr Engineering. By agreement, the feasibility review has included smaller projects that Applicant can undertake unilaterally, and larger projects providing for greater TP removals in which the District, and potentially the MPRB and the City of Minneapolis, might participate.

Work since April 14th, 2022 and Current Status

After Board approval of Permit 22-016, Applicant, the District and the MPRB signed the cooperative agreement, Barr was tasked to perform the feasibility scope, and The feasibility work is complete and the report is being finalized.

Applicant, the District, and the MPRB have met several times to assess potential solutions and to narrow down the list to allow Barr to spend more time evaluating the most feasible options. Through this work, Barr has identified two sets of options, the first unilateral solutions within City of Edina boundaries and the second downgradient, within the City of Minneapolis. The full list can be viewed in the draft feasibility study, which is attached to this memo.

The modeling that Barr has performed for these options reveals that Applicant can meet the required no net increase in loading to Bde Maka Ska through a combination of two adjustments to the Morningside Project. By operating Weber Pond at a slightly higher normal water level and by predictively pumping ~1 foot of volume prior to smaller (~1 inch or less events) rain events, it can reduce TP and TSS at the point of discharge to Bde Maka Ska.

These two changes would reduce TP and TSS in the following ways. By operating the pond at a higher normal water level (860 rather than 859.0), less groundwater will flow into the pond, which reduces pollutant load and volume from groundwater from being conveyed downstream. Predictively pumping before smaller rain events creates more storage volume and higher time of retention, which allows for more settling of particles and nutrients. According to water quality modeling provided by Barr and confirmed by the District engineer, these changes combined will reduce TP discharge into Bde Maka Ska by 5.8 lbs., and TSS discharge by 1,605 lbs., on an annual basis from existing conditions. This means that not only does the result in a no net increase in TP loading to Bde Maka Ska compared to the existing condition, it goes beyond that to result in a net reduction in the load to Bde Maka Ska by ~6 lb. These two methods allow cleaner water to be pumped downstream rather than pumping immediately following storms because particles and nutrients do not have time to settle out.

In mid-September, Applicant met with the District and the MPRB to review the feasibility study results and to share its proposal and both District and MPRB staff support this direction because it meets the requirement of the permit condition.

Under the cooperative agreement, if Applicant meets the permit condition by means of a unilateral option, it must obtain District approval of a maintenance agreement for Weber Pond, a pumping plan, and a performance measurement and reporting regime. If the Board approves the requested permit amendment, the District Administrator will administer these further requirements.

Updated District Rule Analysis

As mentioned above, the Applicant is proposing to operate Weber Pond at a higher normal water level (NWL) than initially proposed, but still lower than the pre-Project NWL so that flood protection is still provided. In order to do this, minor grading changes need to be made so that the safety bench in the pond stays at the water's edge surrounding the pond. Because the original permit was reviewed and approved by the Board, these changes also need to be reviewed and approved by the Board through a permit amendment.

District Staff and Engineer have reviewed the updated plans and modeling for the proposed changes for compliance with the triggered rules of Erosion Control, Stormwater Management, and Floodplain Alteration. No changes are proposed that affect previously determined compliance with Erosion Control and Floodplain Alteration. As to the Stormwater Management rule, specifically, Applicant was asked to resubmit hydrologic & hydraulic modeling to show that downstream water levels at Bde Maka Ska will not increase. Per section 8(b) of the rule, no activity subject to this rule may alter a site in a manner that results in an increase in the bounce of water level for any downstream lake or wetland, beyond those specified in Table 1 of the Stormwater Management rule. For lakes, the rule does not permit any water level rise during the 1-, 10-, and 100-year design storms. Modeling shows that there will be no impact to water level Additionally, freeboard around Bde Maka Ska stormwater ponds will be preserved in the 100-year event.

Existing and Proposed Peak Water Levels for Bde Maka Ska for 24-Hour Storms			
	1-year	*10-year*	*100-year*
Existing	853.66	854.32	855.67
Proposed	853.64	854.30	855.66
Change ft	-0.02	-0.02	-0.01

Existing and Proposed Peak Water Levels for Bde Maka Ska for 10-Day Storms			
	1-year	*10-year*	*100-year*
Existing	853.80	854.70	856.15
Proposed	853.79	854.68	856.15
Change ft	-0.01	-0.02	0.00

Conclusion

At the October 20th, 2022 Board Meeting, staff will provide a briefing on the Morningside Flood Risk Reduction project permit amendment and an update on implementation of the Cooperative Agreement. The full results of the feasibility study and future partnership opportunities will be addressed at a future meeting.

Staff recommends permit amendment approval, incorporating the revised Weber Pond grading plans.

Supporting documents (list attachments):

- Cooperative agreement
- Summary of proposed changes, including revised plan sheets
- April 14th, 2022 Board Memo

COOPERATIVE AGREEMENT
Bde Maka Ska Water Quality Improvement Project

This Cooperative Agreement (“Agreement”) is made by and among the City of Edina, a statutory city ("Edina"); the Minneapolis Park and Recreation Board, a department of the City of Minneapolis governed independently by a board of nine elected commissioners (MPRB); and the Minnehaha Creek Watershed District, a watershed district with purposes and powers as set forth at Minnesota Statutes Chapters 103B and 103D (MCWD) (together, the “parties”).

Recitals

A. Pursuant to Minnesota Statutes §103D.345, Edina has applied to the MCWD for a permit to construct the Morningside Flood Risk Reduction project. The project purpose is to reduce flood risk for the Morningside neighborhood, in Edina, by excavating and expanding two stormwater detention ponds and employing a pumping regime to maintain flood storage and move water into the municipal conveyance system, and ultimately to Bde Maka Ska, in a manner that reserves storage capacity for large rainfall events.

B. The project as designed will reduce the annual load of total phosphorus by 34 pounds, and of total suspended solids (TSS) by 14,600 pounds, at the Edina municipal boundary. Before reaching Bde Maka Ska, the conveyance discharges into a system of stormwater treatment ponds adjacent to the lake, constructed in the 1990's in a cooperative effort of the City of Minneapolis, the MPRB and the MCWD, and maintained by the MCWD. As a result of the altered flow regime that Edina proposes, the MCWD has determined that these ponds will operate less efficiently, so that at the point of discharge into Bde Maka Ska, there will be a net increase in annual loading of about eight pounds of total phosphorus and about 1,900 pounds of TSS.

C. As a condition of the MCWD permit, Edina agrees to prevent this water quality impact by effecting an equivalent removal of total phosphorus from the stormwater flow within the catchment before its discharge into Bde Maka Ska. The need for a water quality project auxiliary to the Morningside project offers an opportunity for a project with a more substantial water quality benefit.

D. Bde Maka Ska is a highly valued public resource within Minneapolis and is subject to intensive recreational use. The MPRB and the MCWD prioritize the careful management of the lake for its water quality, its ecological health and its other beneficial uses. Their cooperative efforts over the past 30 years have served to substantially reduce phosphorus level within Bde Maka Ska and to maintain it at a level of quality exceeding state standards.

