



Bassett Creek Watershed Management Commission

Regular Meeting
Thursday October 19, 2017
8:30 – 11:00 a.m.

Council Conference Room, Golden Valley City Hall, Golden Valley, MN

AGENDA

1. CALL TO ORDER and ROLL CALL

2. **CITIZEN FORUM ON NON-AGENDA ITEMS** - *Citizens may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, with the exception of referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

3. APPROVAL OF AGENDA

4. CONSENT AGENDA

- A. Approval of Minutes – September 21, 2017 Commission Meeting
- B. Approval of October 2017 Financial Report
- C. Approval of Payment of Invoices
 - i. Keystone Waters, LLC – September Administrator Services
 - ii. Keystone Waters, LLC – September Meeting Materials Distribution Expenses
 - iii. Barr Engineering – September 2017 Engineering Services
 - iv. Triple D Espresso – October 2017 Meeting Refreshments
 - v. Triple D Espresso – Chloride Training Breakfast/Lunch
 - vi. Wenck – September 2017 WOMP Monitoring
 - vii. Wenck – September Routine Lake Monitoring
 - viii. Lawn Chair Gardener – September 2017 Administrative and Education Services
 - ix. Kennedy & Graven – August Legal Services
 - x. ECM – Public Hearing Legal Notice Publication
 - xi. Finance and Commerce – Public Hearing Legal Notice Publication
- D. Approval to Reimburse City of Crystal for North Branch Bassett Creek Channel Maintenance Project
- E. Approval of Metro Transit C Line Bus Rapid Transit Project, Minneapolis

5. BUSINESS

- A. Consider Approval of 90% Plans for Main Stem Erosion Repair Project (CIP: 2017CR-M), Minneapolis
- B. Consider Approval of Agreement with Wenck Associates for Assistance with Review of Local Water Management Plans
- C. Consider Revision to Feasibility Study Scope and Budget for DeCola Ponds B & C Improvement Project (BC-2, 3, 8)
- D. Consider Approval of Recommendations of the Aquatic Plant Management/Aquatic Invasive Species Committee
- E. Consider Approval of Technical Advisory Committee Recommendations
- F. Consider Approval of Administrator's Attendance at Minnesota Association of Watershed District Annual Meeting

6. COMMUNICATIONS

- A. Administrator's Report
 - i. Report on Winter Maintenance Workshop
 - ii. Reminder of November's WEDNESDAY Commission Meeting
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
- F. Legal Counsel
- G. Engineer

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>
- B. Grant Tracking Summary and Spreadsheet
- C. Letter to Commission Regarding Plymouth Creek Restoration Project
- D. Minnesota Association of Watershed Districts Annual Meeting
- E. Hennepin County Level II Performance Review Results
- F. WCA Notice of Decision, Golden Valley

8. ADJOURNMENT

Upcoming Meetings & Events

- Sidewalk and Parking Lot Winter Maintenance Training Course: Friday October 13th, 8:30 a.m. – 1:30 p.m., Crystal Community Center
- BCWMC Regular Meeting: WEDNESDAY November 15, 8:30 a.m., Golden Valley City Hall



Bassett Creek Watershed Management Commission

AGENDA MEMO

Date: October 11, 2017

To: BCWMC Commissioners

From: Laura Jester, Administrator

RE: **Background Information for 10/19/17 BCWMC Meeting**

1. **CALL TO ORDER and ROLL CALL**
2. **CITIZEN FORUM ON NON-AGENDA ITEMS**
3. **APPROVAL OF AGENDA – ACTION ITEM with attachment**
4. **CONSENT AGENDA**
 - A. Approval of Minutes – September 21, 2017 Commission meeting- **ACTION ITEM with attachment**
 - B. Approval of October 2017 Financial Report - **ACTION ITEM with attachment**
 - C. Approval of Payment of Invoices - **ACTION ITEM with attachments (online) – I have reviewed the following invoices and recommend approval of payment.**
 - i. Keystone Waters, LLC – September Administrator Services
 - ii. Keystone Waters, LLC – September Meeting Materials Distribution Expenses
 - iii. Barr Engineering – September 2017 Engineering Services
 - iv. Triple D Espresso – October 2017 Meeting Refreshments
 - v. Triple D Espresso – Chloride Training Breakfast/Lunch
 - vi. Wenck – September 2017 WOMP Monitoring
 - vii. Wenck – September Routine Lake Monitoring
 - viii. Lawn Chair Gardener – September 2017 Administrative and Education Services
 - ix. Kennedy & Graven – August Legal Services
 - x. ECM – Public Hearing Legal Notice Publication
 - xi. Finance and Commerce – Public Hearing Legal Notice Publication
 - D. Approval to Reimburse City of Crystal for North Branch Bassett Creek Channel Maintenance Project – **ACTION ITEM with attachment** – *At their meeting in November 2015, the Commission entered an [agreement](#) with the City of Crystal to use Channel Maintenance Funds to repair an eroding bank on the North Branch of Bassett Creek. The project is complete and the city is requesting final reimbursement. Staff recommends approval.*
 - E. Approval of Metro Transit C Line Bus Rapid Transit Project, Minneapolis – **ACTION ITEM with attachment** - *The proposed project is partially located in the Bassett Creek Main Stem subwatershed along Penn Avenue and consists of construction of a new Bus Rapid Transit (BRT). The proposed work includes intersection and roadway reconstruction, and construction of bus station platforms at 11 intersections resulting in 5.5 acres of disturbance. The proposed project results in a decrease in impervious surfaces of 0.4 acres and does not involve work in the floodplain. Staff recommends approval with some comments in the attached memo.*
5. **BUSINESS**
 - A. Consider Approval of 90% Plans for Main Stem Erosion Repair Project (CIP: 2017CR-M), Minneapolis – **ACTION ITEM with attachment** – *At their meeting in August, the Commission approved the 50% design plans for this project, as prepared by Barr Engineering. 90% plans will be presented for consideration at this meeting including estimated project expenses, and a report on input gathered at the public open house.*

- B. Consider Approval of Agreement with Wenck Associates for Assistance with Review of Local Water Management Plans – **ACTION ITEM with attachment** – *At their meeting in July Commissioners were informed that the City of Minnetonka hired Barr Engineering to develop the city’s local water management plan (LWMP) and were reminded that Golden Valley also hired Barr to develop their LWMP. The Commission is required to review LWMPs for consistency with the Watershed Plan. This activity is typically performed by the Commission Engineer. Commissioners expressed concern that in this case, the Commission Engineer (Barr) would be reviewing a plan prepared by Barr. They briefly discussed alternatives. Commissioners indicated that one possible action would be to have me review the bulk of these city’s plans and hire an outside consultant to assist with review of the technical aspects of the plans. Attached for the Commission’s consideration is a simple agreement between the Commission and Wenck Associates to perform this technical review, as needed. Staff recommends approval of the agreement at a cost not to exceed \$6,000.*

- C. Consider Revision to Feasibility Study Scope and Budget for DeCola Ponds B & C Improvement Project (BC-2, 3, 8) – **ACTION ITEM with attachment** - *At their meeting last month, the Commission approved a proposal to complete a feasibility study for the DeCola Ponds B & C Improvement Project, with amendments. One of the amendments was to remove soil testing from the study due to liability concerns at the time. After discussions with various entities, staff recommends revising the scope and budget of the study to include soil testing and development of a soil testing work plan for submittal to the MPCA.*

- D. Consider Approval of Recommendations of the Aquatic Plant Management/Aquatic Invasive Species Committee – **ACTION ITEM see #6E attachment from 9/21/17 meeting** – HELD FROM SEPT MEETING: *At the July 20th meeting, the Commission began reviewing and discussing recommendations by the APM/AIS committee. At that meeting, recommendations #1 - #5 were approved. At this meeting, the Commission should continue discussing committee recommendations.*

- E. Consider Approval of Technical Advisory Committee Recommendations – **ACTION ITEM see #6C from 9/21/17 meeting** - *At their meeting last month the Commission approved TAC recommendations #1 and #2 but did not have time to address items #3 and #4. Staff recommends approval of these recommendations.*

- F. Consider Approval of Administrator’s Attendance at Minnesota Association of Watershed District Annual Meeting – **ACTION ITEM with attachment** (full program and registration documents online [here](#)) – *Again this year I am seeking approval to attend the MAWD conference Nov 30 – Dec 1 in Alexandria, MN. Costs would include conference registration (\$200), one night’s lodging (\$98), mileage (\$143), and time attending sessions (up to 16 hours or \$1,120) for a total of \$1,561. These costs would fit within the “Administrator” budget line.*

6. COMMUNICATIONS

- A. Administrator’s Report - **INFORMATION ITEM with attachment**
 - i. Report on Winter Maintenance Workshop
 - ii. Reminder of November’s WEDNESDAY Commission Meeting
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
- F. Legal Counsel
- G. Engineer

7. INFORMATION ONLY (Information online only)

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8. ADJOURNMENT

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- BCWMC Regular Meeting: WEDNESDAY November 15, 8:30 a.m., Golden Valley City Hall



Item 4A.
BCWMC 10-19-17

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday, September 21, 2017
8:30 a.m.
Golden Valley City Hall, Golden Valley MN

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Guy Mueller	<i>Absent</i>	Mark Ray
Golden Valley	Stacy Harwell <i>[voting member first half]</i>	Jane McDonald Black <i>[voting member second half]</i>	Eric Eckman
Medicine Lake	Clint Carlson	<i>Absent</i>	<i>Absent</i>
Minneapolis	Michael Welch	NA	<i>Absent</i>
Minnetonka	Mike Fruen	<i>Absent</i>	<i>Absent</i>
New Hope	<i>Absent</i>	Pat Crough	Megan Albert
Plymouth	Jim Prom <i>[voting member first half]</i>	John Byrnes <i>[voting member second half]</i>	Derek Asche
Robbinsdale	Michael Scanlan	<i>Absent</i>	Richard McCoy, Marta Roser
St. Louis Park	Jim De Lambert	<i>Absent</i>	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler, Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener		
Legal Counsel	Troy Gilchrist, Kennedy & Graven		
Presenters/ Guests/Public	Amy Thiel, Kuit Excavating and Mr. Chuck Schmidt, Crystal resident		

1. CALL TO ORDER and ROLL CALL

On Thursday, September 21, 2017 at 8:30 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Chair de Lambert called to order the meeting of the Bassett Creek Watershed Management Commission (BCWMC) and asked for roll call to be taken.

2. CITIZEN FORUM ON NON-AGENDA ITEMS

Chair de Lambert reported that Alternative Commissioner Gary Holter suffered a heart attack and is recuperating. Administrator Jester distributed a card for Commissioners to sign.

3. APPROVAL OF AGENDA

MOTION: Commissioner Prom moved to approve the agenda. Commissioner Mueller seconded the motion. Upon a vote, the motion carried 9-0.

4. CONSENT AGENDA

The following items were approved as part of the consent agenda: the August 17, 2017 Commission Meeting Minutes, the September 2017 Financial Report, the payment of invoices, approval to Reimburse City of Golden Valley for Main Stem Restoration CIP Project.

The general and construction account balances reported in the September 2017 Financial Report are as follows:

Checking Account Balance	\$560,331.58
TOTAL GENERAL FUND BALANCE	\$560,331.58
TOTAL CASH & INVESTMENTS ON-HAND (9/12/17)	\$3,368,666.59
CIP Projects Levied – Budget Remaining	(4,381,556.09)
Closed Projects Remaining Balance	(\$1,012,889.50)
2012-2016 Anticipated Tax Levy Revenue	\$10,014.74
2017 Anticipated Tax Levy Revenue	\$643,220.55
Anticipated Closed Project Balance	(\$359,654.21)

MOTION: Commissioner Prom moved to approve the consent agenda. Alternate Commissioner Crough seconded the motion. Upon a vote, the motion carried 9-0.

5. PUBLIC HEARING**A. Receive Comments on Proposed 2018 CIP Project – Bassett Creek Park Pond Phase I Dredging Project: Winnetka Pond Dredging (BCP-2)**

The public hearing opened at 8:36 a.m. Commission Engineer Chandler gave a brief presentation with an overview of the Winnetka Pond (East) Dredging Project. She noted that reasons for the project include reducing sediment

loading, improving wildlife habitat, and maintaining flood control functions of the pond. The project is estimated to reduce total phosphorus loading to North Branch Bassett Creek by 7.1 lbs/yr (according to the P8 model) or 51.7 lbs/yr (according to professional judgment calculations). Total suspended solids loading reduction is estimated at 1,823 lbs/yr as per the P8 model. There will also be a reduction in bacterial loading. The 30-yr annualized cost based on the Commission Engineer's professional judgment loading reduction will be \$960/lb of phosphorus. Several stakeholder meetings have been held. Most of the cost of the project (\$913,000) is for the dredging.

Ms. Theil from an excavating company asked about construction timing. Engineer Chandler responded that the project construction is slated to happen in 2018. The city will prefer to work over the winter, but it depends on the preferred timing of the hired construction company.

Commissioner Harwell asked how dredging improves flood storage. Engineer Chandler explained that the sediment is accumulating and it is near the normal water level.

Mr. Schmidt brought up concerns about runoff from railroad property northeast of the pond. He noted that one reason why the pond needs to be dredged is because a large gully has formed along the railroad which continues to the pond. He noted that sand, sediment, branches and debris accumulate in the pond partially from the gully. Mr. Ray responded that the railroad has been notified of the gully and potential impacts to the tracks, but the city has no jurisdiction and cannot compel them to act. Mr. Schmidt responded that it would make sense to remedy this situation before pond dredging starts. Mr. Schmidt also told the Commission about another ditch that eventually drains into the North Branch of Bassett Creek and that sand and debris are washing down from that area as well.

Commissioner Harwell thanked Mr. Schmidt for coming and is wondering if there are creative solutions to take care of problems that are happening on railroad property. The response was that the city will keep trying to get the railroad to act and the city may look into different ways to design the project. Mr. Schmidt also remarked on the size of the grate spacing at the pond's outlet. Engineer Chandler agreed that a different outlet design could be considered in coordination with the city's project design.

The public hearing was closed at 9:02 a.m.

6. BUSINESS

A. Consider Approval of Resolution 17-06 Ordering 2018 Improvement

Administrator Jester described the various pieces of the resolution. She walked through a memo with her recommendation to request a final 2018 levy of \$1,346,815, the same as the maximum levy submitted to the County earlier in the year. She also noted that adoption of the resolution includes approval of an agreement with the City of Crystal to implement the project. She pointed out that the agreement includes language noting that although the city assumes responsibility for future maintenance of the project, it doesn't preclude the city from requesting CIP funds for a future dredging project. Administrator Jester indicated this language is slightly different from previous agreements with cities because it's the first CIP project that involves dredging a pond.

Mr. Asche noted that previous CIP projects have involved pond construction and dredging and that no similar language was included in agreements with those cities. He noted the City of Plymouth has already dredged West Medicine Lake Pond (which was installed as a BCWMC CIP project) at a cost of \$200,000 and that it needs to be dredged again. He wondered if this agreement sets a precedence and expectations of cities being responsible for on-going maintenance of CIP projects. Commission Engineer Chandler noted that ponds on the BCWMC trunk system such as Bassett Creek Park Pond, Winnetka Pond, and West Medicine Lake Pond are under BCWMC's purview.

Commissioner Welch noted that language in the agreement with Crystal simply indicates that this pond is not ineligible for future CIP funding. He noted that if dredging this pond or a pond in Plymouth on the trunk system was presented to the Commission for CIP funding, they would be eligible for consideration. Attorney Gilchrist echoed Commissioner Welch by stating the language in the agreement doesn't obligate the Commission to do something in

the future, that the new language should be what's been assumed with past agreements, and that cities can request future CIP funds for large projects in the same area.

This comment was followed by a discussion about whether this agreement language is a policy change. Commissioner Carlson asked whether this means the city is ultimately responsible. Attorney Gilchrist clarified that the Commission has a limited role in these projects. The new language says Crystal isn't precluded from coming back to the Commission. Commissioner Harwell thought this item will need future discussion so there is a clear understanding. Administrator Jester noted that one of the CIP "gatekeeper questions" is whether or not the project is on the BCWMC trunk system. Commissioner Scanlan recommended that the TAC discuss and define "maintenance." Commissioner Welch responded that "maintenance" can't be always defined, but the policy issue can be discussed in the future. He then stated that he was more concerned with buffer maintenance. Engineer Chandler agreed that maintenance of the pond's buffer will need to be worked out with the property owner and/or the city.

MOTION: Commissioner Scanlan moved to approve Resolution 17-06 Ordering 2018 Improvement. Commissioner Carlson seconded the motion. Upon a vote, the motion carried 9-0.

B. Consider Approval of Proposal to Develop Aquatic Invasive Species Rapid Response Plan

Administrator Jester's overview reminded the Commission that several APM/AIS Committee recommendations were approved at the July meeting and included directing the Commission Engineer to submit a proposal to develop a rapid response plan for key invasive species in priority lakes. Engineer Chandler added that the proposed plan will:

- i. Determine how the Commission responds to AIS species found in priority 1 lakes
- ii. Determine what the response should be to the specific AIS species specific to the water bodies
- iii. Define responsible parties and funding partners' roles

Commissioner Welch suggested that BCWMC contact MCWD because they have a very well developed AIS plan so the BCWMC doesn't have to "reinvent the wheel." Eric Eckman asked whether toxic blue-green algae would be addressed and was told that it won't be addressed in this plan because it's not an invasive species. Commissioner Harwell asked about AIS that aren't known about yet and Engineer Chandler responded by saying general parts of the plan address this, but there wouldn't be specifics. She noted they had to put boundaries on the plan because there was only a budget of \$15,000. The plan could be amended in the future if needed.

MOTION: Commissioner Welch moved to approve the Proposal to Develop Aquatic Invasive Species Rapid Response Plan. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 9-0.

C. Consider Approval of Technical Advisory Committee Recommendations

TAC Chair Erick Francis, reported that the TAC met on August 4th to discuss multiple topics and had recommendations for Commission consideration. He briefly reviewed the recommendations including directing the Commission Engineer to develop a scope and budget for completing the tasks laid out for the FEMA modeling work and to submit that scope and budget to the DNR to seek FEMA grant funds to complete the work. Commission Engineer Chandler discussed the FEMA modeling process and reported that the DNR is receiving grant funds from FEMA to develop hydrologic and hydraulic models and that the TAC had discussed the pros and cons of the Commission submitting a proposal to the DNR to do this work. She noted the work would be done by the DNR or its consultants if the Commission did not want to perform the work. She noted that if the Commission proposes to do the work, the cost of developing the proposal (estimated at \$2,000) would be a Commission expense but that all actual work on the modeling would be covered by the FEMA grant. She also noted that that if the DNR does the work rather than the Commission, there is likely to be considerable Commission expenses in reviewing and discussing DNR's work.

There was discussion about what would be involved with the work and how it differs from the modeling work recently completed by the Commission. Commissioner Prom noted his opposition to the Commission performing the work because the Commission may incur liability for flood damages that weren't predicted by the modeling.

Commissioner Harwell shared her experience that if DNR does the work, it would be many years before it's complete. Attorney Gilchrist explained that "liability" is a breach in duty. He noted the risk in liability for BCWMC is low because BCWMC is using the best data possible.

Mr. Eckman commented that the TAC discussed that there are already differences between the BCWMC and FEMA flood elevations and that FEMA elevations are outdated. He compared it to using traffic information from 1980 to build modern roads. He noted that the two different elevations are confusing for property owners and realtors. There was discussion about how this work would change the Commission's XP-SWMM model. If the DNR does the work, there could be two different models for the watershed, but if the Commission does the work, the Commission's model would be used by both the Commission and the state and federal agencies.

MOTION: Commissioner Scanlan moved to approve the TAC recommendation to direct the Commission Engineer to develop a scope and budget for completing the tasks laid out for the FEMA modeling work and to submit that scope and budget to the DNR to seek FEMA grant funds to complete the work. Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-1 with Plymouth Commissioner voting nay.

Continuing with TAC recommendations, Mr. Francis reported that the TAC recommends adjusting the Commission's review fees and to add a provision to charge actual costs for reviews that exceed \$5,000 in expenses. Commission Engineer Chandler further described the TAC's discussion noting that at the March 27, 2017 BCWMC Budget Committee meeting, the committee discussed the discrepancy between development review expenses and the fees collected. It was noted that in 2016 and 2017 there were a few large, complicated projects that required much more time to review and to coordinate with developers about the XP-SWMM model and MIDS, than was recovered in fees. The Budget Committee requested TAC input on the issue. The TAC reviewed data provided by the Commission Engineers showing reviews, fees, and a comparison of fees collected with the current structure and fees that would have been collected if their proposed new structure was in place. It was noted that the current fee schedule is based on project size but that smaller parcels often have more complicated and time-consuming projects.

