Bassett Creek Watershed Management Commission

Regular Meeting
Thursday June 15, 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 – April 20, 2017 Commission Meeting
   - B. Approval of Minutes – May 18, 2017 Commission Meeting
   - C. Approval of June 2017 Financial Report
   - D. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – May Administrator Services
     - ii. Keystone Waters, LLC – May Meeting Materials Distribution Expenses
     - iii. Barr Engineering – May 2017 Engineering Services
     - iv. Triple D Espresso – June 2017 Meeting Refreshments
     - v. Wenck – May 2017 WOMP Monitoring
     - vi. Wenck – May Routine Lake Monitoring
     - vii. Lawn Chair Gardener – May 2017 Administrative Services
     - viii. Kennedy & Graven – April Legal Services
     - ix. Metro Blooms – Harrison Neighborhood Reimbursement
     - x. ECM Publishers – Public Hearing Notice
     - xi. MMKR – 2016 Financial Audit
   - E. Approval of CSAH66 Culvert Replacement, Golden Valley
   - F. Approval of Creekside Woods I & II, Plymouth

5. **BUSINESS**
   - A. Consider Approval of 60% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P)
   - B. Receive Presentation with Results of Bassett Creek Watershed Chloride Source Assessment

6. **COMMUNICATIONS**
   - A. Administrator's Report
   - B. Chair
   - C. Commissioners
     - i. Report on Westwood Nature Center Event
   - D. TAC Members
   - E. Committees
     - i. APM/AIS Committee – upcoming meeting

F. Legal Counsel
G. Engineer

7. INFORMATION ONLY (Information online only)

A. CIP Project Updates: Now Available Online http://www.bassettcreekwmo.org/projects
B. Grant Tracking Summary and Spreadsheet
C. West Metro Water Alliance (WMWA) Spring Newsletter https://content.govdelivery.com/accounts/MNHENNE/bulletins/19d00bc
D. Harrison Neighborhood Project Update January – April 2017
E. Old Bassett Creek Tunnel in the News https://www.mprnews.org/story/2017/05/30/engineers-consider-old-minneapolis-storm-tunnels-future
F. WCA Notice of Decision, Agora Project, Plymouth

8. ADJOURNMENT

Upcoming Meetings & Events

- Plymouth Creek Restoration Project Public Open House: Monday June 26, 2017, 4:00 – 6:00 p.m., Medicine Lake Room, Plymouth City Hall
- BCWMC Regular Meeting: Thursday July 20, 2017, 8:30 a.m., Golden Valley City Hall

Bassett Creek Watershed Management Commission

AGENDA MEMO
Date: June 7, 2016
To: BCWMC Commissioners
From: Laura Jester, Administrator
RE: Background Information for 6/15/17 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 – April 20, 2017 Commission meeting- **ACTION ITEM with attachment**
   B. Approval of Minutes – May 18, 2017 Commission meeting- **ACTION ITEM with attachment**
   C. Approval of June 2017 Financial Report - **ACTION ITEM with attachment**
   D. 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 – May Administrator Services
      ii. Keystone Waters, LLC – May Meeting Materials Distribution Expenses
      iii. Barr Engineering – May 2017 Engineering Services
      iv. Triple D Espresso – June 2017 Meeting Refreshments
      v. Wenck – May 2017 WOMP Monitoring
      vi. Wenck – May Routine Lake Monitoring
      vii. Lawn Chair Gardener – May 2017 Administrative Services
      viii. Kennedy & Graven – April Legal Services
      ix. Metro Blooms – Harrison Neighborhood Reimbursement
      x. ECM Publishers – Public Hearing Notice
      xi. MMKR – 2016 Financial Audit

   E. Approval of CSAH66 Culvert Replacement, Golden Valley – **ACTION ITEM with attachment** – *The proposed project in the Bassett Creek Main Stem subwatershed includes the removal of an existing corrugated metal arch pipe and replacement with a precast concrete arch bridge structure. The project results in 0.6 acres of disturbance (grading), 0.24 acre of reconstructed impervious, and no new impervious surface. The project is in the floodplain and involves a creek crossing. Staff recommends approval with conditions as stated in the Engineer's memo.*

   F. Approval of Creekside Woods I & II, Plymouth – **ACTION ITEM with attachment** - *The proposed project includes the construction of 10 new single-family homes, 11 new driveways, sidewalks, grading, stormwater treatment, and utilities. The project is located in the Plymouth Creek subwatershed and results in 3.85 acres of disturbance (grading), 1.37 acres of new/fully reconstructed impervious, and an increase of 0.60 acres of impervious surfaces. Stormwater management is proposed through a variety of practices. Staff recommends approval with conditions as stated in the Engineer's memo.*

5. **BUSINESS**
   A. Consider Approval of 60% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P) – **ACTION ITEM with attachment** (some design pages in printed packet; complete plans online) – *In March 2016, the Commission approved the final feasibility study for the Plymouth Creek Restoration Project. At their meeting in September 2016, the Commission entered an agreement with the City of Plymouth to design and construct the project. The city hired Wenck consulting to design the project; 60% design plans were submitted to the Commission Engineer for review. The 60% design plans follow*

many of the recommendations from the feasibility study and include explanations when feasibility study recommendations are not part of the plans. The Commission Engineer will present their comments as shown in the memo and Wenck staff will be available at the meeting to answer questions and describe proposed design features. The Commission Engineer recommends approval of the 60% designs with comments, and authorization for the city to proceed with developing final plans.