E. The parties wish to cooperate to identify and evaluate project options for Edina to meet the permit condition ("Edina project"), and for the parties together to achieve a more substantial water quality benefit for Bde Maka Ska ("cooperative project"). Accordingly, the parties enter into this Agreement, intending it to be legally binding.

Terms

1. Edina Commitment

a. Edina will provide for a durable structural or designed practice that reduces total phosphorus, at the point of discharge into Bde Maka Ska, by at least eight pounds per year. A "durable" practice is one that

is reliable, is designed for at least a 20-year life, can be measured for performance, and is subject to a legally enforceable maintenance operation. Edina will calculate the TSS flux to Bde Maka Ska, and the reduction in flux, resulting from the practice.

b. If the practice is not constructed pursuant to a subsequent agreement to which the MCWD is a party, the following terms apply:

(i) The practice design is subject to MCWD review and MCWD concurrence as to design performance and durability within the meaning of paragraph 1.a, before construction.

(ii) Edina and the MCWD will agree to a reasonable performance measurement and reporting regime. If the practice does not sustain a removal of eight pounds per year of total phosphorus at the point of discharge into Bde Maka Ska during the first ten years, Edina will take feasible steps to achieve that performance.

(iii) Edina and the MCWD will enter into a maintenance agreement by which Edina will provide for maintenance of the practice in perpetuity.

c. Edina's obligation under this section 1 arises on the MCWD's written determination and notice to the Parties that a cooperative project will not move forward. Edina's unilateral practice will be functional within 18 months of the notice date.

2. Commitments of the Parties

a. Each party will fulfill its obligations under this Agreement.

b. Each party will contribute technical and data resources, and coordinate in good faith, to support the feasibility scope under this Agreement with respect to the identification and assessment of both Edina and cooperative projects.

c. This Agreement does not commit a party to a cooperative project. However, each party recognizes that the public expenditure to be made hereunder, to identify and assess potential cooperative projects, rests on its representation that it is willing to contribute human and financial resources to implement such a project. Any binding commitment of the parties with respect to project implementation will be made by means of a further agreement.

d. In parallel to the feasibility work under this Agreement, the parties will review financing, funding and scheduling elements of a cooperative project. Each party will participate in good faith to: (i) determine, at a staff level, its capacity and willingness to participate in a cooperative project and (ii) share this information with the parties, in order to foster a timely and efficient transition to project implementation in the event the parties determine to proceed.

e. The MCWD, with the cooperation of the parties as it may request, will explore sources of external project funding or financing.

3. Feasibility Study

a. Edina will retain Barr Engineering to perform a feasibility review of both cooperative and unilateral practices. Edina will circulate a proposed scope of services for the parties' review and concurrence.

b. The scope of services will conform to the following:

(i) Barr will develop a proposed set of Edina and cooperative project alternatives for its assessment. The parties will consult to adjust and concur on the set of alternatives. The set will include Edina alternatives sufficient to provide a high level of certainty that a feasible Edina project exists if a cooperative project does not proceed.

(ii) Review of project alternatives will assess feasibility to a degree of confidence typical for such assessments. The review will consider, but not be limited to, the following:

- Technical function
- Operation and maintenance requirements
- Performance reliability (uncertainties surrounding 20-year operation)
- Site ownership, availability, existing encumbrances and potential use conflicts
- Permits and approvals needed
- Need for historic site or species of concern review
- Need for review of environmental site conditions

(iii) When Barr has assessed technical, siting and construction feasibility, the parties will consult to concur on deletion of infeasible alternatives. As to remaining alternatives, the scope will provide for the following:

- Conceptual design
- Expected performance (total phosphorus and TSS removal, other water quality benefits)
- Concept-level construction, operation and lifecycle cost estimates

(iv) The final feasibility report will be issued about six months from Barr's initiation of work.

c. Each party will be responsive to information or data requests from Barr, and will provide staff-level guidance as to feasibility questions within that party's control.

d. The assessment will include the following participation of the parties. The form in which engagements occur (in-person or remote meeting, correspondence, etc.) will be decided by informal party consensus. The parties will:

(i) Review and concur in the Barr scope of services.

(ii) Collaboratively identify and concur in the minimum sets of Edina and cooperative alternatives to be assessed.

(iii) Support Barr's work by providing information and data.

(iv) Review Barr's preliminary assessment and concur in elimination of infeasible alternatives prior to step 3.b(iii), above.

(v) Review Barr's draft feasibility report, provide comment, and consult on request of a party.

(vi) Review final report and consult to consider feasible project alternatives, select one or more preferred project(s), and frame process to determine desire to proceed on cooperative project and transition to project development.

e. Edina will provide for the Barr project-specific agreement to name the MCWD as a third-party beneficiary with respect to performance of the project-specific scope and duty of care. However, only Edina will direct Barr in the performance of the work.

f. Edina will provide in the Barr project-specific agreement that Barr retains no right of property in the final feasibility report or any products derivative thereof. All such materials will be public materials and no party will assert a property interest or copyright therein. The agreement may state that any reuse of such materials without written verification or adaptation by Barr for the specific purpose intended will be at the user's sole risk and without liability to Barr.

g. If, in performing the work, Barr requires from a party any data or information in which the party asserts an intellectual property right or a trade secret classification, the party will consult in good faith to determine how Barr may make use of the necessary data or information while the party's interest or legal duty is protected. A party shares data and information without representation or warranty including but not limited to a warranty of fitness, merchantability, accuracy or completeness.

4. Cost of Feasibility Assessment.

a. The Barr scope will be in the form of task lump sum or hourly not-to-exceed. The scope will separate tasks relating to Edina projects and those relating to cooperative projects, except that tasks common to both categories of project will indicate an appropriate allocation of cost to each category.

b. Edina will bear the cost of the feasibility review for Edina projects. Of the $68,900 cost of the feasibility review for cooperative projects, the MPRB will contribute $15,000, Edina will contribute $17,225, and the MCWD will contribute $36,675. Edina will be responsible for any cost in excess of that set forth in the Barr scope. On transmittal of the final feasibility report, Edina may invoice the MPRB and the MCWD for their reimbursement shares, which each will pay within 30 days.

c. Each party will bear the cost of its participation under the Agreement.

5. Parties Independent. This Agreement is not a joint powers agreement. No party hereto agrees to be responsible for the actions or omissions of another party within the meaning of Minnesota Statutes §471.59, subdivision 1a(a). No employee, representative or contractor of a party acts in any respect as the agent or representative of another party. Nothing in this Agreement limits or waives any immunity, defense or liability limit with respect to any other party or any third party, nor does anything herein create any right in any third party.

6. Public Communication. Each party may communicate with the public as to the Agreement and the work being performed under it, but will note the participation and collaboration of the other parties. At the request of a party, the parties will consult to consider common public communication activity.