Commission Engineer Chandler presented a proposed restructured fee schedule that attempts to base fees more on review effort than project size. She noted that the proposed fee schedule still includes lower fees for single-family homes and municipal projects because the Commission does not intend to burden single-family homeowners with high fees, and the Commission offers lower fees to municipalities that fund the operating budget of the Commission. TAC members discussed situations where reviews take considerable time and expense. There was consensus that escrow accounts are too complicated and time consuming to administer. Instead, the TAC recommended that the Commission charge project proposers for actual expenses when a project review exceeds \$5,000.

Mr. Asche commented that he thought the revised fees were going in the right direction but asked if reviews could be provided through a flat fee from Barr Engineering to the Commission. Administrator Jester noted that that would have to go through a re-negotiated contract with Barr Engineering. She pointed out the proposed fee schedule would have reduced the Commission's loss by 75%.

Commissioner Harwell noted that project plans vary widely and there is a lot of hand-holding which costs money. She commented that it would be appropriate for single-family homeowners to pay over \$5,000 if their project is complicated. Commissioner Prom said he thought it should be equity in fees among developers, homeowners and cities. Mr. Eckman offered that there may be a risk for developers with unknown expenses and wondered if a cap is appropriate. Alternate Commissioner McDonald Black commented that cities already pay into the BCWMC so having to pay a potentially higher fee would cause cities to pay twice. Mr. Asche noted he supported the changes but requested that the Commission consider negotiating a flat fee from Barr Engineering.

MOTION: Commissioner Mueller moved to approve the TAC recommendation without exemption for single-family lots and cities for paying actual costs above \$5,000. Commissioner Scanlan seconded it. Upon a vote, the motion carried 8-1 with Minneapolis Commissioner voting nay.

MOTION: Commissioner Prom moved to approve Resolution 17-07 adopting the revised review fee schedule. Commissioner Scanlan seconded it. Upon a vote, the motion carried 8-1 with Minneapolis Commissioner voting nay.

TAC recommendations #3 and #4 were set aside to a future meeting.

D. Consider Approval of Proposals to Develop Feasibility Studies for 2019 CIP Projects

Administrator Jester reminded the Commission that there are 3 CIP projects slated for implementation in 2019 and that feasibility studies should get underway this fall because some fieldwork is required. She noted that each of the cities where the projects are located asked the Commission Engineer to complete the feasibility study.

i. Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I: DeCola Ponds B & C Improvement Project (BC-2, BC-3 & BC-8)

Commission Engineer Chandler reviewed the proposal to implement one portion of the recently completed Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan. She discussed that much work had already been accomplished through the development of the flood storage and conveyance on the adjacent Liberty Crossing development site but that some more investigation and field work is needed, along with engaging residents and stakeholders. She walked through the specific recommendations in the proposal.

Commissioners Scanlan and Welch expressed displeasure at the last-minute action needed on these proposals and asked that future items be brought to the Commission earlier to allow for sufficient discussion and consideration. Administrator Jester apologized for the short timeframe and noted that any of these proposals could be held until the October meeting if warranted.

MOTION: Commissioner Scanlan moved to approve the proposal to complete a feasibility study for the Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I project. Commissioner Prom seconded the motion.

[Commissioner Prom departs; Alt. Commissioner Byrnes assumes representation for Plymouth.]

Discussion on the motion: There was discussion about what the project would entail, how the total price tag for projects in the Flood Mitigation Plan is \$22M, how this CIP project is just one \$1.6M piece of the Flood Mitigation Plan, how the City of Golden Valley has already implemented one part of the Flood Mitigation Plan, and that additional funding partners would be sought to implement other aspects of the overall Flood Mitigation Plan.

Commissioner Welch noted his disagreement with the component of the proposal that entails wetland bank scoping because doesn't think the Commission should be using capital dollars to offset wetland destruction somewhere else. There was also a discussion about the proposed environmental review that included digging test trenches on private land. Commissioner Welch noted that the site should be enrolled in the Voluntary Investigation and Cleanup (VIC) Program before invasive soil testing is done so as not to expose the Commission to liability if contamination is discovered. Finally, Commissioner Welch asked if the city forester could perform the tree survey rather than the Commission Engineers. Mr. Eckman noted that the city forester has multiple responsibilities and a full plate and that the tree survey is an important component of the feasibility study that should be completed early in the process to appropriately engage residents.

[Commissioner Harwell departed; Alt. Commissioner McDonald Black assumes representation for Golden Valley.]

Engineer Chandler said wetland banking could be removed from the proposal if the Commission chooses to remove it. She responded that test trenching is needed because the project will likely involve excavation. She told the Commission that there is an easement over this area and she wondered if that wasn't sufficient in giving rights to test trench. Commissioner Welch replied that if the Commission performs a test trench, they are "in the mix" as a liable partner. Commissioner Welch offered that maybe the city does have this liability covered. Engineer Chandler asked if it could be left in the proposal with the caveat of addressing the liability issue. There was consensus that test trenching could be removed from the proposal now and added back, with Commission approval, if found to be necessary and legally appropriate.

MOTION: Commissioner Welch moved to amend motion on the floor to remove wetland banking investigation from the proposal. Alt. Commissioner Byrnes seconded the motion. Upon a vote, the motion carried 9-0.

MOTION: Commissioner Welch moved to amend the motion on the floor to remove invasive testing of the soil from the proposal at this time. Commissioner Scanlan seconded it. Motion carried 9-0.

MOTION: Commissioner Welch moved to amend the motion on the floor to cap the feasibility study cost not to exceed \$72,000. Commissioner Mueller seconded the motion. Upon a vote, the motion carried 9-0.

VOTE: Upon a vote of the original motion including the three amendments, the motion carried 9-0.

[Commissioner Fruen departs.]

ii. Westwood Lake Water Quality Improvement Project (WST-2)

Commission Engineer Chandler briefly described the proposal for a feasibility study of the Westwood Lake Water Quality Improvement Project noting that it's part of a much larger city project at the Westwood Hills Nature Center. She noted it is in the BCWMC's current CIP, listed as project WST-2, with a total estimated cost of \$300,000. She also noted that the project could entail pervious pavers, improvements to an existing stormwater pond, or other practices that would go "above and beyond" the treatment required for the complete city project.

There was a brief discussion about the tasks that will be completed by the city vs. those to be completed by the Commission Engineer.

MOTION: Commissioner Welch moved to approve the proposal to complete a feasibility study for the Westwood Lake Water Quality Improvement Project. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0 with. [City of Minnetonka absent from the vote.]

iii. Bryn Mawr Meadows Water Quality Improvement Project (BC-5)

Commission Engineer Chandler walked through the proposal noting that the Bryn Mawr Meadows Water Quality Improvement Project is in the BCWMC's current CIP, listed as project BC-5 with a cost of \$500,000. She noted that the park is owned by the Minneapolis Park and Recreation Board and the project would treat water from a large residential area greater than 300 acres. She reported that field investigations include test trenching and soil borings but significant field work may not be warranted depending on the alternatives to be studied.

Commissioner Welch noted it's a heavily used park with very poor, spongy soils and he doubted if ponding would be an option due to high groundwater and contamination. He expressed concern for whether test trenching was even warranted.

MOTION: Commissioner Welch moved to approve the scope of work with test trenching to be completed only if the Minneapolis Park and Recreation Board enrolls in the Voluntary Investigation and Cleanup (VIC) Program. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0 with. [City of Minnetonka absent from the vote.]

E. Consider Approval of Recommendations of the Aquatic Plant Management/Aquatic Invasive Species Committee

Tabled to a future meeting.

7. COMMUNICATIONS

A. Administrator's Report

- i. Update on Chloride Training Recruitment - Currently 29 people registered
- ii. Report on Main Stem Project Open House - 11 people attended; some comments from residents including a desire for a nicer footpath and concerns with navigability of the creek.

B. Chair – No report

C. Commissioners

i. Report on Golden Valley Arts and Music Festival

Scanlan, Harwell, and Welch attended. Many people played the new bean bag toss game/display and salt cups were given away as prizes.

D. TAC Members—No report

E. Committees —No report

F. Legal Counsel—No report

G. Engineer—No report

8. INFORMATION ONLY (Information online only)

A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>

B. Grant Tracking Summary and Spreadsheet

C. Freshwater Society Recruiting Master Water Stewards

D. Governor Dayton’s 25% by 2025 Clean Water Initiative – Town Hall Meetings. The date has changed and it will be on Wednesday, not Tuesday.

E. WCA Notice of Application, Plymouth

F. Minnehaha Creek Watershed District Cottageville Park Video

G. Freshwater Society Newsletters and Sign Up

H. WCA Notice of Application, Golden Valley

9. ADJOURNMENT

The meeting was adjourned at 11:59 a.m.

Signature/Title

Date

Signature/Title

Date

Bassett Creek Watershed Management Commission General Account
 General Fund (Administration) Financial Report
 Fiscal Year: February 1, 2017 through January 31, 2018
 MEETING DATE: October 19, 2017

Item 4B.
 BCWMC
 10-19-17

(UNAUDITED)

BEGINNING BALANCE	12-Sep-17		560,331.58
ADD:			
	General Fund Revenue:		
	Interest less Bank Fees		23.45
	 Permits:		
	Orbital ATK Inc	BCWMC 2017-31	3,000.00
	The Loppet Foundations	BCWMC 2017-32	1,400.00
	HZ United LLC	BCWMC 2017-33	1,100.00
	 Reimbursed Construction Costs		 39,757.37
		Total Revenue and Transfers In	45,280.82
DEDUCT:			
	Checks:		
	3006 Michael Scanlan	Conference Registration	245.00
	3007 Barr Engineering	Sept Engineering	30,381.35
	3008 Kennedy & Graven	August Legal	1,094.50
	3009 Keystone Waters LLC	Sept Admin/Mtg Material	4,939.76
	3010 Lawn Chair Gardener	Minutes/newsletter/Socia	1,542.47
	3011 Triple D Espresso	Oct Meeting / Chloride Tr	961.81
	3012 Wenck Associates	Outlet Monitor/Lake Mon	4,140.57
	3013 City of Crystal	North Branch Channel ma	25,000.00
	3014 ECM Publishers	P.H. Legal Notice	149.50
	3015 Finance & Commerce	P.H. Legal Notice	70.61
		Total Checks/Deductions	68,525.57
	 Outstanding from previous month:		
	3001 Metro Blooms	Clean Water Project	48,950.77
	3002 Talbott Promotions	Stadium Cups	164.39
ENDING BALANCE	11-Oct-17		537,086.83

Bassett Creek Watershed Management Commission General Account

General Fund (Administration) Financial Report

(UNAUDITED)

Fiscal Year: February 1, 2017 through January 31, 2018

MEETING DATE: October 19, 2017

	2017 / 2018 BUDGET	CURRENT MONTH	YTD 2017 / 2018	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSMENTS TO CITIES-PREPAID			0.00	
ASSESSMENTS TO CITIES	500,000	0.00	500,001.00	(1.00)
PROJECT REVIEW FEES	60,000	5,500.00	62,700.00	(2,700.00)
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
MET COUNCIL REIMBURSEMENTS-LRT PROJECTS	7,000	0.00	9,218.17	(2,218.17)
MET COUNCIL - METRO BLOOMS	0	0.00	60,918.23	(60,918.23)
MISCELLANEOUS	0	0.00	2,889.50	(2,889.50)
TRANSFERS FROM LONG TERM FUND & CIP	38,072	0.00	0.00	38,072.00
REVENUE TOTAL	610,072	5,500.00	640,226.90	(30,154.90)
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	125,000	7,306.00	88,477.25	36,522.75
DEV/PROJECT REVIEWS	65,000	3,569.34	57,780.47	7,219.53
NON-FEE/PRELIM REVIEWS	15,000	2,605.05	17,443.96	(2,443.96)
COMMISSION AND TAC MEETINGS	14,000	748.00	9,005.04	4,994.96
SURVEYS & STUDIES	20,000	0.00	16,347.15	3,652.85
WATER QUALITY/MONITORING	74,300	3,910.89	50,944.50	23,355.50
WATER QUANTITY	11,500	413.89	5,900.57	5,599.43
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	12,000	33.00	33.00	11,967.00
REVIEW MUNICIPAL PLANS	8,000	0.00	1,179.00	6,821.00
WOMP	15,500	1,178.38	12,096.85	3,403.15
XP-SWMM MODEL UPDATES/REVIEWS	10,000	0.00	4,019.00	5,981.00
APM / AIS WORK	35,000	0.00	19,950.45	15,049.55
ENGINEERING & MONITORING TOTAL	406,300	19,764.55	283,177.24	123,122.76
ADMINISTRATION				
ADMINISTRATOR	67,200	4,620.00	37,973.11	29,226.89
LEGAL COSTS	18,500	1,094.50	11,306.53	7,193.47
AUDIT, INSURANCE & BONDING	15,500	0.00	17,304.00	(1,804.00)
FINANCIAL MANAGEMENT	3,200	0.00	40.76	3,159.24
MEETING EXPENSES	2,000	104.22	936.06	1,063.94
ADMINISTRATIVE SERVICES	18,000	1,742.23	9,197.76	8,802.24
ADMINISTRATION TOTAL	124,400	7,560.95	76,758.22	47,641.78
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	2,500	0.00	1,138.50	1,361.50
WEBSITE	4,400	0.00	525.99	3,874.01
PUBLIC COMMUNICATIONS	2,500	220.11	731.61	1,768.39
EDUCATION AND PUBLIC OUTREACH	20,000	1,222.59	86,702.67	(66,702.67)
WATERSHED EDUCATION PARTNERSHIPS	15,500	0.00	5,794.25	9,705.75
OUTREACH & EDUCATION TOTAL	44,900	1,442.70	94,893.02	(49,993.02)
MAINTENANCE FUNDS				
EROSION/SEDIMENT (CHANNEL MAINT)	25,000	0.00	0.00	25,000.00
LONG TERM MAINTENANCE (moved to CF)	25,000	0.00	0.00	25,000.00
MAINTENANCE FUNDS TOTAL	50,000	0.00	0.00	50,000.00
TMDL WORK				
TMDL IMPLEMENTATION REPORTING	20,000	0.00	542.50	19,457.50
TMDL WORK TOTAL	20,000	0.00	542.50	19,457.50
TOTAL EXPENSES	645,600	28,768.20	455,370.98	190,229.02

BCWMC Construction Account
Fiscal Year: February 1, 2017 through January 31, 2018
October 2017 Financial Report

(UNAUDITED)

Cash Balance 09/12/2017				
Cash		2,376,666.59		
	Total Cash			2,376,666.59
Key Bk Natl Assn Ohio C/D (10/02/2017 1.15%)		248,000.00		
	Total Investments			248,000.00
	Total Cash & Investments			2,624,666.59
Add:				
Interest Revenue (Bank Charges)		143.97		
Investment Interest Revenue		4,477.93		
Matured Investments		744,000.00		
	Total Revenue			748,621.90
Less:				
CIP Projects Levied - Current Expenses - TABLE A		(7,978.62)		
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(6,778.75)		
	Total Current Expenses			(14,757.37)
	Total Cash & Investments On Hand		10/11/17	<u>3,358,531.12</u>
	Total Cash & Investments On Hand	3,358,531.12		
	CIP Projects Levied - Budget Remaining - TABLE A	(4,373,577.47)		
	Closed Projects Remaining Balance	(1,015,046.35)		
	2012 - 2016 Anticipated Tax Levy Revenue - TABLE C	10,014.74		
	2017 Anticipated Tax Levy Revenue - TABLE C	643,220.55		
	Anticipated Closed Project Balance	(361,811.06)		
	Proposed & Future CIP Project Amount to be Levied - TABLE B	0.00		

TABLE A - CIP PROJECTS LEVIED							
	Approved Budget	Current Expenses	2017 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget	Grant Funds Received	
Lakeview Park Pond (ML-8) (2013)	196,000	0.00	0.00	11,589.50	184,410.50		
Four Seasons Mall Area Water Quality Proj (NL-2)	990,000	0.00	20,953.50	162,805.34	827,194.66		
2014							
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)	612,000	7,728.12	34,081.58	337,345.03	274,654.97		
Briarwood / Dawnview Nature Area (BC-7)	250,000	0.00	0.00	250,000.00	0.00		
Twin Lake Alum Treatment Project (TW-2)	163,000	0.00	0.00	91,037.82	71,962.18		
2015							
Main Stem 10th to Duluth (CR2015)	1,503,000	0.00	57,299.09	1,003,746.24	499,253.76		
2016							
Honeywell Pond Expansion (BC-4) ¹	810,930	0.00	0.00	25,307.00	785,623.00		
Northwood Lake Pond (NL-1) ²	822,140						
Budget Amendment	611,600	1,433,740	0.00	416.00	1,438,689.98	(4,949.98)	
2017							
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy 400,000	1,064,472	0.00	196.00	114,757.79	949,714.21	
	2018 Levy 664,472						
Plymouth Creek Restoration (2017 CR-P)	2017 Levy 580,930	863,573	250.50	12,254.70	77,858.83	785,714.17	
	2018 Levy 282,643					267,298	
		7,886,715	7,978.62	125,200.87	3,513,137.53	4,373,577.47	

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2017 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
2018					
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)		119.00	29,560.20	60,879.25	(60,879.25)
2018 Project Totals	0	119.00	29,560.20	60,879.25	(60,879.25)
2019					
Bryn Mawr Meadows (BC-5)	0	4,756.20	4,756.20	10,039.00	(10,039.00)
Decola Ponds B&C Improvement(BC-2,BC-3,BC-8)		1,903.55	1,903.55	1,903.55	(1,903.55)
2019 Project Totals	0	6,659.75	6,659.75	11,942.55	(11,942.55)
Total Proposed & Future CIP Projects to be Levied	0	6,778.75	36,219.95	72,821.80	(72,821.80)

BCWMC Construction Account

Fiscal Year: February 1, 2017 through January 31, 2018

October 2017 Financial Report

(UNAUDITED)

TABLE C - TAX LEVY REVENUES

	County Levy	Abatements / Adjustments	Adjusted Levy	Current Received	Year to Date Received	Inception to Date Received	Balance to be Collected	BCWMO Levy
2017 Tax Levy	1,303,600.00		1,303,600.00	0.00	0.00	660,379.45	643,220.55	1,303,600.00
2016 Tax Levy	1,222,000.00	(6,075.91)	1,215,924.09	0.00	0.00	1,211,989.75	3,934.34	1,222,000.00
2015 Tax Levy	1,000,000.00	1,935.37	1,001,935.37	0.00	0.00	998,801.29	3,134.08	1,000,000.00
2014 Tax Levy	895,000.00	(7,436.49)	887,563.51	0.00	0.00	885,449.96	2,113.55	895,000.00
2013 Tax Levy	986,000.00	(10,440.29)	975,559.71	0.00	0.00	974,888.42	671.29	986,000.00
2012 Tax Levy	762,010.00	(7,488.24)	754,521.76	0.00	0.00	754,360.28	161.48	762,010.00
				<u>0.00</u>			<u>653,235.29</u>	

OTHER PROJECTS:

	Approved Budget	Current Expenses / (Revenue)	2017 YTD Expenses / (Revenue)	INCEPTION To Date Expenses / (Revenue)	Remaining Budget
TMDL Studies					
TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
TOTAL TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
Flood Control Long-Term					
Flood Control Long-Term Maintenance	673,373.00	0.00	14,912.00	320,742.41	
Less: State of MN - DNR Grants			(9,300.00)	(93,000.00)	
	673,373.00	0.00	5,612.00	227,742.41	445,630.59
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Annual Water Quality					
Channel Maintenance Fund	350,000.00	25,000.00	60,915.00	182,157.95	167,842.05
Total Other Projects	1,658,373.00	25,000.00	66,527.00	517,665.51	1,140,707.49

Cash Balance 09/12/2017	1,063,206.44
Add:	
Transfer from GF	0.00
Less:	
Current (Expenses)/Revenue	(25,000.00)
Ending Cash Balance 10/11/17	<u><u>1,038,206.44</u></u>
Additional Capital Needed	<u><u>(102,501)</u></u>

CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (CR-M)	Plymouth Creek Restoration (CR-P)
Original Budget	7,275,115	196,000	990,000	612,000	250,000	163,000	1,503,000	810,930	822,140	1,064,472	863,573
Added to Budget	611,600								611,600		
Expenditures:											
Feb 2004 - Jan 2014	269,971.68	11,589.50	101,635.49	89,594.90	19,598.09	23,793.65	11,179.35	7,461.95	5,118.75		
Feb 2015-Jan 2016	313,510.98		25,866.35			432.00	93,862.65	6,442.53	94,823.44	42,671.88	49,412.13
Feb 2016-Jan 2017	2,804,454.00		14,350.00	213,668.55	230,401.91	66,812.17	841,405.15	11,402.52	1,338,331.79	71,889.91	16,192.00
Feb 2017-Jan 2018	125,200.87		20,953.50	34,081.58			57,299.09		416.00	196.00	12,254.70
Total Expenditures:	3,513,137.53	11,589.50	162,805.34	337,345.03	250,000.00	91,037.82	1,003,746.24	25,307.00	1,438,689.98	114,757.79	77,858.83

Project Balance	4,373,577.47	184,410.50	827,194.66	274,654.97		71,962.18	499,253.76	785,623.00	(4,949.98)	949,714.21	785,714.17
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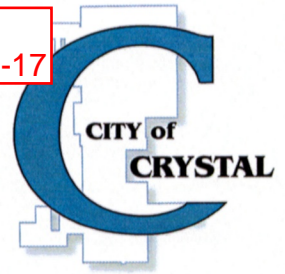
CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (CR-M)	Plymouth Creek Restoration (CR-P)
Project Totals By Vendor											
Barr Engineering	445,035.81	6,338.95	63,974.04	109,333.08	13,089.74	15,712.00	15,825.00	13,157.98	17,966.00	111,939.39	77,699.63
Kennedy & Graven	11,961.70	1,200.55	2,471.95	993.40	1,038.35	1,058.65	2,223.75	796.00	1,701.45	318.40	159.20
City of Golden Valley	1,471,580.12			213,668.55	230,401.91	66,812.17	960,697.49				
City of Minneapolis			75,759.35								
City of Plymouth	75,759.35										
City of New Hope	1,413,267.55								1,413,267.55		
City of Crystal										2,500.00	
MPCA	2,500.00										
Blue Water Science	3,900.00					3,900.00					
Misc											
2.5% Admin Transfer	83,378.02	4,050.00	20,600.00	13,350.00	5,470.00	3,555.00	25,000.00	11,353.02			
Transfer to General Fun											
Total Expenditures	3,507,382.55	11,589.50	162,805.34	337,345.03	250,000.00	91,037.82	1,003,746.24	25,307.00	1,432,935.00	114,757.79	77,858.83

CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (CR-M)	Plymouth Creek Restoration (CR-P)
Levy/Grant Details											
2010 - 2014 Levies	1,881,000	162,000	824,000	534,000	218,800	142,200					
2014/2015 Levy	1,000,000						1,000,000				
2015-2016 Levy	1,222,000							810,930	411,070		
2016-2017 Levy	1,303,600								322,670	580,930	400,000
2017-2018 Levy	947,115									282,643	664,472
Construction Fund Balance	703,000	34,000	166,000				503,000				
BWSR Grant- BCWMO	470,000								470,000		
DNR Grants-LT Maint											
Total Levy/Grants	7,526,715	196,000	990,000	534,000	218,800	142,200	1,503,000	810,930	1,203,740	863,573	1,064,472
BWSR Grants Received									670,000		267,298
MPCA Grant-CWP (Total \$300,000)									75,000.00		
									19,932.80		

Bassett Creek Construction Project Details

Proposed & Future CIP Projects (to be Levied)				Other Projects					Totals - All Projects
Total Proposed & Future CIP Projects (to be Levied)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (BCP-2)	2019 Bryn Mawr Meadows (BC-5)	2019 DeCola Ponds B&C Improve (BC-2,BC-3,BC-8)	Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	
Original Budget Added to Budget				1,278,373.00 (250,000.00)	105,000.00	500,000.00	748,373.00 (250,000.00)	175,000.00	8,553,488.00 361,600.00
				93,000.00			93,000.00		93,000.00
				380,000.00	30,000.00		175,000.00	175,000.00	380,000.00
Expenditures:									
Feb 2004 - Jan 2014	5,282.80		5,282.80	245,426.23	107,765.15		43,195.48	94,465.60	520,680.71
Feb 2015-Jan 2016				137,357.54			110,580.19	26,777.35	450,868.52
Feb 2016-Jan 2017	31,319.05	31,319.05		152,070.74			152,070.74		2,987,843.79
Feb 2017-Jan 2018	36,219.95	29,560.20	4,756.20	75,811.00			14,896.00	60,915.00	237,231.82
Total Expenditures:	72,821.80	60,879.25	10,039.00	610,665.51	107,765.15		320,742.41	182,157.95	4,196,624.84
Project Balance	(72,821.80)	(60,879.25)	(10,039.00)	1,140,707.49	27,234.85	500,000.00	445,630.59	167,842.05	5,441,463.16
Project Totals By Vendor									
Barr Engineering	72,821.80	60,879.25	10,039.00	387,939.50	104,888.70		283,050.80		905,797.11
Kennedy & Graven				2,648.25	1,164.30		1,099.35	384.60	14,609.95
City of Golden Valley				86,962.50				86,962.50	1,558,542.62
City of Minneapolis				38,823.35				38,823.35	38,823.35
City of Plymouth				26,747.50				26,747.50	102,506.85
City of New Hope								29,240.00	1,413,267.55
City of Crystal									
MPCA									2,500.00
Blue Water Science									3,900.00
Misc				5,704.41	1,712.15		3,992.26		5,704.41
2.5% Admin Transfer									83,378.02
Transfer to General Fun				32,600.00			32,600.00		32,600.00
Total Expenditures	72,821.80	60,879.25	10,039.00	610,665.51	107,765.15		320,742.41	182,157.95	4,161,629.86
Levy/Grant Details									
2010 -2014 Levies									
2014/2015 Levy				50,000.00	30,000		100,000	100,000	1,881,000
2015-2016 Levy							25,000	25,000	1,050,000
2016-2017 Levy									
2017-2018 Levy									
Construction Fund Balance				50,000.00			25,000	25,000	753,000
BWSR Grant- BCWMO				50,000.00			25,000	25,000	520,000
DNR Grants-LT Maint				93,000.00			93,000		
Total Levy/Grants				473,000.00	30,000		268,000	175,000	4,204,000

Item 4D.
BCWMC 10-19-17



Billing Address: 114751
BASSETT CREEK WATERSHED MGMT COMMISSION
ATTN: LAURA JESTER, ADMINISTRATOR
16145 HILLCREST LANE
EDEN PRAIRIE MN 55346

INVOICE

7043

Invoice Date 9/27/2017

Due Date 10/27/2017

Page: 1

Item	Remark	Amount
001	REIM>N BRANCH BANK 2017 WORK	25,000.00
	Total Amount Invoiced	25,000.00
	Tax Amount	
	Balance Due	<u>25,000.00</u>

4141 Douglas Drive North • Crystal, Minnesota 55422-1696

Tel: (763) 531-1000 • Fax: (763) 531-1188 • www.crystalmn.gov

Dear Ms. Jester,

Enclosed you will find documentation for design and construction expenses for the North Branch Channel Maintenance Project approved by the Commission on November 18, 2015. This is the second and final request to the Bassett Creek Watershed Management Commission (BCWMC) for reimbursement of City expenses incurred for this project.

The project was done to complete repairs on an eroding bank that was originally part of the 2012 North Branch Bassett Creek Restoration Project (2012 CR). In November 2015, the TAC and BCWMC determined that this project is eligible for Channel Maintenance Funds to repair the eroding bank, which was caused by heavy rains in 2014. The erosion was located behind 3451 Brunswick Ave N in Crystal.

The requested total reimbursement for the North Branch Bassett Creek Slope Stabilization Project is \$31,675, which was the amount approved by the BCWMC and reflects the amount of funding available to the City at the time the project was approved. The expenses incurred by the City total \$34,700, including \$8,900 for engineering and \$25,800 for construction. The bids for construction were higher than originally estimated; however, modifications were made during construction to reduce the overall project costs.

The first reimbursement request for \$6,675 was submitted in March 2017. The City of Crystal is now requesting a reimbursement of the remaining \$25,000, as authorized for the project in 2015.

Thank you again for your support of this project. If you have any questions regarding the submission, please contact me at 763.531.1160 or mark.ray@crystalmn.gov

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Ray', written in a cursive style.

Mark Ray, PE
Director of Public Works



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

INVOICE

CUSTOMER NAME
Barr Engineering 4300 MarketPointe Drive Suite 200 Minneapolis, MN 55435

PROJECT NAME
North Branch Basset Creek

BILLING DATE	INVOICE #
8/21/2017	15897

TERMS	DUE DATE
Net 30	9/20/2017

VENDOR #	P.O. NO.

QTY	UNITS	ITEM	DESCRIPTION	UNIT PRICE	EXTENTION
1	LS	Mobilization	Mobilization/Demobilization	1,800.00	1,800.00
250	EA	Grading/Earthwork	Vegetated Reinforced Soil Slope (S.F.F)	65.00	16,250.00
150	EA	Plant Installation	Furnish and Install Shrubs	15.00	2,250.00
10	EA	Plant Installation	Furnish and Install Trees	300.00	3,000.00
1	LS	Erosion Control Pro...	Erosion Control	500.00	500.00
1	LS	Installation	Site Restoration	2,000.00	2,000.00
			Work Completed 8/1-8/2 & 8/10/17	6.875%	0.00
			<i>Now accepting credit cards. Call today!</i>		

Thank you for your business. Please place the invoice number on your check.	Total	\$25,800.00
Any amount unpaid beyond 30 days, will incur a 1.5% per month finance charge.	Payments/Credits	\$0.00
763-295-0010 • www.mnnativelandscapes.com • amy@MNLcorp.com	Balance Due	\$25,800.00

Using ecological services to enhance your environment...



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4E – Metro Transit C Line Bus Rapid Transit – Minneapolis, MN
BCWMC October 19, 2017 Meeting Agenda
Date: October 11, 2017
Project: 23270051 2017 2140

4E Metro Transit C Line Bus Rapid Transit (BRT) – Minneapolis, MN BCWMC 2017-33

Summary:

Proposed Work: Rapid Bus Transit system from downtown Minneapolis to the Brooklyn Center Transit Center

Basis for Review at Commission Meeting: Linear project disturbing more than 5 acres

Impervious Surface Area: Decrease 0.42 acres

Recommendation: Conditional Approval

General Background & Comments

The proposed project is partially located in the Bassett Creek Main Stem subwatershed along Penn Avenue between Golden Valley Road and Lowry Avenue in Minneapolis, MN. The proposed project consists of construction of a new Bus Rapid Transit (BRT) system from downtown Minneapolis to the Brooklyn Center Transit Center. The proposed work includes intersection reconstruction at Penn Ave/Golden Valley Road and Penn Ave/Broadway, roadway reconstruction along Penn Avenue between Broadway and Lowry Avenue, and construction of bus station platforms at 11 intersections resulting in 5.5 acres of disturbance (grading). The proposed project results in a decrease in impervious surfaces of 0.4 acres from 5.4 acres in existing conditions to 5.0 acres in proposed conditions. The proposed project includes 5.0 acre of reconstructed impervious surfaces

Floodplain

The project does not involve work in the Bassett Creek floodplain.

Wetlands

The project does not involve work that impacts wetlands.

Stormwater Management

The drainage patterns under existing and proposed conditions will remain similar; this project will not result in major changes to land use or topography. This project may reduce stormwater volumes and rates by decreasing the amount of impervious surface within the project area.

Water Quality Management

Linear projects on sites without restrictions that create one or more acres of net new impervious surfaces shall capture and retain onsite 1.1 inches of runoff from the net new impervious surfaces. The proposed project does not result in any net new impervious surfaces and therefore does not trigger water quality review or treatment to BCWMC water quality performance goals.

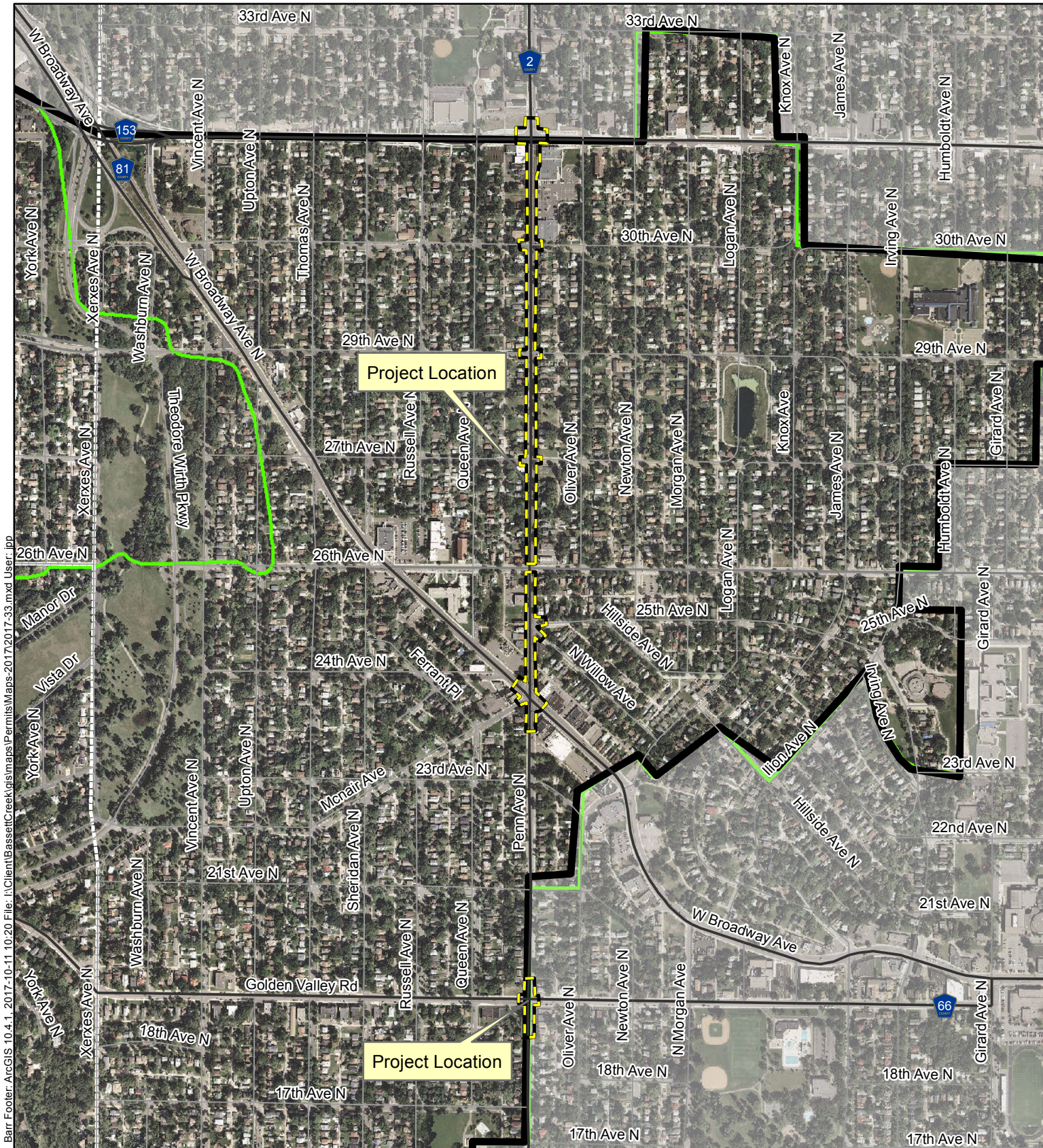
Erosion and Sediment Control

Since the area to be disturbed (graded) for this linear project is greater than 1 acre, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include sediment control logs, storm drain inlet protection, street sweeping, temporary seeding, and erosion control blankets. Permanent erosion and sediment control features includes sodding.

Recommendation







Conditional approval based on the following comments:

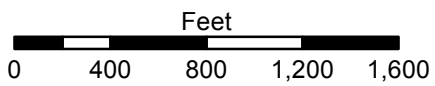
1. Storm drain inlet protection must be shown on Sheets 276-277 for existing catch basins.
2. Storm drain inlet protection must be shown on Sheets 278-282 for proposed catch basins.
3. Sediment control BMPs must be shown on Sheets 278-282 to limit offsite sediment transport during construction.
4. Revised Drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



Barr Footer: ArcGIS 10.4.1, 2017-10-11 10:20 File: I:\Client\Bassett\Creek\gis\maps\Permits\Maps 2017\2017-33.mxd User: jpb

Imagery Source: Aerial Express (2009)

-  Project Location
-  Bassett Creek
-  WMC Boundary
-  Major Subwatershed
-  Municipality
-  Stream



**LOCATION MAP
APPLICATION 2017-33
Metro Transit C Line
Rapid Bus Transit (RBT)
Minneapolis, MN**



October 11, 2017

Elizabeth Stout, PE, CFM
Water Resources Regulatory Coordinator
City of Minneapolis – Public Works
105 S 5th Avenue, Suite 200
Minneapolis, MN 55401

Re: 90% Design Plans – Bassett Creek Main Stem Stabilization

Dear Ms. Stout:

Attached please find the 90% design plans for the Bassett Creek Main Stem Stabilization Project. The Bassett Creek Watershed Management Commission (BCWMC) is funding the Bassett Creek Main Stem Stabilization Project (BCWMC CIP 2017CR-M) through a 2017-2018 ad valorem levy (via Hennepin County). Per the cooperative agreement between the City of Minneapolis and the BCWMC, the city is to construct the project, and the plans and specifications are subject to approval by the Commission. Also, per the BCWMC's CIP project flow chart, the 90% design plans for this project must be submitted to the BCWMC for review and approval. If the attached 90% plans meet the city's approval, we recommend submitting them, along with this letter, to the BCWMC for inclusion in the meeting packet for their October 19 meeting. Barr staff will present the 90% plans to the BCWMC at the meeting and answer any questions from the BCWMC.

The remainder of this letter presents information about the feasibility study, the design features of the project, and approval/permitting needs.

Feasibility Study Summary and Selected Project

Bank erosion along the main stem of Bassett Creek in Minneapolis between Glenwood Avenue and Irving Avenue was evaluated in 2005 for an erosion inventory performed by Minneapolis Park and Recreation Board (MPRB). Portions of the reach were stabilized in a previous BCWMC CIP project (2012CR-M).

The BCWMC completed the *Feasibility Report for the Bassett Creek Main Stem Erosion Repair Project* (May 2016) to evaluate options for stabilizing additional eroding banks at sites along the Bassett Creek Main Stem between Cedar Lake Road and the entrances to the Old and New Bassett Creek tunnels as well as at the Fruen Mill site between Glenwood Avenue North and the Soo Line Railroad Bridge crossing. The study evaluated multiple stabilization options for 15 sites along Bassett Creek, including bioengineering and hard armoring techniques. The analysis considered various advantages and disadvantages of each option and included a detailed assessment of probable lifecycle costs. Based on the results of the analysis, the recommended stabilization measures for each site are summarized in Table 1.