B. Receive Presentation with Results of Bassett Creek Watershed Chloride Assessment – **INFORMATION ITEM no attachment** – *Part of the 2017 water monitoring program (approved with the 2017 operating budget) included a watershed-wide chloride source assessment. The assessment was completed in response to increasing trends in stream chloride concentrations and impaired waters listings for lakes in the watershed. The project assesses the potential source areas that are contributing excess chloride in snowmelt or spring runoff across the watershed. At the meeting, the Commission Engineer will share the results of grab samples collected at multiple locations, along with a GIS hotspot mapping analysis based on the extent of land uses that contribute inordinately higher amounts of road salt runoff. The results of this effort will also be compared with past lake water quality sampling and MCES' monitoring for chloride and continuous conductivity measurements at the Bassett Creek WOMP station.*

6. COMMUNICATIONS

A. Administrator's Report – **INFORMATION ITEM with attachment**
B. Chair
C. Commissioners
   i. Report on Westwood Nature Center Event
D. TAC Members
E. Committees
   i. APM/AIS Committee
F. Legal Counsel
G. Engineer

7. INFORMATION ONLY (Information online only)

A. CIP Project Updates: Now Available Online http://www.bassettcreekwmo.org/projects
B. Grant Tracking Summary and Spreadsheet
C. West Metro Water Alliance (WMWA) Spring Newsletter https://content.govdelivery.com/accounts/MNHENNE/bulletins/19d00bc
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F. WCA Notice of Decision, Agora Project, Plymouth

8. ADJOURNMENT

Upcoming Meetings & Events

- Plymouth Creek Restoration Project Public Open House: Monday June 26, 2017, 4:00 – 6:00 p.m., Medicine Lake Room, Plymouth City Hall
- BCWMC Regular Meeting: Thursday July 20, 2017, 8:30 a.m., Golden Valley City Hall

Item 4A.
BCWMC 6-15-17

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday April 20, 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	Tim Wodarski	Mark Ray
Golden Valley	Stacy Harwell (voting member second ½)	Jane McDonald Black (voting member first ½)	Tom Hoffman
Medicine Lake	Clint Carlson	*Absent*	*Absent*
Minneapolis	Michael Welch	NA	*Absent*
Minnetonka	Mike Fruen	*Absent*	Tom Dietrich
New Hope	Absent	Pat Crough	Megan Albert
Plymouth	Jim Prom (voting member starting 5A)	John Byrnes (voting member thru Item 4)	Derek Asche
Robbinsdale	Michael Scanlan	*Absent*	Richard McCoy
St. Louis Park	Jim de Lambert	Patrick Noon	Erick Francis

Staff and Others Present:	
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	Chuck Schmidt, Crystal resident

1. CALL TO ORDER AND ROLL CALL

On Thursday April 20, 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. No cities were absent from the roll call.

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None

3. APPROVAL OF AGENDA

Administrator Jester requested the addition of item 5D, the Citizen Assisted Monitoring Program (CAMP) Agreement with Met Council.

MOTION: Alt. Commission McDonald Black moved to approve the agenda as amended. Commissioner Welch seconded the motion. Upon a vote, the motion carried 9-0.

4. CONSENT AGENDA

MOTION: Commissioner Welch moved to approve the consent agenda. Alt. Commissioner McDonald Black seconded the motion. Upon a vote, the motion carried 9-0.

The following items were approved as part of the consent agenda: the March 16, 2017 Commission Meeting Minutes, the April 2017 Financial Report, the payment of invoices, approval not to waive monetary limits on municipal tort liability, and acceptance of the BCWMC fiscal year 2016 financial audit.

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

Checking Account Balance	$794,358.18
TOTAL GENERAL FUND BALANCE	$794,358.18
TOTAL CASH & INVESTMENTS ON-HAND (4/12/17)	$2,366,729.55
CIP Projects Levied – Budget Remaining	($4,494,990.84)
Closed Projects Remaining Balance	($2,128,261.29)
2012-2016 Anticipated Tax Levy Revenue	$9,476.76
2017 Anticipated Tax Levy Revenue	$1,303,600.00
Anticipated Closed Project Balance	($815,184.53)

Before the business of the meeting got underway, Chair de Lambert introduced the new alternate commissioner from the City of Crystal, Tim Wodarski, and Dawn Pape, who will be taking on some administrative duties such as taking minutes during meetings.