7. Party Representatives. The following individuals will represent their party under this Agreement. By executing this Agreement, each party delegates to its representative the authority to take or direct all actions of its party for which the Agreement provides. A party may change its representative by advising the other parties in writing.

City of Edina: Ross Bintner, Engineering Services Manager, 952-903-5713

Minnehaha Creek Watershed District: James Wisker, District Administrator, 952-641-4509

Minneapolis Park and Recreation Board: Debra Pilger, Director, Environmental/Equipment Services, 612-313-7728

8. Legally Binding. The Agreement incorporates the above Recitals, is made for mutual consideration and is legally binding on the parties.

9. Effective Date; Termination. The Agreement is effective when fully executed by the parties and terminates six months after delivery of the final feasibility report.

Approved for Form & Execution
MINNEAPOLIS PARK & RECREATION BOARD

BY: Brian F. Rice (May 25, 2022 14:20 CDT) **DATE:** May 25, 2022
Brian Rice, Attorney

BY: Meg Forney (May 25, 2022 15:15 CDT) **DATE:** May 25, 2022
Meg Forney, President

BY: Jennifer Ringold (Jun 1, 2022 18:05 CDT) **DATE:** Jun 1, 2022
Jennifer Ringold, Secretary

CITY of EDINA

BY: Scott Neal (Jun 6, 2022 06:02 CDT) **DATE:** Jun 6, 2022
Scott Neal, City Manager

MINNEHAHA CREEK WATERSHED DISTRICT

Charles Holtman (Jun 6, 2022 12:31 CDT) **DATE:** Jun 6, 2022
MCWD Attorney

James Wisker (Jun 8, 2022 13:35 CDT) **DATE:** Jun 8, 2022
James Wisker, District Administrator

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BARR

Technical Memorandum

To: Abigail Ernst (MCWD)
From: Cory Anderson and Sarah Stratton
Subject: Summary of Clean Water Retrofit Alternative Proposed
Date: October 5, 2022
Project: 23/27-1869.02
c: Ross Bintner and Chad Millner (City of Edina), Rena Weis and Chris Meehan (Stantec), James Wisker and Kayla Westerlund (MCWD), Rachael Crabb and Deb Pilger (MPRB)

1 Introduction

The Morningside Flood Infrastructure Project was proposed in 2021 to reduce flood risk in the Morningside neighborhood in the northeast corner of the City of Edina. The project went through permitting with the Minnehaha Creek Watershed District (MCWD) and received an approval with some conditions on April 18, 2022 (reference (1)). The project is currently undergoing construction, and at the same time, the City of Edina, MCWD, and the Minneapolis Park and Recreation Board (MPRB) have been partnering to find an engineering solution to meet clean water goals as well as flood risk reduction goals. The work has focused on adding to or modifying the project such that the TP and TSS loading to Bde Maka Ska in Minneapolis is equal to or better than the existing condition, specified as an 8 pound per year reduction in TP loading to Bde Maka Ska, relative to the project Issued for Bid (IFB). As this group worked together, Alternative 1.F (described below) was identified as the best option to achieve the clean water goals in the short term, and this is summarized in a memo from Barr (reference (2)). This alternative does not negate the benefit of a continued larger coordinated effort to reduce loading to Bde Maka Ska even further.

2 Summary of Proposed Clean Water Retrofit Changes

Alternative 1.F is a combination of raising the proposed normal water level of Weber Pond and using the predictive pumping system not only for flood risk reduction, but also for managing water quality from runoff events. Alternative 1.F is more fully described in the memo from Barr (reference (2)) and is briefly summarized here.

In short, Alternative 1.F proposes increasing the normal water level in Weber Pond from 859.0 feet (current design) to 860.0 feet. This increase in normal water level has the effect of reducing the groundwater inflow to Weber Pond, and therefore reduces the overall volume of water and load of nutrients getting conveyed downstream. The expected groundwater inflow to the ponds in the Morningside neighborhood is expected to decrease from about 290 gpm on average to about 205 gpm on average. Grading modifications are required to accommodate this normal water level change so that

the safety bench in the pond stays at the water edge. The updated drawings that capture the grading changes and other associated changes are attached as Attachment 1.

Alternative 1.F also includes leveraging the pump station in a way that benefits water quality as well. The pump station can be used to draw the pond down a small amount (~1 foot) ahead of smaller storms (~1 inch or less events) to ensure that Weber Pond can store all of the runoff, and hold the water for an extended time to allow sediment and associated nutrients to settle before the pump station resumes operation. In this way, cleaner water will be pumped downstream either before or well after storms, rather than pumping water during or immediately following storms before sediment and nutrients can settle out as much. This approach has been approved as an effective water quality strategy in the Chesapeake Bay, for example, where nutrient loading is a significant concern (reference (3)).

Between these two approaches, the P8 modeling of the system suggests that implementing Alternative 1.F as part of the current project will achieve the goal of at least an 8 pound reduction in TP annually, and actually results in water quality to Bde Maka Ska that is slightly better than the existing condition (Table 2-1).

Table 2-1 TP and TSS Load Summary

Existing/ Proposed	TP (lbs/yr)		TSS (lbs/yr)	
	Crossing City Border	Into Bde Maka Ska	Crossing City Border	Into Bde Maka Ska
Proposed IFB	168.1	296.9	18,855	27,044
Proposed Retrofit (w/ Alt 1.F)	152.9	286.7	17,726	24,358
Difference	-15.2	**-10.2**	-1,129	**-2,686**

Additionally, the downstream impacts on Bde Maka Ska and the adjacent water quality ponds were checked for the storm events critical to MCWD. The summary for Bde Maka Ska is shown here in Table 2-2, which identifies that the project decreases peak flood levels of Bde Maka Ska for all of the events modeled.

The summary of peak water levels in the water quality ponds adjacent to Bde Maka Ska is shown in Table 2-3 and Table 2-4. One of the goals was to ensure that the homes adjacent to the ponds continue to have the same freeboard during 100-year events as they have now under existing condidtions. The modeling of the 100-year events shows that the project reduces peak levels and therefore actually improves freeboard.