Table 1 Bassett Creek Feasibility Study and 90% Design Summary

Site	Reach and Station (90% Design Plans)	Description	Recommended Alternative (Feasibility Study)	Design Modifications (90% Design Plans)
1	Reach 2 1+60 to 4+00	Eroding pedestrian trail	Design trail for submergence at high flows	Trail surface stabilization with Class 5 aggregate
2	Reach 2 0+10 to 5+60	Bank armored with concrete and stone	Grade stream bank and vegetate	None
3	Reach 2 4+00 to 5+00	Bank erosion adjacent to riprap	Extend riprap to tie into historic wall	None
4	Reach 2 6+00 to 7+30	Undercut concrete swale and downstream banks	Install riprap toe protection	None
5	Reach 2 6+00 to 7+30	High eroding bank	Install VRSS and riprap toe protection	None
6	Reach 1 2+10 to 7+50	Steep undercut and eroding bank	Install VRSS and riprap toe protection	None
7	Reach 1 2+00 to 7+50	Stream bed with imported materials	Install boulder or log vanes to create step-pools	Boulder cross vanes selected
8	Reach 1 2+10 to 10+60	Paved top of stream bank	Remove debris and stabilize top of bank	Willow live stakes selected for stabilization
9	Reach 1 8+10 to 11+00	Undercut outer stream bank	Install willow stakes and live fascines	None
10	Reach 1 8+60	Culvert perched at low flows	Shorten culvert and add riprap	None
11	Reach 1 15+40	Culvert perched at low flows	Add riprap at existing culvert	None
12	Reach 1 13+70 to 15+80	Eroding stream bank toe	Install riprap toe protection and cross vane	None
13	Reach 1 16+80 to 21+40	Undercut outer stream bank	Install willow stakes and live fascines	None
14	Reach 1 22+70 to 27+70	Bare lower stream banks	Improve vegetation without grading	Willow live stakes selected for stabilization
15	Not applicable	Overflow channel with woody debris	Clear trees and remove woody debris	Not included in design, separate maintenance item addressed by City

Design Features – 90% Plans

The primary design features for the Project are shown in the 90% plans and summarized in Table 1. These features include:

- Installing a variety of stream stabilization measures, including riprap, live fascines, vegetated reinforced soil stabilization (VRSS), rock vanes, and riprap toe protection.

- Removing non-native channel bed material (brick and concrete block).
- Restoring the vegetative buffer and improving stream bank vegetation, using a custom native seed mix that focuses on resilient species that will be more resistant to invasive species and the industrial/urban environment; the seed mix specified includes species that are typically available and substitutions are possible in the event of seed unavailability. Trees and shrubs are also included to improve the stream bank vegetation, especially in areas stabilized with VRSS.

Hydraulic modeling of Bassett Creek for the project has been completed using the Bassett Creek model developed by the BCWMC, additional survey data collected by Barr, and hydraulic structure (bridge) information provided by the city. The model has been used to confirm the following items under the 100-year flood event:

- No locations show an increase in flood elevations for the 100-year flood event caused by the project.
- Flow velocities in the project areas for the project range from 1.1 ft/s to 7.7 ft/s, with the areas with highest velocity (Reach 1, Station 2+00 to 7+50) showing a decreased velocity relative to existing conditions due to the proposed bank grading.

Design elements that have been finalized and added to the plans for this 90% plan submittal include the following items:

- Stabilization of the foot path opposite the Fruen Mill site (Site 1 in Table 1), has been designed in consultation with the City and MPRB to include a compacted Class 5 aggregate base protected by riprap toe stabilization.
- Sizing of rock materials used for riprap toe stabilization and boulder vanes has been evaluated with the hydraulic model for the project and confirmed on the plans.
- Elevations and upstream/downstream stationing have been added to the plans for proposed toe stabilization measures following evaluation with the hydraulic model.
- Protocols for addressing invasive species in water, soil, and woody material have been added to the technical specifications.
- Quantities and species of tree and shrub plantings, as well as quantities of live stake plantings, have been added to the plans.

Contaminated soils are known to be present within the project site and many of the adjacent properties. In conjunction with the feasibility study, the BCWMC completed a *Phase II Investigation Report* (April 2016). As noted in the 90% plans and technical specifications, all disturbed soils will be tested and managed in accordance with the Response Action Plan prepared for the project, and Barr staff will provide environmental oversight during project grading activities.

As stated in the feasibility study, the total reduction in pollutant loading as a result of the project is estimated as 48,300 pounds per year total suspended sediment and 27.8 pounds per year total phosphorus.

Cost Estimate Summary

Cost estimate indicates the overall project costs will stay within the budget developed in the feasibility study as design and construction costs are projected to be below the amounts estimated during the feasibility study. A 90% cost estimate is attached to his memorandum.

Approvals/Permit Requirements

In addition to BCWMC approval of the plans, other permits/approvals will be required for this project. Permit applications have been submitted for the following permits:

- Minnesota Department of Natural Resources' (MDNR) public waters work permit
- USACE 404 permit, including a Section 106 review for historic and cultural resources

The following permit applications are being prepared for submittal at this time:

- Minnesota Pollution Control Agency (MPCA) National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater (CSW) General Permit and Stormwater Pollution Prevention Plan (SWPPP), which is included in draft form in the 90% plans
- City of Minneapolis Erosion and Sediment Control plan
- MPRB Construction Permit
- Burlington Northern Santa Fe (BNSF) Railroad access agreements (pending discussion with BNSF)

Recommendations


We recommend that the city request 1) BCWMC approval of the 90% drawings, and 2) BCWMC authorization for the city to proceed with final plans, contract documents, and permitting.

If you have any questions, please contact me at 952-832-2706 or jweiss@barr.com.

Sincerely,



Jeff Weiss, P.E.
Senior Water Resources Engineer

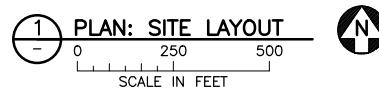
 PREPARED BY: BARR ENGINEERING COMPANY ENGINEER'S COST ESTIMATE BASED ON 90% REVIEW PLANS PROJECT: Bassett Creek Main Stem Stabilization LOCATION: City of Minneapolis, MN PROJECT #: 23271579 OPINION OF COST - SUMMARY	REV 0	SHEET: 1	OF 1
		BY: PJH2	DATE: 10/9/2017
		CHECKED BY: JDW	DATE: 10/11/2017
		APPROVED BY: JTL2	DATE:
	ISSUED:		DATE:
	ISSUED:		DATE:
	ISSUED:		DATE:

Engineer's Cost Estimate based on 90% Review Plans

Bid Item	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	ITEM COST	NOTES	
1	MOBILIZATION/DEMobilIZATION	LS	1	\$57,300.00	\$57,300.00	1,2,3,5	
2	CONTROL OF WATER	LS	1	\$20,900.00	\$20,900.00	1,2,3,5	
3	RESTORE ACCESS PATHS & HAUL ROADS	LS	1	\$10,500.00	\$10,500.00	1,2,3,5	
4	ROCK CONSTRUCTION ENTRANCE	EA	3	\$1,500.00	\$4,500.00	1,2,3,5	
5	SILT FENCE	LF	2798	\$3.50	\$9,793.00	1,2,3,5	
6	EROSION LOG	LF	1970	\$3.50	\$6,895.00	1,2,3,5	
7	TURBIDITY CURTAIN	LF	92	\$3.50	\$322.00	1,2,3,5	
8	CLEARING AND GRUBBING	ACRE	0.7	\$7,000.00	\$4,900.00	1,2,3,5	
9	SELECT TREE REMOVAL	EA	105	\$400.00	\$42,000.00	1,2,3,5	
10	CONCRETE REMOVAL	CY	100	\$25.00	\$2,500.00	1,2,3,5	
11	DEBRIS REMOVAL	CY	338	\$10.00	\$3,380.00	1,2,3,5	
12	REMOVE/REPLACE CHAIN LINK FENCE	LF	1050	\$5.00	\$5,250.00	1,2,3,5	
13	GRADING	SY	3098	\$6.00	\$18,588.00	1,2,3,5	
14	EXCAVATE & DISPOSE OF CONTAMINATED SOIL	CY	1866	\$53.00	\$98,898.00	1,2,3,5	
15	STABILIZE CONTAMINATED SOIL	CY	302	\$30.00	\$9,060.00	1,2,3,5	
16	IMPORT GRANULAR FILL	CY	134	\$10.00	\$1,340.00	1,2,3,5	
17	FURNISH AND INSTALL BASE AGGREGATE	TON	13	\$100.00	\$1,300.00	1,2,3,5	
18	FURNISH AND INSTALL FIELD STONE RIPRAP	TON	1174	\$100.00	\$117,400.00	1,2,3,5	
19	ROCK BOULDER CROSS VANE	EA	11	\$4,000.00	\$44,000.00	1,2,3,5	
20	VEGETATED REINFORCED SOIL SLOPE	SFF	1875	\$40.00	\$75,000.00	1,2,3,5	
21	IMPORT TOPSOIL	CY	403	\$33.00	\$13,299.00	1,2,3,5	
22	TREES	EA	91	\$100.00	\$9,100.00	1,2,3,5	
23	SHRUBS	EA	315	\$50.00	\$15,750.00	1,2,3,5	
24	SEEDING AND MULCH	ACRE	2.7	\$8,000.00	\$21,600.00	1,2,3,5	
25	LIVE STAKES	EA	720	\$5.00	\$3,600.00	1,2,3,5	
26	LIVE FASCINES	LF	758	\$15.00	\$11,370.00	1,2,3,5	
27	EROSION CONTROL BLANKET	SY	1086	\$3.00	\$3,258.00	1,2,3,5	
28	VEGETATION MANAGEMENT AND MAINTENANCE	LS	1	\$20,900.00	\$20,900.00	1,2,3,5	
ESTIMATED TOTAL PROJECT COST						\$632,703.00	1,2,3,4,5
ESTIMATED ACCURACY RANGE		-10%		\$570,000.00		⁴	
		10%		\$696,000.00		⁴	

Notes
¹ The opinion of probable construction cost provided in this table has been developed on the basis of Barr's experience and qualifications and represents our best judgment as experienced and qualified professionals familiar with the project.
² Estimated quantities are based on the project drawings dated 10/05/2017
³ Estimated unit prices are based upon bid prices obtained from Kingsbury Creek, Mission Creek, Sawmill Creek, Flute River, Nine Mile Creek, and Purgatory Creek projects.
⁴ This definitive-level (Class 1, 50-100% design completion per ASTM E 2516-11 and USACE EI 01D010 (9/1/97)) cost estimate is based on detailed designs, alignments, quantities and unit prices. Time value-of-money escalation costs are not included. The estimated accuracy range for the Total Project Cost as the project is defined is -10% to +10% . The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency.
⁵ Since we have no control over the cost of labor, materials, equipment, or services furnished by others, or over the contractor's methods of determining prices, or over competitive bidding or market conditions, Barr cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this opinion of probable construction cost.





GENERAL NOTES:

1. TOPO AND CONTROL GROUND SURVEY CONDUCTED BY BARR ENGINEERING IN 2017 IN HENNEPIN COUNTY FEET PROJECTION.
2. IMAGERY; COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND HENNEPIN COUNTY, MINNESOTA, 2015.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING FOR EACH LOCATION DURING CONSTRUCTION. EROSION CONTROL PLANS ARE PROVIDED INSIDE THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
6. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET OR STRAW MULCH.
7. CONTRACTOR TO MAINTAIN EXISTING STREAM BOTTOM WIDTH SO NOT TO DECREASE CREEK CROSS SECTIONAL AREA DURING RIPRAP INSTALLATION.
8. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND/OR ENGINEER AND STAKED IN THE FIELD.
9. TEST AND MANAGE DISTURBED SOILS ON SITE AS DESCRIBED IN THE RESPONSE ACTION PLAN.

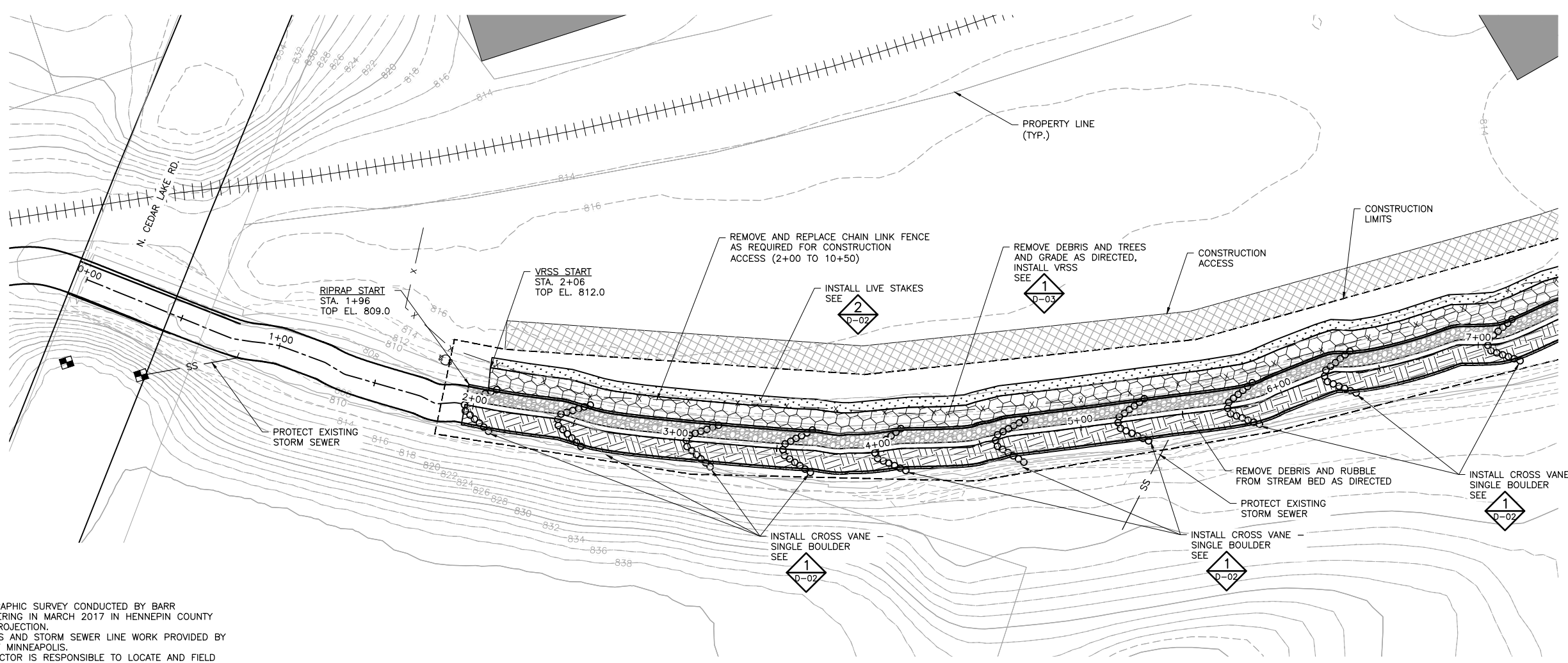
**90% PLAN SET
ISSUED FOR REVIEW
NOT FOR CONSTRUCTION**

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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: JEFFREY D. WEISS SIGNATURE: _____ DATE: 10/05/2017 LICENSE # 48031				CLIENT: 10/05/17					Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com		Scale: AS SHOWN Date: 10/05/2017 Drawn: EPF Checked: AKH Designed: BARR Approved: JDW		CITY OF MINNEAPOLIS MINNEAPOLIS, MINNESOTA		BASSETT CREEK MAIN STEM STABILIZATION MINNEAPOLIS, MN SITE LAYOUT		BARR PROJECT No. 23/27-1579.00		CLIENT PROJECT No. -	
				RELEASED TO/FOR: A B C 0 1 2 3					DATE RELEASED		DWG. No. C-01						REV. No. A			
NO.		BY		CHK.		APP.		DATE		REVISION DESCRIPTION										
A		EPF		PJH2		JDW		10/05/2017		ISSUED FOR REVIEW										

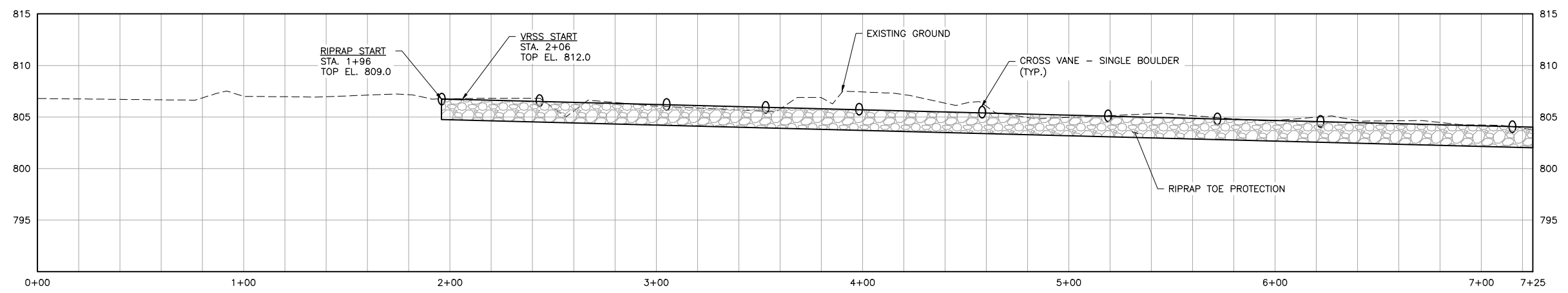
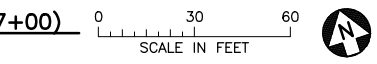
SYMBOL AND PATTERN LEGEND

- EXISTING 10' CONTOUR
- - - EXISTING 2' CONTOUR
- - - CONSTRUCTION LIMITS
- SS CITY STORM SEWER
- SAN CITY SANITARY SEWER
- W WATERMAIN LINE
- [Grid Pattern] BANK GRADING
2H TO 1V TYP.
- [Riprap Pattern] RIPRAP STABILIZATION
- [Dotted Pattern] LIVE STAKES
- [Diagonal Lines] FASCINES
- [Hexagon Pattern] VRSS
- [Cross-hatch Pattern] DEBRIS REMOVAL
- [Boulder Pattern] ROCK CROSS VANE—SINGLE BOULDER

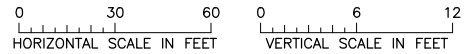


- NOTES**
1. TOPOGRAPHIC SURVEY CONDUCTED BY BARR ENGINEERING IN MARCH 2017 IN HENNEPIN COUNTY FEET PROJECTION.
 2. PARCELS AND STORM SEWER LINE WORK PROVIDED BY CITY OF MINNEAPOLIS.
 3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
 4. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, AND SIGNS SHALL BE PROTECTED DURING CONSTRUCTION.
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 6. ALL GROUND DISTURBANCE SHALL BE STABILIZED AND RESTORED WITH TOPSOIL AND SEED WITH EROSION CONTROL BLANKET.
 7. CONTRACTOR SHALL ONLY PERFORM TREE REMOVALS AT THE DIRECTION OF ENGINEER.