Table 2-2 Peak Water Level in Bde Maka Ska

Existing/ Proposed	24-Hour Storms		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.6587	854.3189	855.6749
Proposed	853.6405	854.3035	855.6640
Difference	-0.0182	-0.0154	-0.0109
Existing/ Proposed	**10-Day Storms**		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.8009	854.6955	856.1541
Proposed	853.7910	854.6785	856.1527
Difference	-0.0099	-0.0170	-0.0014

* No predictive pumping was modeled prior to this event

Table 2-3 Peak Water Level in the South Water Quality Pond Adjacent to Bde Maka Ska

Existing/ Proposed	24-Hour Storms		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.8717	854.3582	855.6781
Proposed	853.8645	854.3750	855.6665
Difference	-0.0072	+0.0168	-0.0116
Existing/ Proposed	**10-Day Storms**		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.8037	854.6863	856.1616
Proposed	853.7945	854.6694	856.1554
Difference	-0.0092	-0.0169	-0.0062

* No predictive pumping was modeled prior to this event

Table 2-4 Peak Water Level in the North Water Quality Pond Adjacent to Bde Maka Ska

Existing/ Proposed	24-Hour Storms		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.6606	854.3179	855.6853
Proposed	853.6428	854.3026	855.6665
Difference	-0.0178	-0.0153	-0.0188
Existing/ Proposed	**10-Day Storms**		
	~99% ACE (1-yr)*	10% ACE (10-yr)	1% ACE (100-yr)
Existing	853.8030	854.6936	856.1818
Proposed	853.7934	854.6768	856.1554
Difference	-0.0096	-0.0168	-0.0264

* No predictive pumping was modeled prior to this event

3 Conclusion and Request for Approval

The City of Edina would like to make this proposed water quality improvement change to the project which was conditionally permitted in April 2022. This project update, implementing Alternative 1.F, requires some grading changes to the pond being excavated; therefore, we request written approval from MCWD noting that this change satisfactorily meets the permit conditions before the grading changes are made per the plans shown in Attachment 1.

4 References

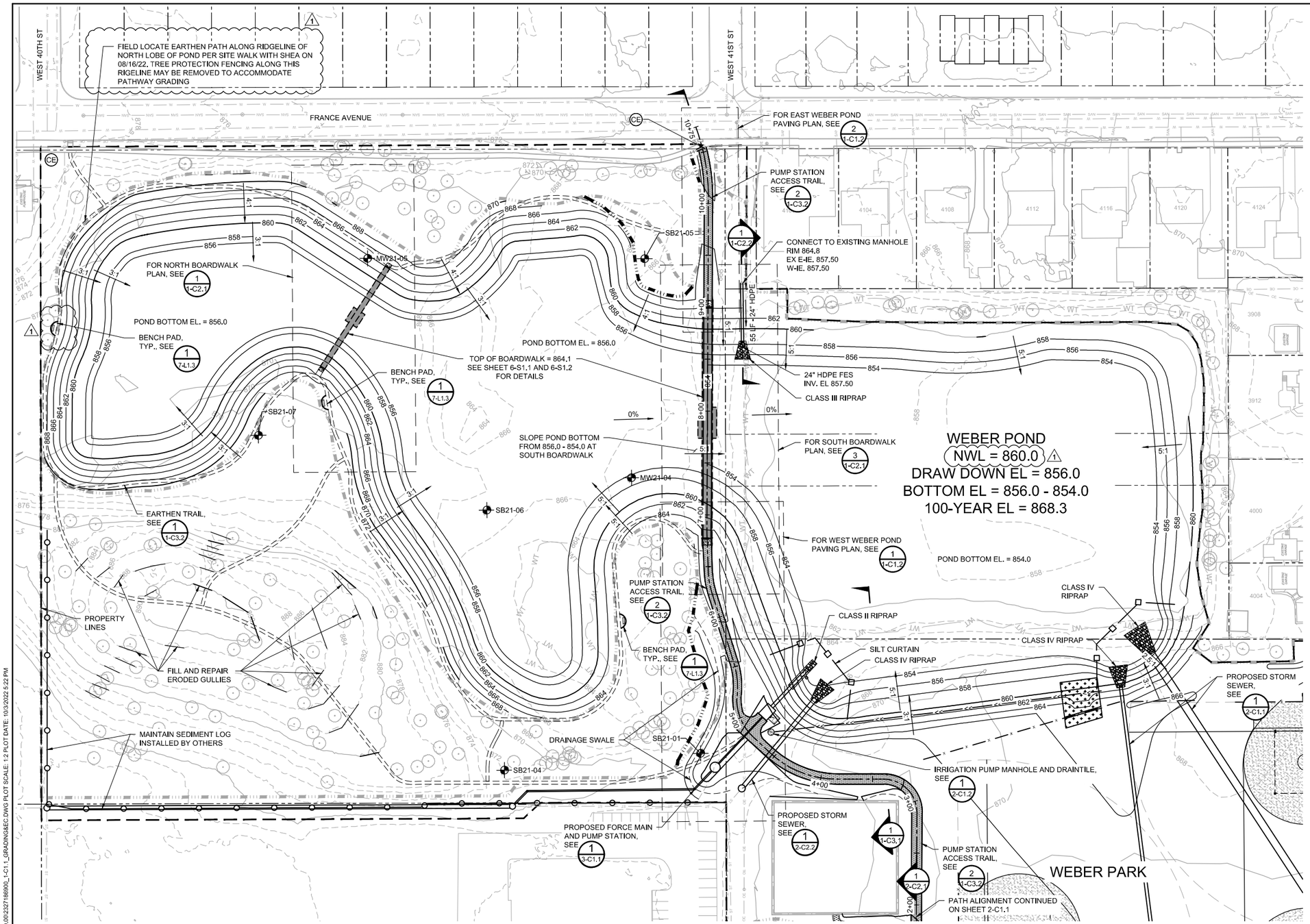
1. **Minnehaha Creek Watershed District.** *Notice of Conditional Approval for MCWD Permit Application #22-016: Morningside Flood Infrastructure Project.* April 18, 2022.

2. **Barr Engineering Co.** *DRAFT - Morningside Flood Infrastructure Project - Clean Water Retrofit Alternatives Evaluation.* October 5, 2022.

3. **OptiRTC.** *Summary of Chesapeake Bay Program Approval for CMAC for the Enhancement and Conversion of Existing Best Management Practices.* Boston, MA : s.n., November, 2016.

Attachment 1

Updated Drawings for Construction



EXISTING CONDITIONS LEGEND

- 10-FT CONTOUR
- 2-FT CONTOUR
- PROPERTY LINE
- WETLAND BOUNDARY
- STORM SEWER
- SANITARY SEWER
- GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- WATER MAIN
- FENCELINE
- FIBER OPTIC
- CURB
- TREE PROTECTION FENCING
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- STORM SEWER FLARED END SECTION
- SANITARY SEWER MANHOLE
- FIRE HYDRANT
- POTABLE WATER VALVE
- IRRIGATION SPRINKLER
- SIGN
- LIGHT POLE
- BOLLARDS
- DECIDUOUS TREE, PROTECT
- CONIFEROUS TREE, PROTECT
- SOIL BORING

CONSTRUCTION LEGEND

- CONSTRUCTION LIMITS
- 860 — 10-FT CONTOUR
- 858 — 2-FT CONTOUR
- FENCE
- MULCH/ROCK SEDIMENT CONTROL LOG — 2 0-G1.2
- SILT CURTAIN — 3 0-G1.2
- INLET PROTECTION — 1 0-G1.4
- TREE PROTECTION FENCING — 5 0-G1.3
- TURF REINFORCEMENT MAT — 3 1-C3.2
- BITUMINOUS PAVEMENT
- BITUMINOUS PUMP STATION ACCESS TRAIL
- CONCRETE
- DRAINTILE
- CONCRETE CURB AND GUTTER
- CONSTRUCTION ENTRANCE (CE) — 3 0-G1.3

NOTES:

1) SALVAGE TOPSOIL ENCOUNTERED DURING EXCAVATION
2) SEE SHEETS 2-C2.2 FOR STORM SEWER PLAN AND PROFILES
3) SEE SHEET 3-C1.1 FOR SEWER NEAR PUMP STATION AND FORCE MAIN

1 - PLAN: WEBER POND AND WOODS GRADING AND EROSION CONTROL

0 50 100
SCALE IN FEET

ISSUED FOR BID

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
1	ADB2	MAK	CDA	010/03/2022	MODIFIED NWL & BENCH, ADDED NOTE FOR EARTHEN TRAIL

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.

PRINTED NAME CORY ANDERSON
SIGNATURE
DATE 10/03/2022 LICENSE # 51305

CLIENT								
BID	04/01/22							
CONSTRUCTION		10/03/22						
RELEASED TO/FOR	0	1	2	3	4	5	6	DATE RELEASED

BARR
Corporate Headquarters: Minneapolis, Minnesota
Ph: 1-800-632-2277

Project Office:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435
Ph: 1-800-632-2277
Fax: (952) 832-2601
www.barr.com

Scale	AS SHOWN
Date	04/01/2022
Drawn	GWB
Checked	MAK
Designed	BARR
Approved	CDA

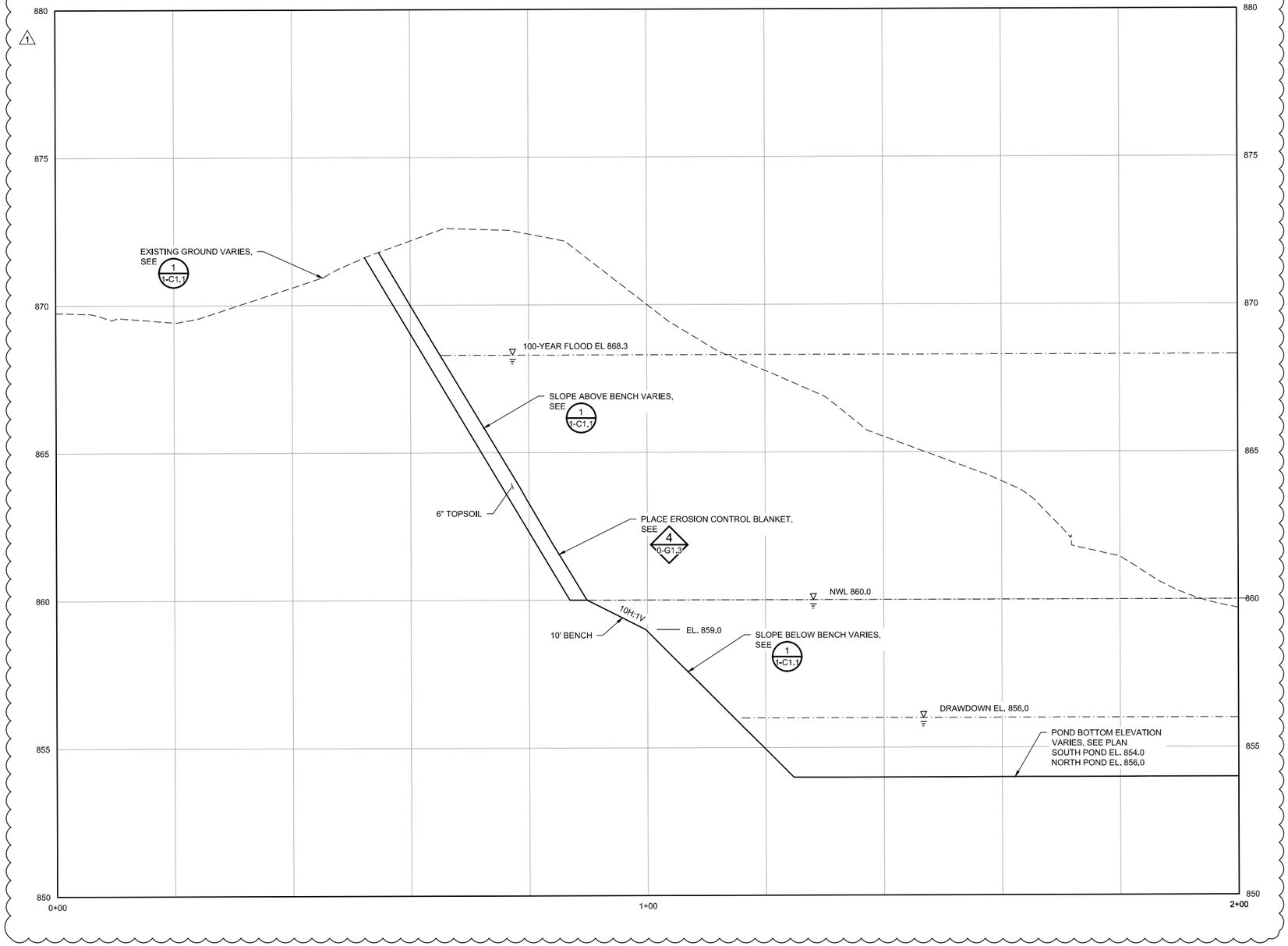
THE CITY OF EDINA
EDINA, MN

MORNINGSIDE FLOOD RISK REDUCTION
EDINA, MN

AREA 1: WEBER POND & WOODS
GRADING AND EROSION CONTROL

BARR PROJECT No. 23/27-1869.00
CLIENT PROJECT No.
DWG. No. 1-C1.1
REV. No. 1

CADD USER: Alec D. Bateman FILE: M:\DESIGN\23271869.00\23271869001-C1.1_GRADING&EC.DWG PLOT SCALE: 1:2 PLOT DATE: 10/3/2022 5:22 PM



NOTE: SEE SHEET 1-L1.0 FOR STABILIZATION PLAN.

1 / - SECTION: WEBER POND TYPICAL SECTION

HORIZONTAL SCALE IN FEET: 0 10 20

VERTICAL SCALE IN FEET: 0 2 4

ISSUED FOR BID

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
1	ADB2	MAK	CDA	10/03/2022	MODIFIED NWL AND BENCH ELEVATION IN POND

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.