1 PLAN: REACH 1 (STA. 0+00 TO 7+00)



2 PROFILE: REACH 4 (STA. 0+00 TO 7+00)



**90% PLAN SET
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CLIENT	10/05/17						
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

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

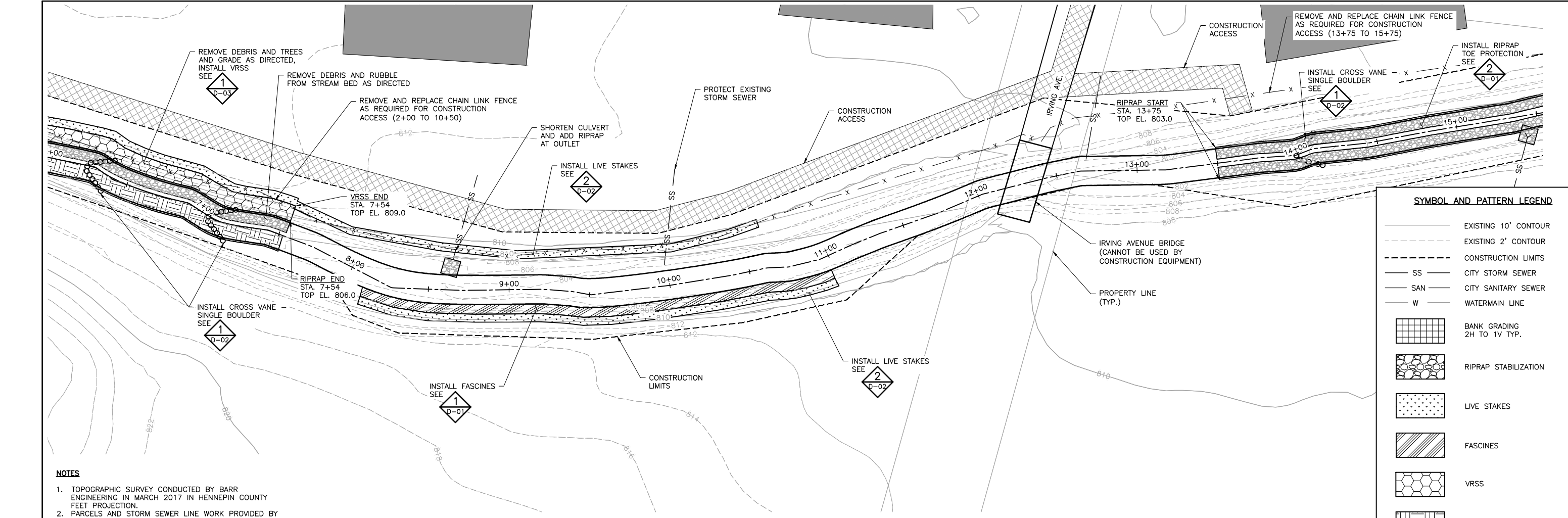
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Checked	AKH
Designed	BARR
Approved	JDW

**CITY OF MINNEAPOLIS
MINNEAPOLIS, MINNESOTA**

**BASSETT CREEK MAIN STEM STABILIZATION
MINNEAPOLIS, MN**

**PLAN AND PROFILE
REACH 1 (STA. 0+00 TO 7+00)**

BARR PROJECT No.	23/27-1579.00
CLIENT PROJECT No.	
DWG. No.	C-02
REV. No.	A

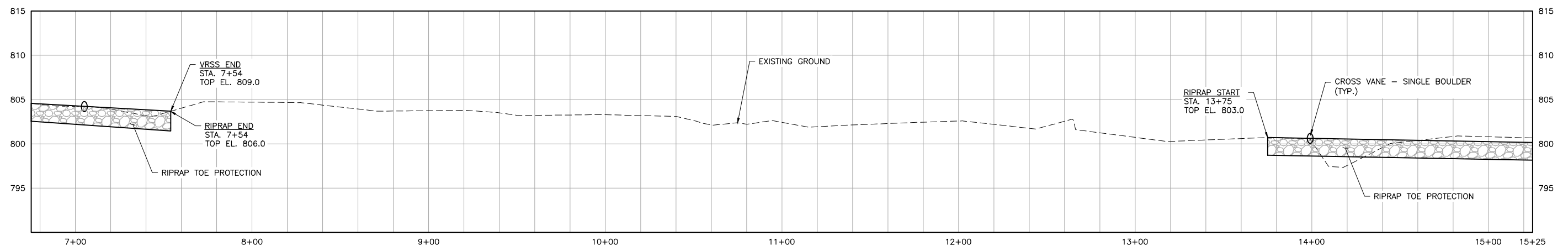
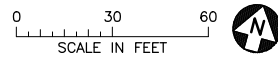


SYMBOL AND PATTERN LEGEND

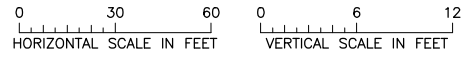
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	WATERMAIN LINE
	BANK GRADING 2H TO 1V TYP.
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	LIVE STAKES
	FASCINES
	VRSS
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2 PROFILE: REACH 1 (STA. 7+00 TO 15+00)



**90% PLAN SET
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CLIENT	10/05/17
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BARR ENGINEERING CO.
 4300 MARKETPOINTE DRIVE
 Suite 200
 MINNEAPOLIS, MN 55435
 Corporate Headquarters:
 Minneapolis, Minnesota
 Ph: 1-800-632-2277
 Fax: (952) 832-2601
 www.barr.com

Scale	AS SHOWN
Date	10/05/2017
Drawn	EPF
Checked	AKH
Designed	BARR
Approved	JDW

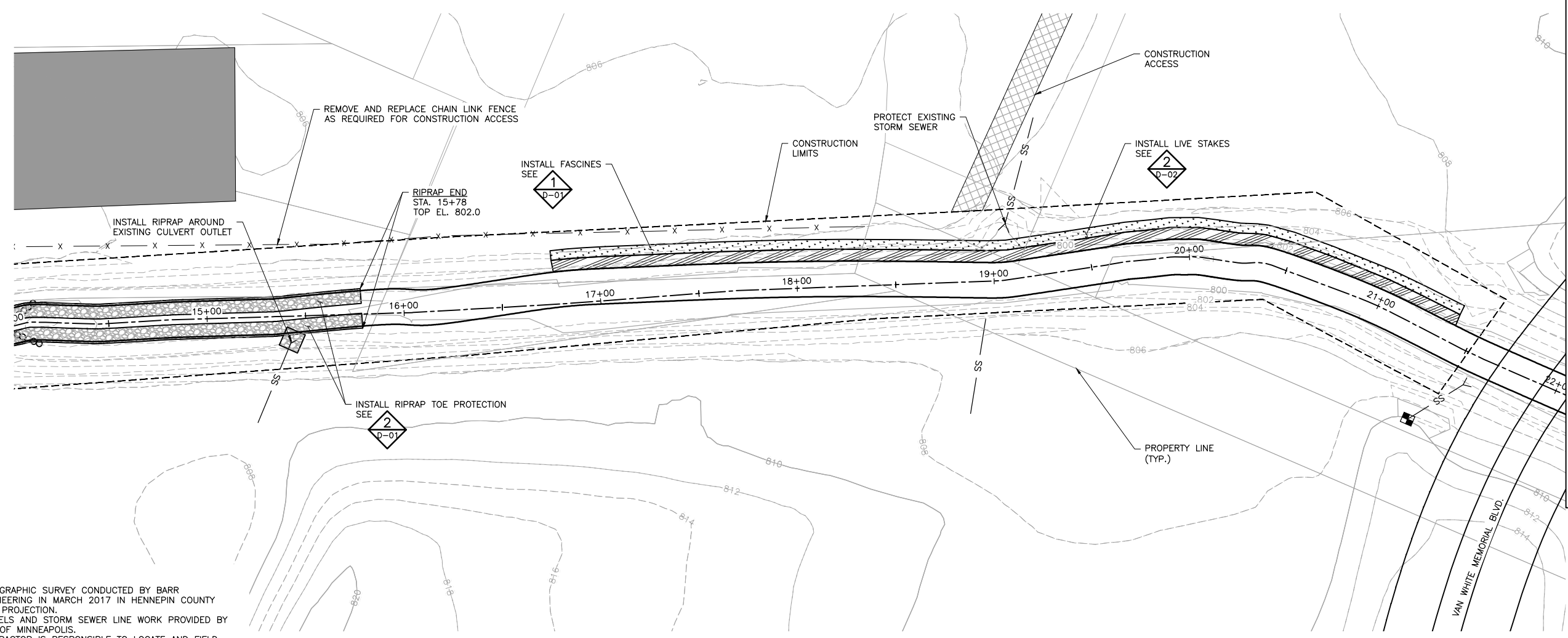
CITY OF MINNEAPOLIS
 MINNEAPOLIS, MINNESOTA

BASSETT CREEK MAIN STEM STABILIZATION
 MINNEAPOLIS, MN
 PLAN AND PROFILE
 REACH 1 (STA. 7+00 TO 15+00)

BARR PROJECT No.	23/27-1579.00
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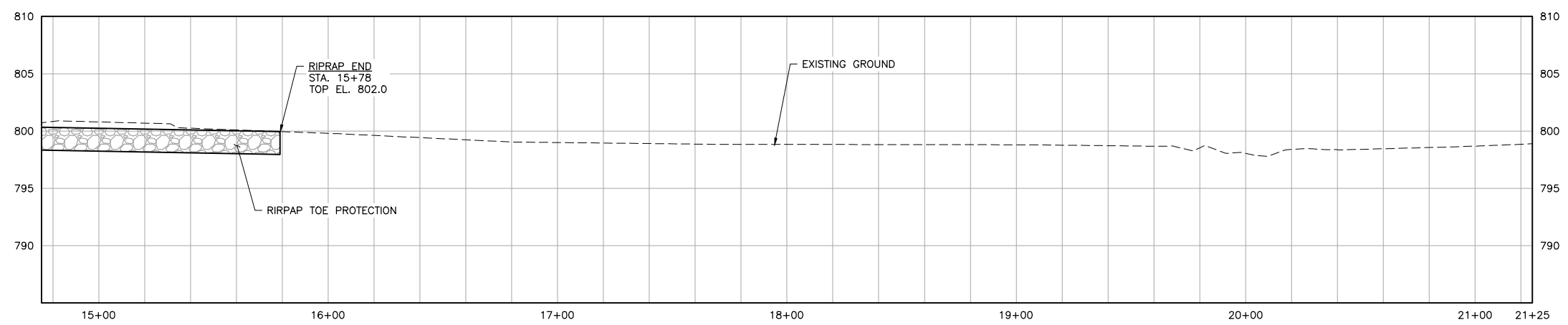
SYMBOL AND PATTERN LEGEND

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- SAN CITY SANITARY SEWER
- W WATERMAIN LINE
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2H TO 1V TYP.
- [Riprap Pattern] RIPRAP STABILIZATION
- [Dotted Pattern] LIVE STAKES
- [Diagonal Lines] FASCINES
- [Hexagon Pattern] VRSS
- [Rectangular Pattern] DEBRIS REMOVAL
- [Boulder Pattern] ROCK CROSS VANE—SINGLE BOULDER



- NOTES**
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1 PLAN: REACH 1 (STA. 15+00 TO 21+00) 0 30 60 SCALE IN FEET



2 PROFILE: REACH 1 (STA. 15+00 TO 21+00) 0 30 60 HORIZONTAL SCALE IN FEET 0 6 12 VERTICAL SCALE IN FEET

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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: JEFFREY D. WEISS
SIGNATURE: _____
DATE: 10/05/2017 LICENSE # 48031

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BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435

Project Office:
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Designed	BARR
Approved	JDW

CITY OF MINNEAPOLIS
MINNEAPOLIS, MINNESOTA

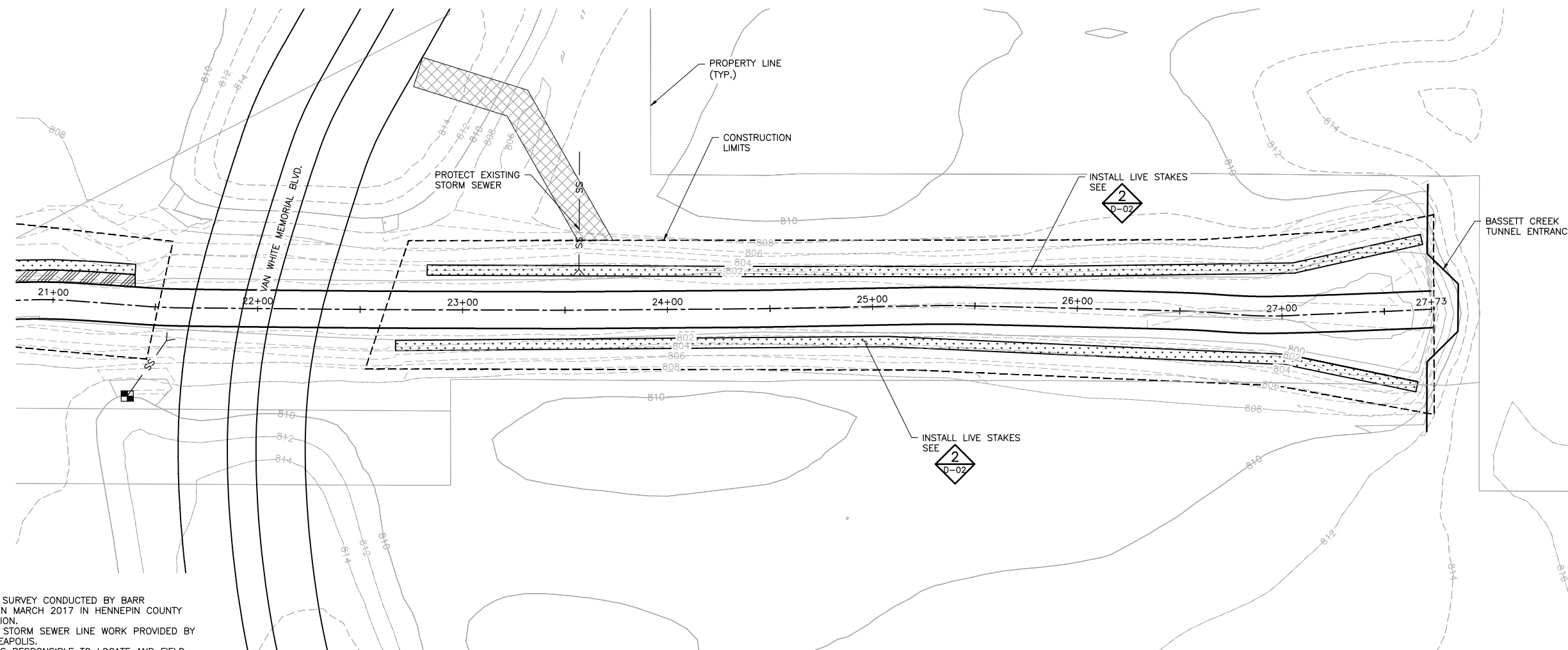
BASSETT CREEK MAIN STEM STABILIZATION
MINNEAPOLIS, MN

PLAN AND PROFILE
REACH 1 (STA. 15+00 TO 21+00)

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CLIENT PROJECT No.	
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REV. No.	A

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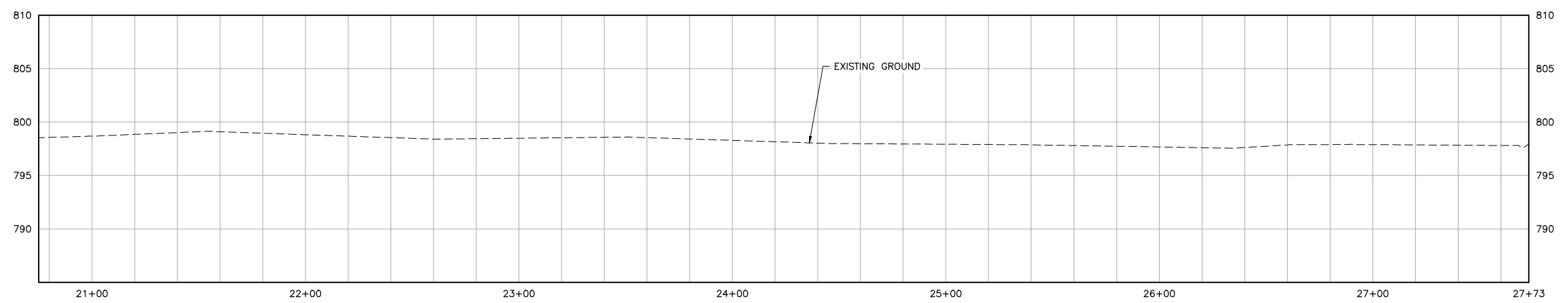
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2 PROFILE: REACH 1 (STA. 21+00 TO 27+75) 0 30 60 HORIZONTAL SCALE IN FEET 0 6 12 VERTICAL SCALE IN FEET

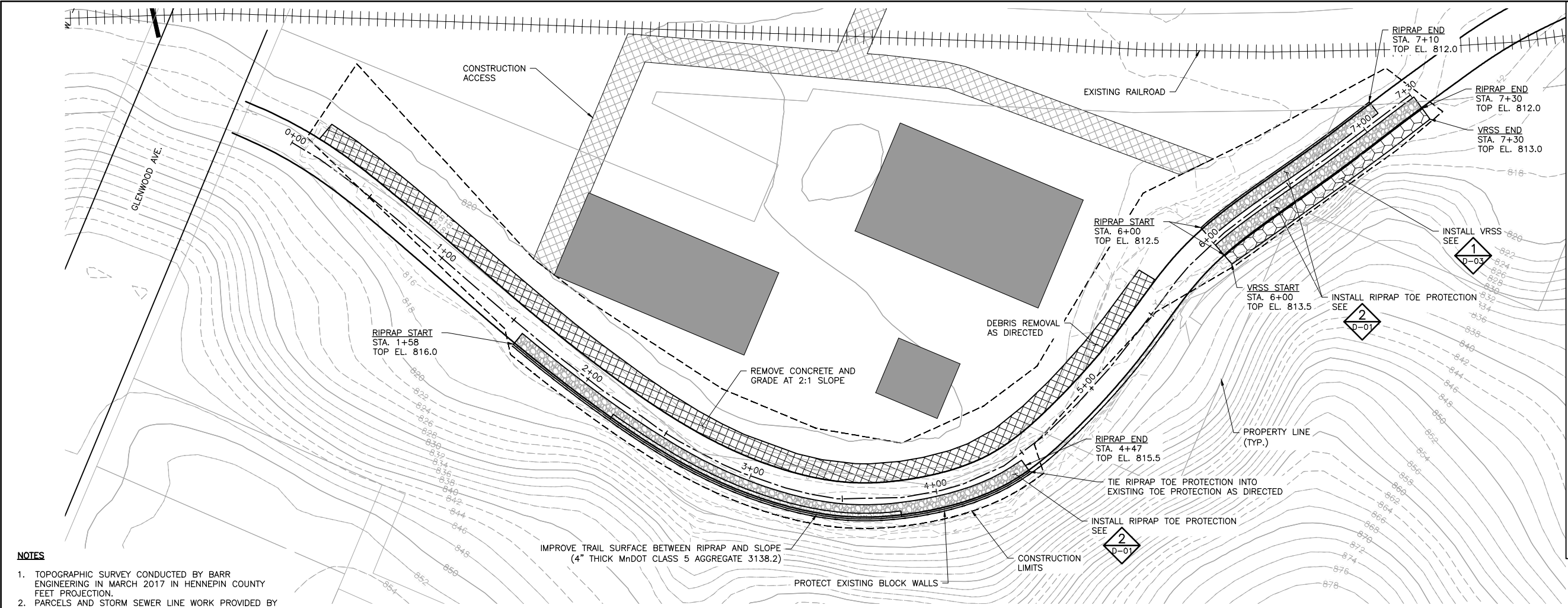
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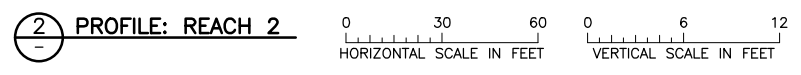
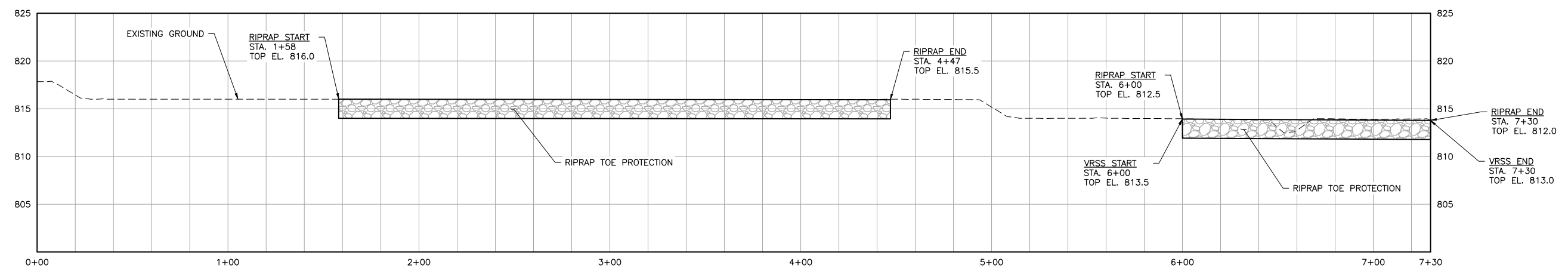
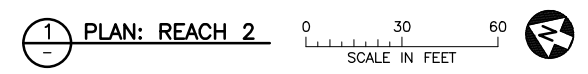
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SYMBOL AND PATTERN LEGEND

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- [Hexagon Pattern] VRSS
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- [Stippled Pattern] TRAIL IMPROVEMENT
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		RELEASED TO/FOR: A B C 0 1 2 3 DATE RELEASED: _____				DWG. No. C-06 REV. No. A							

AGREEMENT FOR TECHNICAL SERVICES

THIS AGREEMENT FOR TECHNICAL SERVICES (“Agreement”) made and entered into this
___ day of _____, 2017

Between: Bassett Creek Watershed Management Commission
4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435 (hereinafter
called “CLIENT”)

And: Wenck Associates, Inc.
1800 Pioneer Creek Center
P.O. Box 249
Maple Plain, Minnesota 55359-0249 (hereinafter
called “WENCK”)

(and together “the Parties”)

Witnesseth That the Parties hereto agree, each with the other, as follows:

1. **PROJECT & SCOPE of SERVICES**
WENCK will review certain sections of the Local Water Management Plans (LWMPs) submitted to the Commission by the cities of Golden Valley and Minnetonka for conformance with the 2015 Bassett Creek Watershed Management Plan, as requested by the CLIENT’S Administrator. The results of the LWMP review will be submitted in writing to the CLIENT (collectively, the “Services”). Reviews by WENCK will be primarily for technical portions of the LWMPs and shall be performed within a scope and timeframe specified by the CLIENT’s Administrator.
2. **COMPENSATION**
Compensation shall be paid for the Services actually provided. The CLIENT will be invoiced on a monthly basis for professional time completed and expenses incurred with a 0% mark-up. Invoices are to be paid within 45 days of receipt of the invoice. The total compensation, including expenses, to be paid to Wenck for all the Services to be provided under this Agreement shall not exceed \$6,000.
3. **TERM**
This Agreement shall be effective as of the date of the last party to execute it and it shall continue to be in effect until December 31, 2018.
4. **TERMINATION**
This Agreement may be terminated by CLIENT upon 5 days notice in writing to WENCK. CLIENT shall forthwith pay to WENCK all amounts, including all expenses and other charges, payable under this Agreement as of the termination date.