PRINTED NAME CORY ANDERSON

SIGNATURE

DATE 10/03/2022 LICENSE # 51305

CLIENT	
BID	04/01/22
CONSTRUCTION	10/03/22

RELEASED TO/FOR

0	1	2	3	4	5	6

DATE RELEASED

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Date	04/01/2022
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Approved	CDA

THE CITY OF EDINA
EDINA, MN

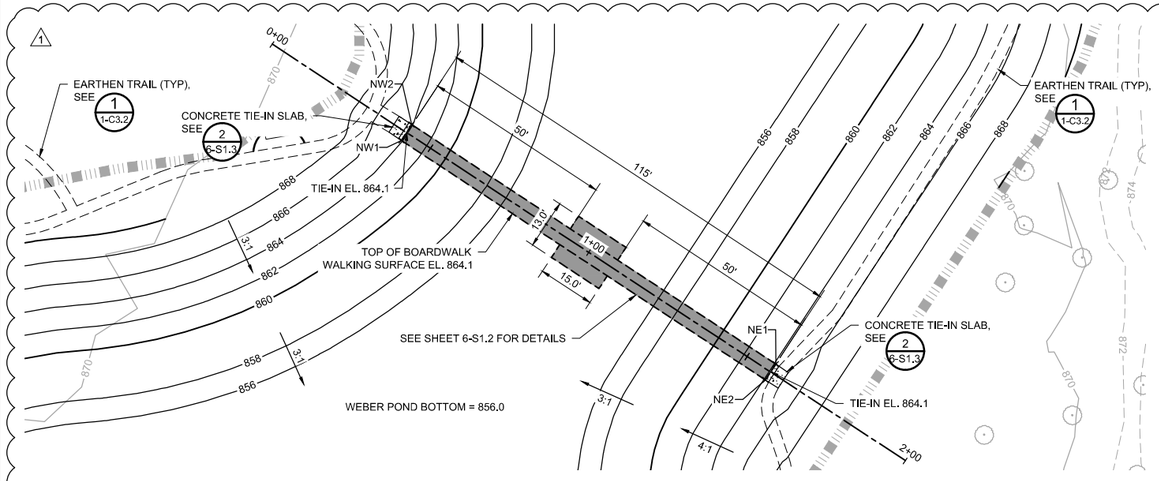
MORNINGSIDE FLOOD RISK REDUCTION
EDINA, MN

AREA 1: WEBER POND & WOODS
TYPICAL SECTION

BARR PROJECT No. 23/27-1869.00
CLIENT PROJECT No.
DWG. No. 1-C3.1
REV. No. 1

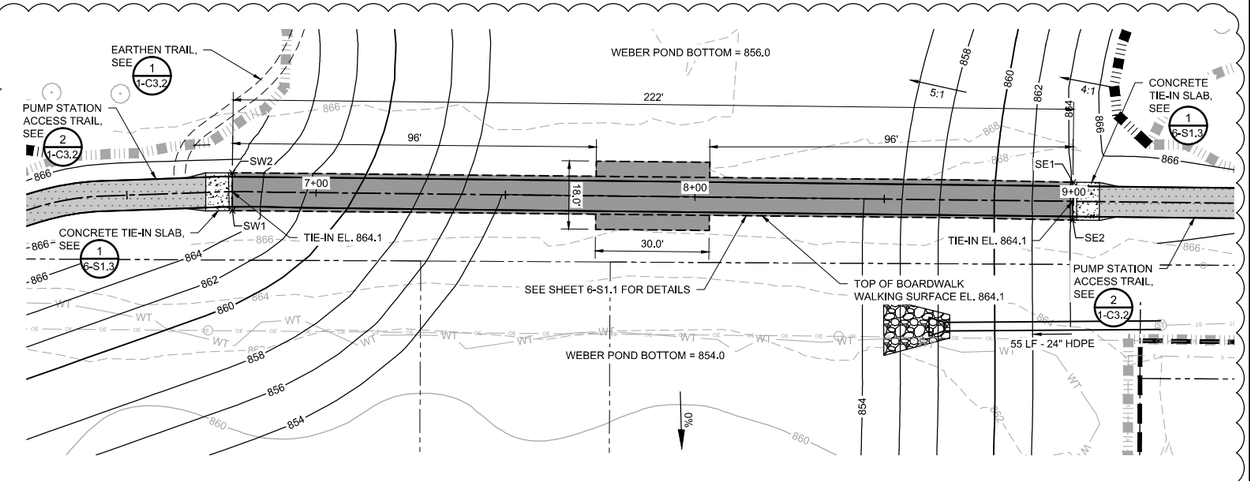
BOARDWALK POINTS				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1002	NW1	864.10	150576.1855	513815.4676
1003	NW2	864.10	150580.4008	513818.1575
1004	NE1	864.10	150517.2071	513914.2749
1005	NE2	864.10	150513.0292	513911.5281

BOARDWALK POINTS				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1010	SW1	864.10	150204.3777	513650.0610
1011	SW2	864.10	150214.3771	513650.0460
1012	SE1	864.10	150211.8636	513871.9602
1013	SE2	864.10	150201.8579	513871.8624



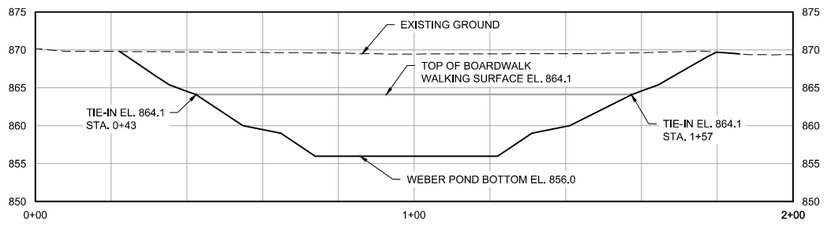
1 - PLAN: NORTH BOARDWALK

0 20 40 SCALE IN FEET



3 - PLAN: SOUTH BOARDWALK

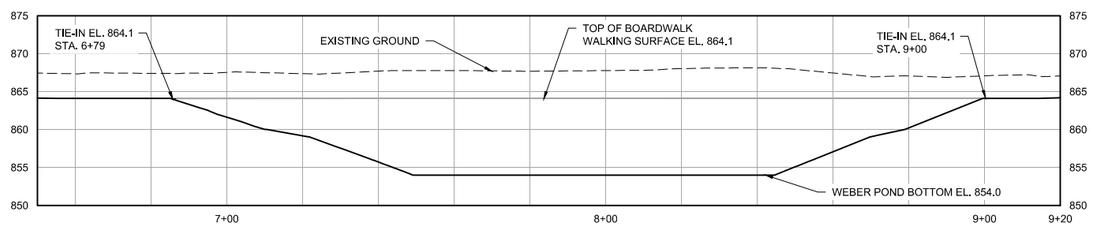
0 20 40 SCALE IN FEET



2 - PROFILE: NORTH BOARDWALK

0 20 40 HORIZONTAL SCALE IN FEET

0 10 20 VERTICAL SCALE IN FEET



4 - PROFILE: SOUTH BOARDWALK

0 20 40 HORIZONTAL SCALE IN FEET

0 10 20 VERTICAL SCALE IN FEET

ISSUED FOR BID

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
1	ADB2	MAK	CDA	10/03/2022	MODIFIED WEBER POND BENCH AND NWL

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.