5. STANDARD OF CARE/INDEMNITY

WENCK will provide:

- A. The standards of care, skill and diligence normally provided by a professional in the performance of the Services contemplated by this Agreement.
- B. Wenck agrees to indemnify and hold CLIENT harmless from any claim, cause of action, demand or other liability of any nature or kind (including the costs of reasonable attorney's fees and expert witness fees) arising out of any negligent act or omission of Wenck or any subcontractor of Wenck in connection with the Services performed under the terms of this Agreement. Nothing herein shall be deemed a waiver by CLIENT of any limitations or exemptions from liability available to it under Minnesota Statutes, chapter 466 or other law.
- C. WENCK shall, during the entire term of this Agreement, maintain commercial general liability insurance and professional liability insurance, each with a policy limit of at least \$1,000,000. WENCK shall have CLIENT named as an additional insured on WENCK's commercial general liability policy. WENCK shall provide CLIENT a certificate of insurance showing proof of such coverages.

6. DISPUTE RESOLUTION/GOVERNING LAW

If a dispute arises out of or in connection with this Agreement or the breach thereof, the Parties will attempt to settle the dispute by negotiation before commencing legal action. The governing law shall be the law of the State of Minnesota.

7. NOTICE AND OFFICIALS

WENCK will appoint a Project Manager who shall be in charge of the Project for WENCK. CLIENT'S administrator is the official authorized to act for the CLIENT, understanding that certain decisions must be made by CLIENT'S board. The person so appointed by WENCK will maintain close contact with the authorized representative of CLIENT. All notices to WENCK, including without limitation, those concerning changes in the scope of Services shall be directed in writing to the appointed Project Manager at the address shown above. Notices to CLIENT shall be directed in writing to CLIENT at the address of CLIENT shown above or to such other address as the CLIENT may in writing designate.

8. MISCELLANEOUS

This Agreement i) constitutes the entire Agreement between the Parties, ii) supersedes any previous representations or agreements between the Parties with respect to the Service, iii) may be modified or amended only in a writing signed by the Parties, and iv) shall inure to the benefit of and be binding upon the Parties, their respective permitted successors and assigns. Neither Party may assign this Agreement in whole or in part without the express written consent of the other Party. Nothing in this Agreement is to be construed to create any rights in any third party (including without limitation vendors and contractors working on the Project whether as third party beneficiaries or otherwise. WENCK shall comply with all applicable laws, rules, and regulations in providing the Services. WENCK agrees to comply with the Minnesota Data Practices Act with respect all data created, collected, received, stored, used, maintained, or disseminated by WENCK

in the course of providing Services under this Agreement. This Agreement does not require data on individuals to be made available to WENCK. The books, records, documents, and accounting procedures of WENCK related to the Services are subject to examination by CLIENT and either the legislative auditor or the state auditor, as appropriate, for a minimum of six years.

IN WITNESS WHEREOF the parties have duly executed this Agreement.

“CLIENT”
Bassett Creek Watershed
Management Commission

“WENCK”
Wenck Associates, Inc.

By: _____
Its Chair

By: _____

Its Secretary

By: _____
Its



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5C– Consider Revision to Feasibility Study Scope and Budget for DeCola Ponds B & C Improvement Project (BC-2, 3, 8)
BCWMC October 19, 2017 Meeting Agenda
Date: October 11, 2017

5C. Consider Revision to Feasibility Study Scope and Budget for DeCola Ponds B & C Improvement Project (BC-2, 3, 8)

Recommendations:

1. Consider approving the revised scope of work and revised budget (\$86,000) presented in this memorandum for the DeCola Ponds B & C Improvement Project (2019 CIP Project BC-2, BC-3 & BC-8) feasibility study.

Background

At their September meeting, the Commissioners discussed the proposal to conduct a feasibility study for the Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I: DeCola Ponds B & C Improvement Project (2019 CIP Project BC-2, BC-3 & BC-8) ([Item 6Di](#)). After discussion about the appropriateness of the Commission conducting invasive soil testing due to liability concerns, the Commission amended the proposal to remove that activity and revised the study's budget accordingly. (Note: at their September meeting, the Commission also amended the study scope to remove the wetland bank scoping task – Section 2d of the original proposal.)

After further consultation with Commissioner Welch, Golden Valley staff, and the MPCA, we recommend adding test trenching back into the study's scope and developing a work plan for this investigation for submittal to the MPCA. See below for the Section 2b excerpt from the original scope regarding the environmental investigation work. Revisions to the scope (additional recommended activities) are underlined.

In addition, we recommend revising the approved study budget to accommodate the soil testing and work plan development from \$72,000 (approved last month) to \$86,000.

Although this revision will not affect the overall project schedule, the revision results in the following additions to the schedule:

- Submit environmental investigation work plan to MPCA: November 2017
- Environmental investigation field work: January 2018

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5C– Consider Revision to Feasibility Study Scope and Budget for DeCola Ponds B & C Improvement Project (BC-2, 3, 8)
BCWMC October 19, 2017 Meeting Agenda
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Page: 2

2b) Additional environmental investigations – We will utilize the Phase II environmental investigations and Response Action Plan/Construction Contingency Plan (RAP/CCC) developed in 2015 for the City of Golden Valley’s flood mitigation project on the Liberty Crossing development site, which also included a test trench on the Dover Hills Apartment property and three push probes in the wooded area between DeCola Ponds B and C. The Phase II investigation indicated that the wooded area north of DeCola Pond B is likely filled with debris, and that a leaking underground storage tank (LUST) is located on the Dover Hills Apartment property. In addition, some unexpected low-level contamination was encountered on the Dover Hills property during the construction in 2017. We recommend additional investigation in the Pennsylvania Woods area on the Dover Hills property to delineate the extent of debris/fill and assess whether contamination associated with fill or the LUST site is present in the soils north of DeCola Pond B. This scope includes three additional test trenches within the area to be excavated north of DeCola Pond B (outside the existing wetland boundary), with up to two soils samples per trench analyzed for PAHs, RCRA metals and DRO with silica gel cleanup, and up to two soil samples analyzed for VOCs and GRO, if elevated headspace readings are observed. Peat, if encountered, will be sampled and analyzed for arsenic, based on elevated arsenic concentrations identified in peat samples in the Liberty Crossing project area. The additional test trench investigation report will be letter format and will include trench logs, data tables comparing results to MPCA Soil Reference Values, and sample location figures. We will develop a work plan for the test trench investigation and submit it to the City of Golden Valley and to the MPCA for review and approval under the current MPCA Voluntary Brownfield Program site number for the Liberty Crossing flood mitigation project. The Voluntary Brownfield Program covers two programs—the Voluntary Investigation and Cleanup (VIC – for non-petroleum contamination) program and the Petroleum Brownfields program. We assume one meeting with BCWMC, Golden Valley and/or MPCA staff. Depending on the results of the additional investigation, the BCWMC may consider applying for a Hennepin County ERF grant during the fall of 2018 (as part of a future project effort). In addition, we assume that an amendment to the RAP/CCP, if needed, would be developed during project final design.



Bassett Creek Watershed Management Commission

MEMO

To: Bassett Creek Watershed Commissioners
 From: Laura Jester, Administrator
 Date: July 11, 2017

NOTE: Recommendations 1- 5 were approved at the July Commission meeting. At this meeting we'll consider recommendations 6 -16, as time allows.

RE: APM/AIS Committee Recommendations

[Please note: All committee meeting agendas, notes, presentations, and materials can be found at: <http://www.bassettcreekwmo.org/document/meeting-materials-minu.>]

Background and Initial Committee Work

The BCWMC Aquatic Plant Management/Aquatic Invasive Species Committee met on eight occasions from June 2016 to June 2017 to discuss and consider the Commission's role in these issues. The committee included commissioners and alternate commissioners; Commission Engineers Chandler and Rattei; TAC members from Plymouth and Golden Valley; representatives of Sweeney Lake, Parkers Lake, and Medicine Lake; and representatives from Three Rivers Park District (TRPD), Minneapolis Park and Rec Board, Hennepin County, Metropolitan Council, and the Department of Natural Resources (DNR).

In order to guide their discussions, the committee identified types of projects where the Commission should have a role in APM/AIS. Reflecting the goals of the BCWMC Watershed Management Plan, the committee decided on the following levels of involvement:

PRIMARY OBJECTIVE of PROJECT	Commission should be involved	Commission should be involved only as a partner	No Commission role; although may be outcome of project
Activities that improve water quality	X		
Activities that improve habitat and the overall ecology of the waterbody	X		
Activities that protect the function or capacity of Flood Control Project	X		
Activities that improve recreation		X	
Activities that improve or protect human health and safety		X	
Activities that improve aesthetics			X

The committee noted that “recreation” is a broad term that means different things to different people and that improving water quality, in turn, improves recreation. The committee noted that effects on recreation would be taken into consideration for any Commission project or program and the Commission could partner with others on recreation-based projects. Although there wasn’t complete consensus, most committee members agreed that projects which have the primary objective of improved recreation should not be led by the Commission. Alt. Commissioner Holter believe the Commission should have “improved recreation” included as a primary focus of the Commission’s work and role in these issues.

In order to help determine where Commission involvement should be concentrated, the committee reviewed a map and description of the different classifications of waterbodies in the watershed, the locations and descriptions of different AIS already in the watershed and in nearby watersheds, and a list of impaired waterbodies in the watershed. (See Table 1)

The committee also received a presentation from the DNR on the latest studies, observations, and monitoring results regarding control of curly-leaf pondweed (CLP), and a presentation from TRPD on a whole-lake treatment on Medicine Lake that was part of a collaborative pilot project conducted in 2004 – 2006.

Table 1. BCWMC Waterbodies

Waterbody	BCWMC Classification¹	AIS Present	Impairment/TMDL completion date and reference	Local Partners
Medicine Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil, carp	Nutrients 2011: https://www.pca.state.mn.us/water/tmdl/medicine-lake-excessive-nutrients-tmdl-project	TRPD, AMLAC
Parkers Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Chloride 2016 ²	
Sweeney Lake	Priority 1 deep lake	CLP, yellow iris, carp	Nutrients 2011 https://www.pca.state.mn.us/water/tmdl/sweeney-lake-total-phosphorus-tmdl-project Chloride 2016 ²	Homeowners Assoc.
Twin Lake	Priority 1 deep lake	CLP, carp	None	
Wirth Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Nutrients 2010 (since delisted) https://www.pca.state.mn.us/water/tmdl/wirth-lake-excess-nutrients-tmdl-project Chloride 2016 ²	MPRB
Northwood Lake	Priority 1 shallow lake	CLP	Nutrients – no TMDL	Friends of Northwood
Westwood Lake	Priority 1 shallow lake	CLP		Westwood Nature Center
Cavanaugh (Sunset) Pond	Priority 2 shallow lake			
Crane Lake	Priority 2 shallow lake	CLP		
Lost Lake	Priority 2 shallow lake	CLP		
Main Stem Bassett Creek	Priority stream	CLP	Chloride 2016 ² + Bacteria 2014 ³	Friends of Bassett Creek
North Branch Bassett Creek	Priority stream		Bacteria 2014 ³	
Plymouth Cr.	Priority stream		Chloride 2016 ² + Bacteria 2014 ³	
Sweeney Br. Bassett Cr.	Priority stream			

CLP = Curly-leaf Pondweed

¹ Priority 1 Lakes– “MDNR Public Waters” Lakes, greater than 10 acres, with public access or adjacent to public land

Priority 2 Lakes – “MDNR Public Waters” Lakes, greater than 10 acres, without public access or adjacent to public land

Priority 1 Streams – “MDNR Public Waters” Watercourses

²Twin Cities Metro Area Chloride TMDL: <https://www.pca.state.mn.us/sites/default/files/wq-iw11-06e.pdf>

³ Upper Mississippi Bacteria TMDL: <https://www.pca.state.mn.us/water/tmdl/upper-mississippi-river-bacteria-tmdl-project>

Committee Recommendations

Over the course of four meetings, the committee reviewed and discussed activities related to AIS early detection, rapid response, studies, prevention, and management. The committee determined which APM/AIS activities the Commission should lead and which activities could include the Commission as a partner only. To help develop recommendations, the committee often prioritized the activities, considering the activity’s impact vs. the level of effort needed for the activity.

The committee recommends the following activities by the Commission:

1. EARLY DETECTION TRAINING	
Recommendation: The committee recommends that the Commission cooperate with other organizations on training groups or individuals on early detection of AIS in all waterbodies. Possible Commission activities include advertising training sessions, helping to recruit participants, assisting with venue coordination, reimbursing registration costs for Commissioners and active CAMP volunteers, and providing some modest funding. Because training programs and curriculum already exist, the Commission should not develop its own program.	
Current Activity by Others:	DNR, Hennepin County, TRPD and U of M offer training programs
Priority:	HIGH due to low effort for high impact

2. EARLY DETECTION MONITORING	
Recommendation: The committee recommends that the Commission purchase \$600 worth of zebra mussel sampler plates (approx. 50 plates) with 2017 APM/AIS funds for use by CAMP volunteers and lake residents on Priority 1 lakes and CAMP lakes. Further, the Commission should cooperate with other organizations and/or actively recruit and train volunteers to detect zebra mussels on all Priority 1 lakes, aiming for at least one volunteer in each lake quadrant. Finally, the Commission should consider recruiting one “AIS captain” per lake to field calls and questions from volunteers and to collect samples, as needed, to reduce time spent by Commission administrator.	
Current Activity by Others:	<ul style="list-style-type: none"> • Routine Commission monitoring will detect invasive plants, snails, spiny waterflea, and rusty crayfish in lakes and streams • TRPD performs early detection monitoring on Medicine Lake for zebra mussels (but could use help in expanding program) • MPRB performs early detection monitoring on Wirth Lake
Priority:	HIGH due to low effort for high impact

3. RAPID RESPONSE PLAN DEVELOPMENT	
Recommendation: The committee recommends that the Commission begin developing a rapid response action plan for key species (including zebra mussels and starry stonewort) in Priority 1 lakes using 2017 APM/AIS budget (up to \$15,000). The Commission should request a proposal from the Commission Engineer to develop lake-specific rapid response plans that consider infestation thresholds for action, consider experience and recommendations of the DNR and other organizations, assign responsible parties, and list possible funding partners for plan implementation. The Commission could request that this committee review the draft plan and implementation recommendations.	
Current Activity by Others:	MPRB has a Zebra Mussel Action Plan for Wirth Lake
Priority:	HIGH due to need to identify responsible parties and funding mechanisms for quickest, most effective response to new infestations.

4. RAPID RESPONSE TO NEW INFESTATIONS	
Recommendation: The committee recommends the Commission follow guidance resulting from the rapid response plan.	
Current Activity by Others:	MDNR works with local entities to implement rapid responses
Priority:	No priority level set by committee

5. INVENTORIES AND STUDIES	
“Inventories and studies” could include a very thorough and detailed inventory of all AIS, an assessment of the proximity of AIS to BCWMC waterbodies, an analysis of various pathways of AIS into the BCWMC, and an assessment of vulnerability of each waterbody to various AIS.	
Recommendation: At this time, the committee recommends that additional water quality parameters be added to routine monitoring starting in 2018 in order to assess the vulnerability of waterbodies to harboring AIS; and that water monitoring reports include a brief assessment of vulnerability. In 2018 this additional work, estimated at \$2,800, could come from APM/AIS budget.	
Current Activity by Others:	Henn County analyzed the risk of AIS originating from pet stores & nurseries
Priority:	HIGH: Inventory and general vulnerability analysis with routine monitoring through addition of some water quality parameters LOW: Developing full blown studies and assessments for every lake

6. AIS PREVENTION: BOAT LAUNCH AND ACCESS MANAGEMENT

Activities could include inspections of boats entering/leaving lake for AIS; installation and management of washing stations and/or compost bins at launches; regulation of launch closures/open hours.

Recommendation: The committee believes that boat launch owners (including private owners, cities, TRPD, and MPRB) should be responsible for monitoring and managing launches. However, the committee recommends the Commission begin an AIS Prevention Grant Program beginning with the 2019 BCWMC Budget to assist boat launch owners with inspections, equipment purchase, educational signage, staff training, etc.

Current Activity by Others:	TRPD performs inspections during peak hours at their boat launch on Medicine Lake. MPRB closed the boat launch on Wirth Lake to help prevent AIS movement
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Priority:	No priority level set by committee.
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7. AIS PREVENTION: AIS EDUCATION

Recommendation: The committee recommends that the Commission add materials and activities regarding AIS to its education and outreach program including 1) providing printed educational materials during events (using existing materials rather than developing new materials); 2) distributing newsletter articles to cities about AIS; 3) adding AIS information to news items on BCWMC website home page; and 4) considering ideas or requests from cities/lake groups for tailored educational materials through Education Committee's annual work and budget planning.

Current Activity by Others:	TRPD, MPRB, Hennepin County, DNR, and lake groups each provide some level of AIS education through various avenues
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Priority:	No priority level set by committee.
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8. AIS PREVENTION: POLICY DEVELOPMENT/ADVOCACY

Advocating for and/or assisting with policy changes or ordinance development at the local or state level.

Recommendation: The committee doesn't recommend Commission involvement at this time. The committee did direct the Administrator to determine if the Commission could be a member of the Minnesota Lakes and Rivers Advocates due their lobbying efforts on AIS at the legislature. Upon review, the Administrator/Legal Counsel determined the Commission cannot be an actual member of the organization. However, the committee suggested that the organization's newsletter could be distributed or posted with BCWMC materials.

Current Activity by Others:	Some lake groups are member of Minnesota Lakes and River Advocates. Park districts and cities may have AIS issues within their policy agendas.
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Priority:	No priority level set by committee.
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9. MANAGEMENT: MONITORING CURRENT INFESTATIONS

Recommendation: The committee notes that the BCWMC's current routine monitoring program includes monitoring AIS infestations except for fish. The committee recommends that the Commission gather and review existing information on fish surveys during routine lake monitoring to determine if a survey is needed and/or if there are ways to partner with others on surveys. The committee further recommends that the Commission request a presentation from the DNR and others performing fish surveys (such as TRPD and the City of Plymouth) on fish populations in BCWMC waterbodies.

Current Activity by Others:	BCWMC's current monitoring program includes surveys of current AIS infestations except fish. TRPD surveys fish on Medicine Lake City of Plymouth surveys fish on all lakes
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Priority:	No priority level set by committee.
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10. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITH APPROVED PLAN	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
Recommendation: The committee recommends that the Commission perform herbicide spot treatments of aquatic invasive plants where the following conditions are met: 1) treatment of the plant is considered a management tool for improving water or habitat quality according to an approved management plan such as a TMDL; and 2) another entity or organization is sharing the cost of the treatment. (This is consistent with the committee’s recommendation and Commission approval of curly-leaf pondweed control on Medicine Lake in January 2017.)	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches. (City of Plymouth previously treated curly-leaf pondweed in Medicine Lake.)
Priority:	No priority level set by committee.

11. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITHOUT APPROVED PLAN	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
Recommendation: The committee recommends that the Commission consider requests for spot treatments on lakes without an approved plan on a case by case basis.	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches.
Priority:	No priority level set by committee.

12. MANAGEMENT: WHOLE LAKE HERBICIDE TREATMENTS

Recommendation: The committee recommends that the Commission consider requests for whole lake herbicide treatments and that the Commission Engineer continue to engage with the DNR regarding this as well as other new treatment methods and technologies.