PRINTED NAME CORY ANDERSON

SIGNATURE

DATE 10/03/2022 LICENSE # 51305

CLIENT							
BID	04/01/22						
CONSTRUCTION		10/03/22					
RELEASED TO/FOR	0	1	2	3	4	5	6
DATE RELEASED							

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Scale	AS SHOWN
Date	04/01/2022
Drawn	RLB2
Checked	MAK
Designed	BARR
Approved	CDA

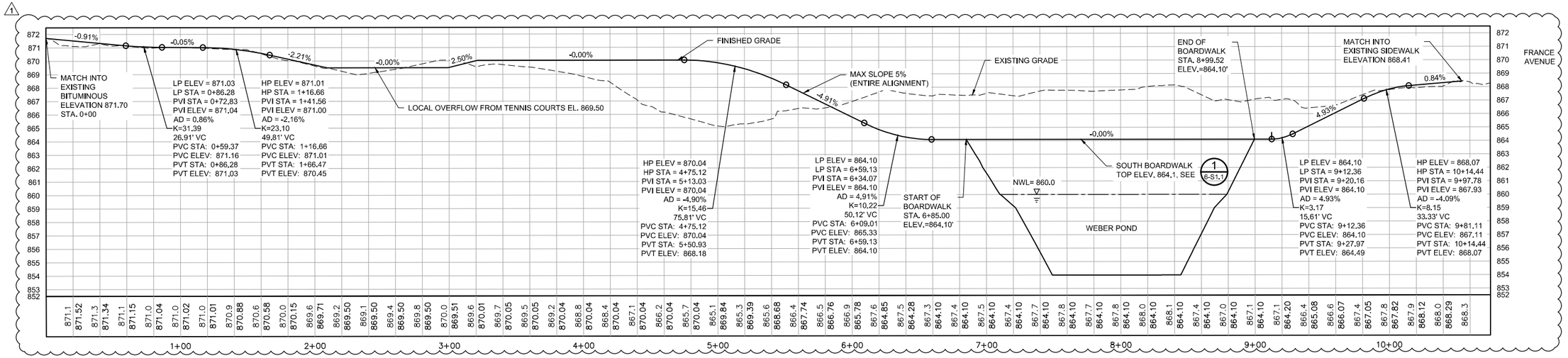
THE CITY OF EDINA

EDINA, MN

MORNINGSIDE FLOOD RISK REDUCTION
EDINA, MN

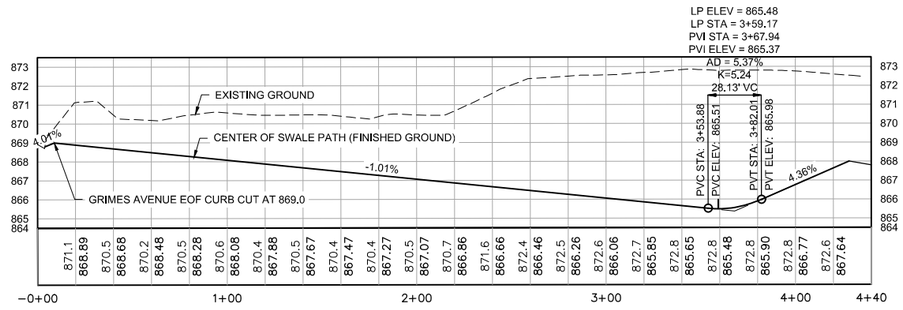
AREA 1: WEBER POND & WOODS
BOARDWALK PLAN AND PROFILES

BARR PROJECT No.	
23/27-1869.00	
CLIENT PROJECT No.	
DWG. No.	REV. No.
1-C2.1	1



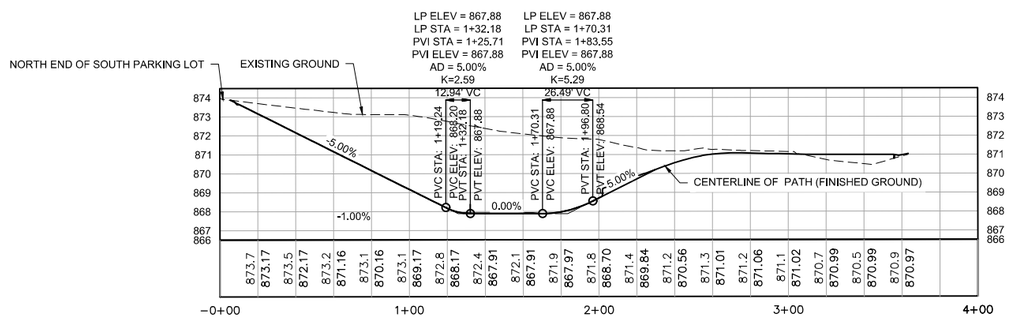
1 2-C1.1 PROFILE: BITUMINOUS PATH FROM NORTH PARKING LOT TO FRANCE AVENUE

HORIZONTAL SCALE IN FEET 0 40 80 — VERTICAL SCALE IN FEET 0 4 8



2 2-C1.1 PROFILE: GRIMES AVENUE TO BALL FIELDS

HORIZONTAL SCALE IN FEET 0 40 80 — VERTICAL SCALE IN FEET 0 4 8



3 2-C1.1 PROFILE: SOUTH PARKING LOT TO NORTH PARK AREA

HORIZONTAL SCALE IN FEET 0 40 80 — VERTICAL SCALE IN FEET 0 4 8

ISSUED FOR BID

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
1	ADB2	MAK	CDA	06/22/2022	REVISED BITUMINOUS PATH TIE-IN

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.

PRINTED NAME CORY ANDERSON

SIGNATURE

DATE 06/22/2022 LICENSE # 51305

CLIENT	
BID	04/01/22
CONSTRUCTION	06/22/22
RECORD	

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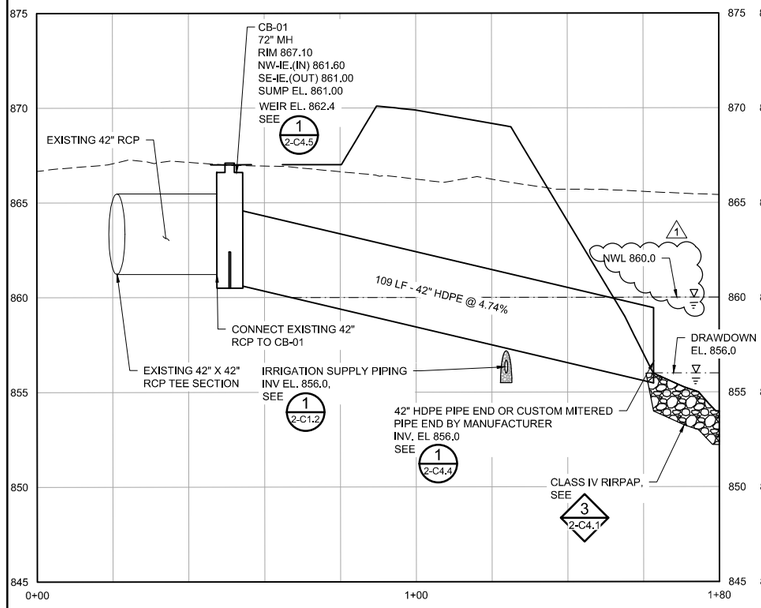
Designed	BARR
Approved	CDA