Current Activity by Others:	TRPD treated curly-leaf pondweed in Medicine Lake through a whole lake herbicide treatment (2004-2006) as part of a pilot program in coordination with the DNR.
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Priority:	No priority level set by committee.
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13. MANAGEMENT: CARP HARVESTING/FISH BARRIERS

Common carp can have a significant negative impact on water quality and aquatic vegetation, particularly in shallow lakes.

Recommendation: The committee recommends that the Commission consider the need for managing carp populations in Priority 1 lakes if fish surveys and other data indicate that carp are a significant problem.

Current Activity by Others:	TRPD and neighboring watershed organizations have performed or will be performing carp management activities including harvesting and barrier installation.
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Priority:	No priority level set by committee.
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14. MANAGEMENT: WATER LEVEL MANAGEMENT

In some lake systems, water levels can be lowered in order to consolidate sediments, encourage native plant growth, and significantly reduce invasive plants such as curly-leaf pondweed.

Recommendation: The committee recommends that the Commission consider water level management on a case by case basis if recommended in an approved management plan.

Current Activity by Others:	Neighboring watershed organizations have performed water level management activities.
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Priority:	No priority level set by committee.
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15. MANAGEMENT: BIOLOGICAL TREATMENT

Insects are sometimes used to control invasive species, including beetles introduced to control purple loosestrife infestations.

Recommendation: The committee recommends that the Commission consider biological control on a case by case basis as a possible future control method and to stay informed on new biological control agents.

Current Activity by Others:	Many entities have released purple loosestrife beetles in the past with great success. The DNR continues to “collect and move” beetles in limited cases.
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Priority:	No priority level set by committee.
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16. CONVENING LAKE GROUPS TO UNDERSTAND OPTIONS FOR ORGANIZATION

During the discussion of many of the prevention and management options, it was noted that formal [lake improvement districts](#) may be the best type of organization to implement many of the prevention and management tools noted above and that BCWMC lake groups might need more information about the pros and cons of forming a lake improvement district.

Recommendation: The committee recommends that the Commission convene a meeting of lake groups and other interested groups/individuals in the BCWMC and request a presentation from the DNR and other experts to learn about lake improvement districts vs. lake associations and other less formal lake groups.



Item 5E.
BCWMC 10-19-17

Bassett Creek Watershed Management Commission

NOTE: TAC recommendations #1 and #2 were approved at Sept meeting. Please review only #3 and #4 for consideration at this meeting.

MEMO

To: Bassett Creek Watershed Management Commissioners
From: BCWMC Technical Advisory Committee
Date: September 13, 2017

RE: TAC Recommendations – 8/4/17 TAC Meeting

The BCWMC Technical Advisory Committee met on August 4th to discuss 1) FEMA modeling in the watershed, 2) communication needs regarding the XP-SWMM model and revised floodplain elevations, 3) the timing and process for updating the XP-SWMM model, and 4) possible revisions to the BCWMC review fees. They forward the following recommendations for the Commission's consideration.

TAC Members and Others at 8/4/17 TAC Meeting:

Liz Stout, Minneapolis	Rachael Crabb, MPRB
Jeff Oliver and Eric Eckman, Golden Valley	Jim de Lambert, Commission Chair
Richard McCoy and Marta Roser, Robbinsdale	Jim Prom, Plymouth Commissioner
Megan Albert, New Hope	Laura Jester, Administrator
Mark Ray, Crystal	Karen Chandler and Jim Herbert, Commission Engineers
Tom Dietrich, Minnetonka	Suzanne Jiwani, Pat Lynch and Jason Spiegel, MDNR
Ben Scharenbroich, Plymouth	
Susan Wiese, Medicine Lake	

1. FEMA Modeling in the Bassett Creek Watershed

At their May meeting, the Commission directed the Commission Engineer to contact the MN Department of Natural Resources (DNR) about possible funding for the FEMA map revision process (as part of the discussion regarding the TAC's recommendations regarding the XP-SWMM model). In communications with DNR staff, the Commission Engineer learned that the DNR will be receiving a FEMA grant to develop hydrologic and hydraulic (H&H) models for the Twin Cities Mississippi River watershed, which includes the Bassett Creek watershed. Once completed, the modeling may lead to a FEMA physical map revision (i.e., official revisions to the FEMA floodplain maps).

Suzanne Jiwani with the DNR attended the TAC meeting and reported that the State of Minnesota agreed to do this work (with FEMA funding) rather than FEMA using their own consultants to perform the work. She went on to discuss the opportunity and gauge the Commission's interest in participating in the modeling effort. She reported the following information:

FEMA wants to model key watersheds in the Twin Cities area because these areas were "digitally captured" when the most recent digital Flood Insurance Rate Maps (DFIRMs) were produced. This

means FEMA took what was on the old map and placed it on the new maps, with no additional modeling, and with no use of the LiDAR data to delineate the floodplain. FEMA wants to go back and update these areas so they are supported by a new model.

The FEMA grant would cover the development of H&H models for the Bassett Creek (HUC10) watershed, along with the Coon Creek, Shingle Creek, Elm Creek, and Upper Minnehaha Creek watersheds, and parts of the Rice Creek and Vadnais Lakes area watersheds. The DNR's scope for the Bassett Creek watershed includes:

- Developing a hydrologic model
- Creating a hydraulic model for 25.4 miles of stream
- Delineating the Special Flood Hazard areas
- Developing other FEMA Flood Risk Products.

The BCWMC completed much of this work through its XP-SWMM modeling effort. (The FEMA grant cannot be used to reimburse this already-completed work.) Some additional work is needed to collect and analyze all data sought by FEMA for this effort. The TAC members discussed the pros and cons and possible costs if the Commission were to be involved with the effort. Further points of discussion included:

1. The work will be done with or without the Commission's involvement. The entire scope of the project is included in table below.
2. Although formal FEMA map updates are several years out, FEMA is likely to place a higher priority on map updates where new data (i.e., FEMA modeling) is available. It is also likely that local partners (like the BCWMC) would complete the FEMA modeling work faster than the DNR. (This, then, has added benefit of possibly getting formal map revisions completed sooner – something cities are hoping for.)
3. If the Commission does the work, Commission costs would be approximately \$2,000 for development of a scope of work and budget. These costs would not be reimbursed by the DNR or FEMA grant funds, but all other work would be reimbursed through the FEMA grant.
4. If the Commission does not do the work, the Commission would be asked to review the DNR's work, and would likely interact with DNR at various points throughout the process, which would likely cost the Commission more than developing the scope of work mentioned in #3.
5. There is likely to be better and more timely communication and coordination with cities if the Commission does the work.
6. Other benefits (identified by the DNR) for the Commission doing the work: The Commission will have more input during the modeling process; a better model will be completed because of the detail that has gone into it; and there could be extra money at the end to use for other flood risk reduction projects.

RECOMMENDATION:

The TAC recommends that the Commission direct the Commission Engineer to develop a scope and budget for completing the tasks laid out for the FEMA modeling work and to submit that scope and budget to the DNR to seek FEMA grant funds to complete the work. (Upon a vote among TAC members, 7 cities were in favor of this recommendation, Plymouth staff voted against the recommendation, and City of St. Louis Park was absent.)

Table 1. Tasks to Complete the FEMA Modeling Process

<ol style="list-style-type: none">1. Obtain approval from the Interagency Hydrology Review Committee on the XPSWMM model hydrology and make necessary modifications to the model. (<i>The Interagency Hydrology Review Committee includes staff from the DNR, US Army Corps of Engineers, Natural Resource and Conservation Service, and United States Geological Survey.</i>)2. Develop a set of cross-sections that associate the XPSWMM model to the FEMA streamline. These will be used as the cross-sections on the DFIRMs and will need to be used to delineate the floodplain and create the FEMA Flood Risk Products.3. Develop the 1-percent-chance (100-year) and 0.2-percent-chance (500-year) floodplain polygons.4. Develop the floodway polygon.5. Format the cross-sections and floodplain/floodway polygons to FEMA standards (the DNR has templates for this).6. Submit model hydraulics for review by the DNR. Suggested changes will most likely be minor, but they may include requiring a survey for road crossings in detailed study areas if as-built data are not available.7. Perform the suggested corrections/updates to the XP-SWMM model.8. Develop FEMA Flood Risk Products (Changes Since Last FIRM and Depth Grids). The DNR can provide instructions regarding the development of these products.9. Organize all files and supporting data for uploading to FEMA's Mapping Information Platform (MIP).

2. Proposed Revisions to BCWMC Review Fee Schedule

At the March 27, 2017 BCWMC Budget Committee meeting, the committee discussed the discrepancy between development review expenses and fees collected for reviews. It was noted that in 2016 and 2017 there were a few large, complicated projects that required much more time to review and to coordinate with developers about the XP-SWMM model and MIDS, than was recovered in fees. The Budget Committee requested TAC input on the issue.

At this meeting, the TAC reviewed data provided by the Commission Engineers showing reviews, fees, and a comparison of fees collected with the current structure and fees that would have been collected if their proposed new structure was in place (attached). Commission Engineer Herbert noted that the current fee schedule (attached) is based on project size but that smaller parcels often have more complicated and time-consuming projects and review needs. There was consensus that it makes sense to revise the fee structure so that complicated projects end up paying a fee more commensurate with actual expenses. The Commission Engineers presented a proposed restructured fee schedule (attached) that attempts to base fees more on review effort than project size.

Commission Engineers noted that the proposed fee schedule still includes lower fees for single-family homes and municipal projects because the Commission does not intend to burden single family homeowners with high fees, and the Commission offers lower fees to municipalities that fund the operating budget of the Commission. However, it was also noted that often single-family home projects require more communication with project proposers due to their

inexperience with construction projects; and that lately municipal projects have been more complex and challenging, resulting in more time needed for review.

TAC members discussed situations where reviews take considerable time and expense including when substantial changes are made to a project after an initial review and comment letter from the Commission, requiring further review and a revised comment letter. There was consensus that escrow accounts are too complicated and time consuming to administer. Instead, the TAC recommended that, if legally appropriate, the Commission should charge project proposers for actual expenses when a project review exceeds \$5,000.

RECOMMENDATION:

The TAC recommends that the Commission adopt the proposed review fee structure (attached) and include a provision to charge actual costs for review expenses above a \$5,000 threshold.

The TAC recommended that the revised fee schedule take effect January 1, 2018. Commission staff recommend adopting the revised fee schedule effective October 1, 2017 to be more in-line with recent changes to the requirements document.

3. Communication Needs for XP-SWMM/Revised Floodplain Elevations

There was some discussion about how cities are currently communicating with residents and other city staff (such as planning departments) about recent changes to floodplain elevations and discrepancies between FEMA and BCWMC floodplain elevations. The group suggested that the Commission develop only a minor communication piece for use on the website and for communications with residents and others.

RECOMMENDATION:

The TAC recommends that the Commission develop a one-page explanation of why there are two different numbers for floodplain elevations and a description of the modeling effort.

4. Timing and Process for BCWMC Model Updates

The Commission Engineer noted that updates to the P8 and XP-SWMM models are generally based on information provided by member cities on projects constructed in the watershed. They asked for the TAC's input on a timeline and process for submitting the information needed for model updates.

RECOMMENDATIONS:

- The TAC recommends that the Commission direct member cities to submit all pertinent information from the calendar year to the Commission Engineer no later than March 1st of the following year.
- The TAC recommends that the Commission direct the Commission Engineer to finalize model updates no later than June 1st of each year.

Proposed Fee Schedule

Fee Schedule (Effective _____, 2017)

Bassett Creek Watershed Management Commission Project Reviews

Project Review Fees (check appropriate boxes) ^{1, 7}		
<input checked="" type="checkbox"/> Base Fees		
<input type="checkbox"/>	Single Family Lot (No add-on fees required)	\$500
<input type="checkbox"/>	Projects Requiring Only Erosion and Sediment Control Review	\$1,500
<input type="checkbox"/>	Municipal Projects ² (No add-on fees required)	\$1,500
<input type="checkbox"/>	All Other Projects	\$1,500
<input checked="" type="checkbox"/> Add-On Fees³		
<input type="checkbox"/>	1. Projects requiring Rate Control or Treatment to MIDS Performance Goal	\$1,000
<input type="checkbox"/>	2. Projects involving work within or below the 100-year floodplain (Table 2-9, Watershed Management Plan) - select highest of following add-on fees (a or b)	
<input type="checkbox"/>	a. Work involving filling and compensating storage within or below the 100-year floodplain (identified in Table 2-9)	\$1,000
<input type="checkbox"/>	b. Work along the Bassett Creek trunk system or inundation areas involving review of, or modifying the XP-SWMM model.	\$2,000
<input type="checkbox"/>	3. Work involving creek crossings (bridges, culverts, etc.)	\$1,000
<input type="checkbox"/>	4. Projects involving review of alternative BMPs ⁴	\$1,000
<input type="checkbox"/>	5. Project involving variance request	\$1,000
<input checked="" type="checkbox"/> Wetland Fees⁵		
<input type="checkbox"/>	Wetland delineation review	Varies
<input type="checkbox"/>	Wetland replacement plan review	Varies
<input type="checkbox"/>	Monitoring and reporting	Varies
<input type="checkbox"/>	Wetland replacement escrow	Varies
Total Project Review Fees ^{6, 7}		\$_____
<p>1 State agencies are exempt from review fees. Other public agencies are required to pay review fees and add-on fees.</p> <p>2 Including Minneapolis Park & Recreation Board projects</p> <p>3 Required in addition to base fee (except for single family lots and municipal projects).</p> <p>4 BMPs not included in <i>Minnesota Stormwater Manual</i>.</p> <p>5 Wetland fees will be billed at actual cost for projects where BCWMC acts as the LGU for the Wetland Conservation Act or when a member city requests assistance from the BCWMC for wetland-related review tasks (BCWMC is the LGU for the cities of Medicine Lake, Robbinsdale and St. Louis Park).</p> <p>6 Include check for total project review fees or other fees with application form. Check should be payable to Bassett Creek Watershed Management Commission.</p> <p>7 If the actual cost to conduct a review reaches \$5,000, the applicant shall be required to reimburse the Commission for all costs it incurs in excess of that amount. The Commission shall bill the applicant for the additional costs. If an applicant fails to fully reimburse the Commission for the additional costs, any future requests for a review from the applicant shall be deemed incomplete, and the Commission will not conduct a review, until all outstanding amounts have been paid.</p>		

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Current Fee Schedule

Fee Schedule (Effective September 17, 2015)

Bassett Creek Watershed Management Commission Project Reviews

Project Review Fees (check appropriate boxes)		
Base Fees¹		
	Single Family Lot	\$300
Single Family Residential Development (density less than 3 units per acre)		
	Total parcel size <15 acres	\$1,500
	Total parcel size 15–30 acres	\$1,800
	Total parcel size >30 acres	\$2,500
All Other Development²		
	Total parcel size <5 acres	\$1,700
	Total parcel size 5–20 acres	\$2,200
	Total parcel size >20 acres	\$3,000
	Street/highway/trails/utility/municipal projects	\$1,100
Add-On Fees³		
	Work within or below the 100-year floodplain (Table 2-9, Watershed Management Plan)	\$300
	Work involving creek crossings (bridges, culverts, etc.)	\$300
	Projects involving review of alternative BMPs ⁴	\$300
Other Fees		
	Variance escrow	\$2,000
Wetland Fees⁵		
	Wetland delineation review	Varies
	Wetland replacement plan review	Varies
	Monitoring and reporting	Varies
	Wetland replacement escrow	Varies
Total Project Review Fees⁶		\$_____
<p>1 Project-review fee based on total parcel size (not disturbed area) including wetlands, buffer, right-of-way, and other nondeveloped area.</p> <p>2 State agencies are exempt from review fees.</p> <p>3 Required in addition to base fee.</p> <p>4 BMPs not included in <i>Minnesota Stormwater Manual</i>.</p> <p>5 Wetland fees will be billed at actual cost for projects where BCWMC acts as the LGU for the Wetland Conservation Act or when a member city requests assistance from the BCWMC for wetland-related review tasks (BCWMC is the LGU for the cities of Medicine Lake, Robbinsdale and St. Louis Park).</p> <p>6 Include check for total project review fees or other fees with application form. Check should be payable to Bassett Creek Watershed Management Commission.</p>		

BCWMC Fee Schedule Comparison and Analysis (Select FY 2016 Applications)

Application Form No.	Task #	Project Name	City	Application Fee (Current Fee Schedule)	Application Fee (Proposed Fee Schedule)	Application Fee Change	Review Cost	Application Fee - Review Cost (Current Fee Schedule)	Application Fee - Review Cost (Proposed Fee Schedule)
2016-01	2067	Theodore Wirth Adventure and Welcome Ctr	GV	\$1,100	\$2,500	\$1,400	\$4,002	(\$2,902)	(\$1,502)
2016-02	2068	2016 Northwood Lake Improvements ¹	NH	\$1,400	\$1,500	\$100	\$2,250	(\$850)	(\$750)
2016-03	2069	2016 Northwood South Area Infrastructure ¹	NH	\$1,100	\$1,500	\$400	\$5,540	(\$4,440)	(\$4,040)
2016-04	2070	Three Rivers PD BC Regional Trail	NH	\$1,400	\$2,500	\$1,100	\$4,402	(\$3,002)	(\$1,902)
2016-05	2071	Arlington Row East Apts	SLP	\$1,700	\$1,500	(\$200)	\$1,531	\$169	(\$31)
2016-06	2072	GV 2016 PMP STH 169-Plymouth Ave ¹	GV	\$1,100	\$1,500	\$400	\$3,404	(\$2,304)	(\$1,904)
2016-07	2073	Gardendale Development	CRY	\$1,500	\$1,500	\$0	\$873	\$627	\$627
2016-09	2075	Four Seasons Mall Demo	PLY	\$2,200	\$1,500	(\$700)	\$1,376	\$824	\$124
2016-10	2076	Old Rockford Rd Overlay & Trail	PLY	\$1,100	\$1,500	\$400	\$1,115	(\$15)	\$385
2016-11	2077	Armstrong HS Baseball Field Imp.	PLY	\$2,200	\$1,500	(\$700)	\$1,071	\$1,129	\$429
2016-12	2078	Pilgrim Lane Elementary Additions	PLY	\$2,200	\$2,500	\$300	\$2,279	(\$79)	\$221
2016-13	2079	Little Newtons Addition	PLY	\$1,700	\$2,500	\$800	\$738	\$962	\$1,762
2016-14	2080	Mortenson Hdqtrs Addition ²	GV	\$2,200	\$2,500	\$300	\$1,529	\$671	\$971
2016-15A	3009	SP 2772-104 TH 169 16th St/Ramp Closure ³	SLP	\$0	\$0	\$0	\$762	(\$762)	(\$762)
2016-15B	3010	SP 2772-105 TH 169 Pavement Project ³	SLP (GV, Ply, Mtk)	\$0	\$0	\$0	\$1,199	(\$1,199)	(\$1,199)
2016-17	2083	SWLRT Minneapolis ⁴	MPLS	-	-	-	-	-	-
2016-18	2084	Beacon Academy	CRY	\$2,200	\$2,500	\$300	\$1,498	\$702	\$1,002
2016-19	2085	Ply PW Campus Facility Add	PLY	\$1,100	\$2,500	\$1,400	\$1,367	(\$267)	\$1,133
2016-20	2086	Cherrywood Pointe ²	MTKA	\$1,700	\$2,500	\$800	\$2,183	(\$483)	\$317
2016-22	2088	Theo Wirth Utility Improvements	GV	\$1,100	\$1,500	\$400	\$1,498	(\$398)	\$2
2016-23	2089	Daugherty 2860 Evergreen Ln	PLY	\$600	\$500	(\$100)	\$1,482	(\$882)	(\$982)
2016-24	2090	Luther Support Center	GV	\$2,200	\$2,500	\$300	\$2,699	(\$499)	(\$199)
2016-25	2092	Hutton House (10715 S Shore Dr)	ML	\$1,700	\$2,500	\$800	\$3,042	(\$1,342)	(\$542)
2016-26	2094	226 Peninsula Road	ML	\$600	\$500	(\$100)	\$1,474	(\$874)	(\$974)
2016-27	2095	Brookview Community Ctr ²	GV	\$1,100	\$1,500	\$400	\$1,772	(\$672)	(\$272)
2016-28	2096	Liberty Crossing Fld Mitigation	GV	\$1,100	\$1,500	\$400	\$1,128	(\$28)	\$372
2016-29	2097	@glenwood Campus	MPLS	\$2,000	\$5,500	\$3,500	\$9,370	(\$7,370)	(\$3,870)
2016-31	2099	GV Tank Mound Project	GV	\$2,200	\$1,500	(\$700)	\$702	\$1,498	\$798
2016-33	2101	Twin City Outdoor Services	PLY	\$1,700	\$1,500	(\$200)	\$517	\$1,183	\$983
2016-34	2102	Ridgedale Corner Shoppes	MKTA	\$1,700	\$2,500	\$800	\$3,075	(\$1,375)	(\$575)
2016-35	2103	Mpls Marriott West	SLP	\$2,200	\$1,500	(\$700)	\$701	\$1,499	\$799
2016-36	2104	Berger Financial Group Addition ²	PLY	\$1,700	\$1,500	(\$200)	\$740	\$960	\$760
2016-37	2105	Crest Ridge Senior Housing	MTKA	\$2,200	\$2,500	\$300	\$1,519	\$681	\$981
2016-38	2106	Northwood N. Infrastructure Imp	NH	\$1,100	\$1,500	\$400	\$2,357	(\$1,257)	(\$857)
2016-39	2107	French Regional Park Pavement	PLY	\$1,400	\$1,500	\$100	\$2,061	(\$661)	(\$561)
Totals:				\$50,500	\$62,000	\$11,500	\$71,256	(\$20,756)	(\$9,256)

¹ Municipal Applicant; no add-on fees

² Review in Progress

³ State Agency Applicant; exempt from review fees

⁴ Separate Agreement was Established with the BCWMC for Review

Does not factor in recouping expenses for reviews over \$5,000. This figure would drop to (\$4,346) if footnote "7" in proposed schedule is approved.

Item 5F.
BCWMC 10-19-17
Full Program online

MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, INC



Land and Water Shall be Preserved

November 30 - December 2, 2017

Arrowwood Conference Center

Alexandria, MN

2017 MAWD Annual Meeting & Trade Show

CONCURRENT GENERAL SESSION I

Thursday, November 30 at 7:15-8P.M.

Seminar A: Preventing the Spread of Aquatic Invasive Species (AIS) with a Collaborative Watercraft Inspection Program.

Mike Sorensen - Comfort Lake-Forest Lake Watershed District

It is generally accepted that boater education is one of the best tools for preventing the spread of aquatic invasive species. As such, the CLFLWD, in partnership with Chisago County, manages a watercraft inspection program that continues to grow each year with generous support from a variety of partners. The 2017 program is currently on track to achieve more than 3,000 hours of inspections and more than 7,000 total inspections. A wide array of inspection survey data is analyzed at the end of each summer. For example, in 2016, inspections were performed on 314 watercraft coming from lakes containing AIS that are not currently found in CLFLWD lakes. Trends in drain plug violations, inspection rate, and previous lake of incoming watercraft were also observed. This presentation will highlight lessons that have been learned after more than five years of the CLFLWD's administration of the watercraft inspection program.

Seminar B: From Planning to Prioritizing, a Watershed District Story

Claire Bleser, Scott Sobiech, Greg Williams, Peggy Knapp, Michelle Jordan, Josh Maxwell, Erin Anderson-Wenz.

Understanding that public support is critical for the efficient and effective operation of any government organization, the District emphasized public engagement and outreach throughout the development of their 10-year Plan. As a result, the issues identified and emphasized in their Plan are the direct result of stakeholder input.

Furthermore, the results of the public engagement process identified "project prioritization" as an issue of high importance to stakeholders. Comments received at public meetings highlighted the difficulty in developing a clear and equitable method for project prioritization. To address this concern, the RPBCWD developed a proposed project prioritization method that allowed relative comparison of various watershed management type projects spanning across watershed boundaries and types of water resources (i.e. wetlands, creeks, lakes and groundwater).

This prioritization tool allowed a method for scoring these projects based on multiple benefits with consideration for logistical factors (i.e. timing, partnership dollars and coordination with partners to name a few). The logistical constraints for high priority projects were taken into consideration in the development of a 10-year Management Implementation Program and were included in the District's 10-Year Management Plan to guide the District as they protect, restore and manage their water resources.

Seminar C: Grey Cloud Restoration

John Loomis, South Washington Watershed District

The Grey Cloud slough is a side channel of the Mississippi River in southern Washington County. Flow from the Mississippi River into the slough was cut off following construction of an earthen embankment and roadway across the mouth of the slough in the 1960s. As a direct result, the slough exhibits stagnation, poor water quality, and severely degraded backwater aquatic habitat. SWWD and its partners are currently replacing the embankment with a bridge to restore flow to the channel. The project will be complete in October and is expected to make immediate significant improvement to water quality within the channel. We will present project background, development, and funding as well as extensive visual documentation collected before, during, and after the project for project promotion.

Seminar D: Sustainable Stormwater Analysis for the Ford Site Redevelopment in St. Paul

Bob Fossum, Capitol Region Watershed District, Wes Saunders-Pearce, City of St. Paul

Ford's former 122-acre Twin Cities Assembly Plant along the Mississippi River in St. Paul is in the process of being redeveloped over the coming years. Capitol Region Watershed District and the City of Saint Paul completed a Sustainable Stormwater Management Study, which defines the vision and lays the groundwork for future stormwater infrastructure, with one of the goals being to protect Hidden Falls. A centralized stormwater management approach was compared to a baseline parcel-by-parcel approach. Innovative tools for comparing feasibility costs, benefits, impacts and sustainability for the different options provided insights about the community value that redevelopment alternatives might generate. Sustainable Return on Investment (SROI) analysis using the software AutoCase allowed for monetizing the estimated environmental and social impacts of each alternative, thereby informing planning recommendations. The study outlines transformation of the Ford Site by featuring a stormwater-based amenity that reconnects the community to parks and the Mississippi River.

PLENARY SESSION I

8A.M. - Friday, December 1

Climate Adaptation & Mitigation - Erin Anderson Wenz, Barr Engineering Co.

Our climate is changing and citizens are asking about what can be done to prevent it from getting worse and how to adapt. Some organizations and industries are being proactive on this front and preparing for extreme storm events. Others are overwhelmed by the possible extent of impacts. Watershed districts are addressing this difficult issue in many ways. From dealing with unprecedented flood events to developing adaptation plans, MN watershed districts are being proactive. This presentation will feature current work of several watershed districts, including the Riley Purgatory Bluff Creek Watershed District and the Ramsey-Washington Metro Watershed District. Examples include facilitating climate resilience workshops with local communities for them to plan for upcoming changes from storms, floods, heat, and warming winters. The results of these workshops will be incorporated into their 2018 City Comprehensive Plans. Other examples include modeling for the 95% confident limit storm from Atlas 14 to predict extreme event flooding, infrastructure vulnerability studies, and designing plant community restorations prepared for invasive species encroachment. This presentation will provide several examples of climate adaptation projects initiated by watershed districts.

CONCURRENT TECHNICAL SESSION FOR MAWA

9A.M. - 10A.M. - Friday, December 1

A. Developing an Education and Outreach Plan Through Community Engagement and Need Identification

Michelle Jordan and Claire Bleser, Riley-Purgatory-Bluff Creek

As part of the ongoing process of updating its watershed management plan, the Riley Purgatory Bluff Creek Watershed District (RPBCWD) developed an associated Education and Outreach Plan (E&O Plan). The objective of the E&O Plan is to improve water quality within RPBCWD by leveraging the power of an engaged community to effect positive, meaningful change. In creating the E&O Plan, RPBCWD sought to craft messages and programs that would be meaningful to its audiences. To accomplish this, it needed to better understand the needs and interests of its community. A series of community meetings and surveys were conducted. The information gathered from stakeholders was interpreted, and community needs identified. This was then used to create a set of E&O strategies and guiding questions. Informed by this engagement process, the final plan seeks to build capacity to protect clean water by partnering with stakeholders to create a network of watershed champions.

9A.M. - 10A.M. - Friday, December 1

B. Cost Analysis of Water Quality Standards in Minnesota

Greg Wilson, Barr Engineering and Andy Henschel, Shell Rock River Watershed

Barr Engineering and Bolton and Menk recently completed an analysis of the overall capital and operating costs to maintain and upgrade wastewater and storm water systems for existing water quality standards, and well as recently adopted, proposed or anticipated changes to water quality standards for total suspended solids, nutrients, chloride, nitrate and sulfate on behalf of Minnesota Department of Management & Budget. The results showed that there could be significant cost implications for several cities/utilities across the state, with Albert Lea being one of the more notable examples that will be discussed in this presentation. This presentation will also include estimates of the incremental effect on receiving water quality, as well as the relative cost-effectiveness and affordability, based on the number of residential and commercial connections to treatment systems.

We are excited to announce our Keynote Speaker, Jeff Peterson, who will be attending the luncheon on Friday, December 1



Jeffrey M. Peterson is the Director of the University of Minnesota's Water Resources Center, a partnership of University Extension and the College of Food, Agricultural, and Natural Resource Sciences. As Director, he provides overall leadership for the center's outreach, teaching, and research activities involving faculty and students across the university. He also holds a faculty appointment as a professor in the Department of Applied Economics. He earned his Ph.D. from Cornell University in agricultural and resource economics. Prior to coming to Minnesota he held a faculty position in the Department of Agricultural Economics at Kansas State University for 15 years, including service as Director of Graduate Studies from 2014 to 2015. He is the recipient of national awards for his research on environmental policy analysis, focusing on water use and water quality impacts from agriculture. He currently serves as an editor of the Journal of Agricultural and Resource Economics.

CONCURRENT GENERAL SESSION II

Friday, December 1 at 2-2:45P.M.

Seminar A: Measuring the Success of Shallow Lake Management in Anderson Lakes

Randy Anhorn, Nine Mile Creek Watershed District and Janna Kieffer, Barr Engineering Co.

Prior to 2008, Anderson Lakes (Northwest, Southwest, and Southeast) located in the Nine Mile Creek watershed were suffering from poor water quality due to excess phosphorus loading (watershed and internal) limiting the lake health and native plant communities. Release of phosphorus from the lake bottom sediments was also adding phosphorus, resulting in algal blooms and poor water clarity. In 2008, the Nine Mile Creek Watershed District (NMCWD) performed upstream pond improvements and a drawdown of Northwest and Southwest Anderson Lakes to address invasive Curlyleaf Pondweed. In 2012, the NMCWD conducted a buffered alum treatment of Southwest Anderson Lake to immobilize the phosphorus at the lake bottom. These shallow lake management techniques successfully controlled Curlyleaf Pondweed, surpassed phosphorus reduction and water clarity expectations and significantly improved the aquatic plant community.

Seminar B: Flood Prediction to Improve Planning in Southwestern Minnesota

Jason Love and Jared Oswald, RESPEC

The Big Sioux River Basin, located in South Dakota and southwestern Minnesota, has historically experienced flooding. A 2014 flood revealed a lack of understanding of flood events. State and local governments need accurate hydrologic and hydraulic model of the basin to predict the severity of floods and to implement appropriate flood reduction projects. This hydrologic and hydraulic study will provide this information. The resulting system will predict impacted areas under a range of flood scenarios. A one-stop web-platform will provide access to flood conditions, forecasts, visualizations, inundation maps, and applications. Real-time and historical conditions will be available by streaming data from automated sensors, gauges, and weather forecasts. The system includes a rainfall-runoff forecast model to provide a flood risk estimate at critical locations and to assess impacts of flood management strategies. Users will obtain a relative understanding of the current and forecasted conditions in relation to flood response actions.

Seminar C: Moody Lake Adaptive Management Project

Emily Heinz, Mike Kinney-Comfort Lake-Forest Lake Watershed District and Meghan Funke, Emmons & Olivier Resources

Moody Lake is on the impaired waters list for eutrophication due to excess phosphorus. The CLFLWD is in the final stages of a multi-year, multi-phase, adaptive management approach to reducing phosphorus loads to Moody Lake. Following completion of a TMDL, the District conducted intensive monitoring of tributary inlet streams to target the primary sources of phosphorus from the watershed. This resulted in excavation of phosphorus-laden soil from a degraded wetland and several small pond alum treatments to address legacy livestock loads. A fish barrier and aerator were also installed to control in-lake carp. The final phase will be a whole-lake alum treatment to address internal phosphorus loading. The combination of these projects should result in Moody Lake reaching a summer average phosphorus concentration of 40 g/L. Total estimated implementation cost is approximately \$820,000. Total lifetime phosphorus load reduction is 17,000 pounds (\$50/pound).

Seminar D: Why is Watershed Phosphorus Loading So Stubbornly Persistent?

Joe Bischoff, Wenck Associates

The traditional paradigm for reducing phosphorus loading from watersheds is to build or utilize nutrient sinks by settling phosphorus in stormwater ponds and wetlands. The primary assumptions in this approach is that phosphorus is permanently sequestered once it reports to pond or wetland sediments. Recent evidence for stormwater ponds and wetlands suggest that sediments expected to permanently sequester are releasing phosphorus to surface waters, offsetting any new efforts aimed at reducing watershed phosphorus loading. Further exacerbating the problem, phosphorus released from sediments is in dissolved forms that are not removed by traditional practices and can directly result in excessive algal blooms. Wenck analyzed ponds and wetland sediments from watersheds in the Twin Cities Metropolitan Area that receive stormwater to characterize their potential to release previously sequestered phosphorus. Results of these studies demonstrate that many sediments are high in mobile phosphorus and have the potential to offset watershed nutrient reduction efforts.

CONCURRENT GENERAL SESSION III

Friday, December 1 at 3:15-4P.M.

Seminar A: Innovative Drone Aerial Services for Watershed Management

Dr. Michael Vogt, Mr. Mark Vogt, Mr. Mark Lundquist, North American Robotics

Watershed management typically relies upon large-scale human-intensive sampling of waters and associated vegetation. Techniques often employed were established many decades ago, and few replacement technologies have been both practical and cost-effective. But, specialized near-remote sensing provided by professionally-operated small unmanned aircraft systems (UASs) or “drones”, can deliver dramatically more water/shed condition information to improve: performing maintenance, diagnosing problems, evaluating remediation's, and communicating risks to residents. Three services in particular have been developed and refined over the past five years and are ready to improve key aspects of watershed management: lake algae photogrammetric inspections - to spatially track blooms during alerts, synthetic water clarity gradient mapping - to augment spot sampling and evaluate complex surface waters, and drainage ditch surveying to improve their maintenance and planning. Results from these services are high-resolution specialized maps and 3D models that on-demand capture conditions, and their rates-of-change, critical to improving watershed understanding, modeling and maintenance.

Seminar B: Conditioned Digital Elevation Models - Scale Matters

Charles Fritz, International Water Institute, Houston Engineering

The MN Legislature requires Clean Water Fund project sponsors to prioritize, target, and measure projects at watershed scale to ensure public accountability. Watershed and Soil and Water Resource Districts are developing geospatial data and state-of-the-art planning methods to establish goals and strategies to fulfill this requirement and appropriately manage Minnesota's water and soil resources. The most important and useful geospatial data is a hydro-conditioned digital elevation model (DEM). The DEM must be altered to accurately reflect surface water movement through an editing process that removes “digital dams.” Products derived from hydro-conditioned DEMs are used to varying degrees in to advance business needs of local watershed and soil and water resource districts. This presentation will explore how the scale of a hydro-conditioned DEM can affect the application of derived products for planning and implementation efforts.

Seminar C: Longevity and effectiveness of alum to restore lake water quality

Greg Wilson, Keith Pilgrim, Kevin Menken (Barr Engineering) and Diane Lynch (PLSLWD)

Sediment phosphorus release is a pervasive problem in nutrient-impaired lakes. Guidance for watershed (external) phosphorus controls is abundant, but there is no guidance on in-lake phosphorus controls. In-lake alum treatment has been used in Minnesota for nearly 30 years to reduce sediment phosphorus release, but it is poorly understood and judgement of alum-treatment success is wide-ranging. With increasing lake temperatures and ever-expanding impaired waters listings for eutrophication, there is urgency to develop a better understanding of alum treatment and its role in mitigating these conditions. Barr has completed several recent studies, including a comparative analysis for PLSLWD, and published papers that have advanced the understanding of the use of alum to reduce internal phosphorus loading. This presentation will discuss results of these analyses, explain those factors that can optimize the longevity of in-lake alum treatments in Minnesota and present a checklist of considerations for future planning and assessment.

Seminar D: What Does Lake Restoration Look Like? Balancing Water Clarity Goals and Aquatic Plants

Matt Kocian, Rice Creek Watershed District

Lake restoration goals are often straightforward and typically involve reducing nutrient loading by a certain amount. Ultimately, managers aim to meet state nutrient standards, thus reducing algal blooms and supporting lake recreation. But what happens when lake restoration and lake recreation conflict? Nearly 25 years after Marten Sheffer and others conceptualized the idea of “alternate stable states” in lakes, watershed managers and lake residents are grappling with the desire (and mandate!) to improve water clarity, and the impact to recreation due to increases in lake plants. This presentation will document two lake restoration projects: Silver Lake, located in the City of St. Anthony, and Bald Eagle Lake, located in White Bear Township. Both experienced significant improvements in water clarity and increases in aquatic plants following restoration efforts. The restoration projects, changes in lake chemistry and ecology, public outreach efforts, and public responses will be presented.

CONCURRENT GENERAL SESSION IV

Friday, December 1 at 4:15-5P.M.

Seminar A: Getting it done Wright! Lessons Learned from the First Regional AIS Inspection Station

Alicia O'Hare, Wright Soil and Water Conservation District

Regional inspections were not a new idea, but they were never done before. A couple organizations considered it but no program ever got off the ground. But three lakes in Wright County finally had the chance to give it a try from October 11-31st, 2017. From securing the grant to outfitting the inspectors there were plenty of challenges along the way. But through the challenges came the data, and we got a little insight as to how to continue the program into 2018.

Seminar B: Building Innovative, Credible Watershed Plans

Rachel Olm - Houston Engineering, Margaret Johnson - Middle Fork Crow Watershed District

Success from a watershed planning effort should not be defined by a completed plan. Rather, success should mean the completed plan is locally credible, and is used to actually implement the most cost-effective practices consistent with landowners' business needs, to address resource issues locally important to the community. Developing this credible plan requires engagement from all stakeholders in the watershed: agricultural producers, urban residents, lakeshore property owners, and more. The One Watershed, One Plan (1W1P) creates the platform to develop innovative, credible, implementation-focused plans. The North Fork Crow River 1W1P incorporates methodologies to both define altered hydrology and set measurable goals for mitigating impacts of a hydrologically-impacted watershed. The plan also pilots a "land stewardship" concept, which sets the framework for claiming good work already being done by rural, urban, and shoreland residents, and encourages field walkovers to increase information exchange and implementation of additional structural and nonstructural management practices within the watershed.

Seminar C: Data Collection/Monitoring; Water Quality Projects

Maddie Vargo (CRWD), Bob Fossum (CRWD), Britta Suppes (CRWD)

William Street Pond is a stormwater pond located in Roseville, MN. The pond receives stormwater from the surrounding urbanized residential neighborhood and discharges to Lake McCarrons, a 75-acre deep lake. Capitol Region Watershed District (CRWD) regards the phosphorus inputs to the lake as a high priority for improvement efforts. In 2011, CRWD installed two iron-enhanced sand filter benches (IESF's) at the pond's outlet, which remove dissolved phosphorus via surface sorption to oxidized iron. To assess the efficacy of the IESF's, CRWD collected influent and effluent water quality samples from 2013 to 2016 and analyzed them for multiple phosphorus species. Most samples taken showed a reduction of phosphorus. Further, effluent samples showed consistent, low concentrations for both phosphorus species regardless of influent concentrations. This suggests that the William Street Pond IESF's are reducing the amount of phosphorus entering Lake McCarrons. Monitoring will continue at William Street Pond to further analyze performance.

Seminar D: Permit Enforcement Techniques & Troubleshooting

Maggie Karschnia, Prior Lake-Spring Lake Watershed District

Struggling with repeat permit violators? Wondering what other enforcement tools are available to watershed districts? The session will highlight different permit enforcement approaches & protocols used by two seasoned watershed districts that handle 30+ new permits every year. The presenters of this session will outline their approach to permit enforcement and provide examples of permit projects that were successfully handled as problems continued or escalated. An overview of permit enforcement techniques throughout all watershed districts will also be presented based on a state-wide survey that will be conducted in fall 2017. There will be an opportunity at the end of the session to have an open discussion on common violation problems and successful resolutions. Participants will be asked to send in questions in advance to mkarschnia@plslwd.org -or- to bring questions to the session.