THE CITY OF EDINA
EDINA, MN

MORNINGSIDE FLOOD RISK REDUCTION
EDINA, MN

AREA 2: WEBER PARK
PATH PROFILES

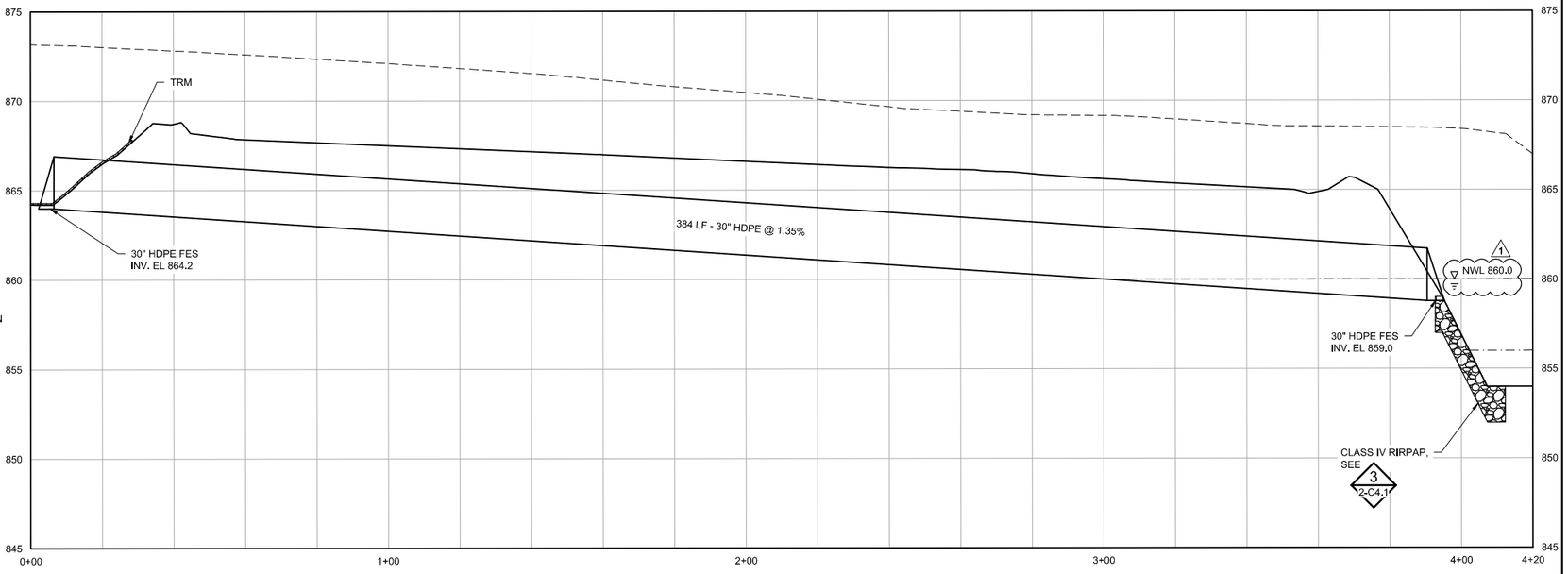
BARR PROJECT No. 23/27-1869.00
CLIENT PROJECT No.
DWG. No. 2-C2.1
REV. No. 1



1 - PROFILE: WEBER STORM SEWER PROFILE 1

0 20 40 HORIZONTAL SCALE IN FEET

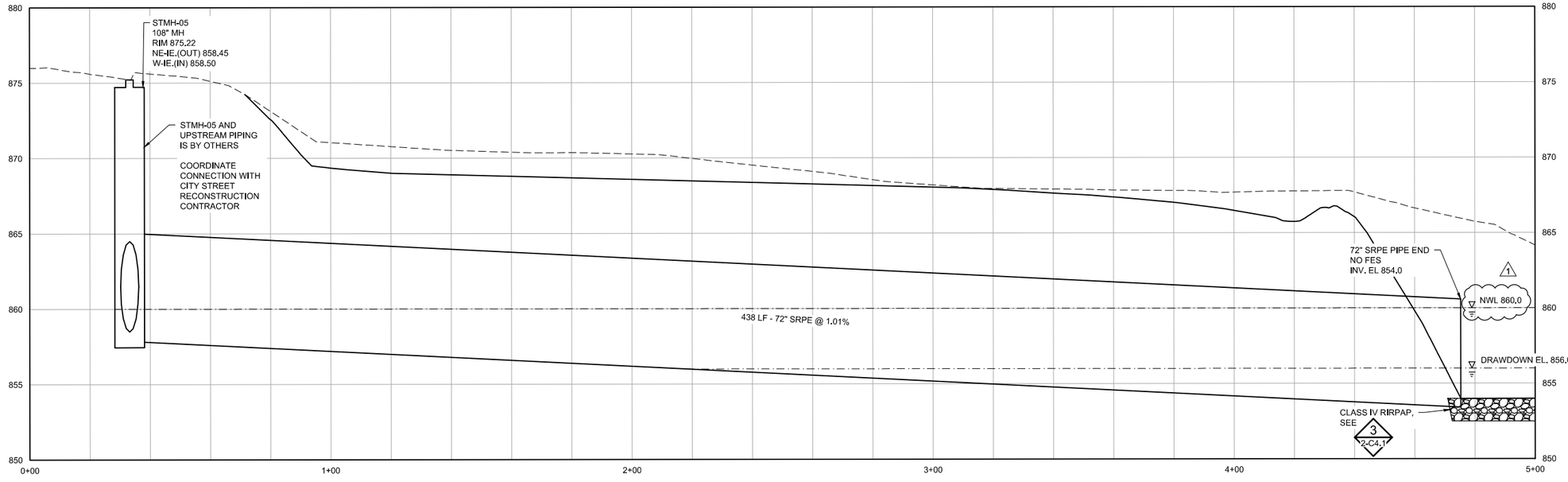
0 4 8 VERTICAL SCALE IN FEET



2 - PROFILE: WEBER STORM SEWER PROFILE 2

0 20 40 HORIZONTAL SCALE IN FEET

0 4 8 VERTICAL SCALE IN FEET



3 - PROFILE: WEBER STORM SEWER PROFILE 3

0 20 40 HORIZONTAL SCALE IN FEET

0 4 8 VERTICAL SCALE IN FEET

ISSUED FOR BID

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
1	ADB2	MAK	CDA	10/03/2022	MODIFIED NWL AND BENCH ELEVATION IN POND

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CONSTRUCTION		10/03/22						
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Approved	CDA

THE CITY OF EDINA
EDINA, MN

MORNINGSIDE FLOOD RISK REDUCTION
EDINA, MN

AREA 2: WEBER PARK
STORM SEWER PROFILES

BARR PROJECT No.	23/27-1869.00
CLIENT PROJECT No.	
DWG. No.	2-C2.2
REV. No.	1