5. BUSINESS

A. Receive Presentation and Discuss Draft Feasibility Study for Bassett Creek Park Pond/Winnetka Pond Dredging Project (BCP-2)

[Commissioner Prom arrives.]

Commission Engineer Chandler presented the draft feasibility study for the Bassett Creek Park Pond/Winnetka Pond Dredging Project (BCP-2), slated for construction in 2018. She reported that the Commission ordered this study in July 2016. She noted that both ponds are located in the City of Crystal and both ponds are on the North Branch of Bassett Creek, so they are both "online" treatment ponds. Engineer Chandler noted that analysis of sediment in Bassett Creek Park Pond indicates that some of the sediment is contaminated and will require landfilling, which adds to the cost of the project. She noted that Winnetka Pond was probably only designed to be 2-ft. deep. She reminded the Commission that Winnetka Pond is on the trunk system and was identified as part of the flood control system, but is not technically part of the official BCWMC Flood Control Project.

Commissioner Welch asked if there was any direct discharge to Bassett Creek Park Pond. Engineer Chandler replied affirmatively and that there may be more contamination near those outfalls.

There was also discussion about the ponds being designated as public water v. public water wetland. Engineer Chandler clarified that the water body is a "public water" but the whole pond area is delineated as a wetland. Engineer Chandler reported on a technical stakeholder meeting with the MN Department of Natural Resources, U.S. Army Corps of Engineers, Minnesota Pollution Control Agency, Commissioner Mueller, Administrator Jester, and city staff to discuss permitting constraints. She noted the DNR is focused on staying out of delineated wetlands. In the case of Bassett Creek Park Pond, the deep area is considered non-wetland so it can be made deeper.

[Derek Asche arrives.]

Engineer Chandler described different add-ons and alternatives for Bassett Creek Park Pond including creating a forebay to capture sediment as it first enters the pond, further deepening the deep part of the pond (up to 10-feet) in order to harbor fish, and installing a native buffer all around the pond. For Winnetka Pond she noted that ownership of the pond is split between the city and owner of the apartment buildings so there are fewer opportunities to install a buffer or implement different alternatives. However, she noted that one appealing alternative for Winnetka Pond is to dredge it deeper than originally designed, to a depth of 4.2 feet, which will increase its pollutant removal abilities.

Engineer Chandler reported that the P8 model does not do a good job of estimating pollutant removals of the projects because the ponds are on the creek itself and the model doesn't include upstream bank erosion, nor scouring and re-suspension within the ponds themselves. However, she noted the Engineer analyzed flow velocities in Winnetka Pond and found that a large portion of sediment is susceptible to re-suspension. Engineer Chandler reported that the Engineer's professional judgment is that the current pond is likely only achieving 20% of what the P8 model predicts under existing conditions, so the additional annual total phosphorus removal is more likely to be approximately 49.6 lbs per year if Alternative 2 (deepening pond to 4.2 ft) is implemented.

Engineer Chandler reported that her recommendation is for the Commission to implement Winnetka Pond East Alternative 2. She noted that with the high cost of dredging Bassett Creek Park Pond and the complicated issues there, it is recommended to set this project aside until after 2024. She noted that in the meantime, the Commission should collect data on the North Branch of Bassett Creek, which could be used to recalibrate the P8 model, and allow the city to finalize its Bassett Creek Park improvement planning.

Chair de Lambert asked if there would be a cost reduction if the sediment could be disposed on-site. Engineer Chandler indicated yes, there would be a savings. Mark Ray with the City of Crystal indicated that possibly some

Winnetka Pond sediment could be used in a project at Bassett Creek Park where fill is needed.

Engineer Chandler stated that dredging Winnetka Pond also makes sense now because it's located upstream of Bassett Creek Park Pond and that the pond is so full of sediment that it's nearly interfering with the pond's flood storage.

There was a question about the possibility of not dredging either pond and thus not having a CIP project in 2018. Engineer Chandler noted that both ponds need to be dredged and the longer the wait, the more expensive it will be because more sediment will need to be removed.

There was discussion about inquiring with the Winnetka Apartments property owner about installing a native buffer around the pond. Mr. Ray responded that the apartment owner had not been approached but that he/she can be asked about that possibility.

Commissioner Welch wondered about wetland impacts and permitting issues. Engineer Chandler answered there were no wetland regulations when Winnetka Pond was constructed in the 1960s. She noted that wetland permitting would be easier if the project involves dredging only the accumulated sediment to return the project to its design condition, and that dredging to 4.2 ft. would be considered impacting a wetland. She noted that obtaining a permit is possible, but more of a hurdle.

Asked for her input, Administrator Jester commented that she agreed with the Commission Engineer's recommendation. She noted a buffer along Winnetka Pond would be beneficial, that now it is mostly mown grass to the edge which attracts many geese. Commission Engineer Chandler and Mr. Ray noted that installation of a buffer along the north side of the pond would cost approximately $45,000.

When asked for direction on action needed now, Engineer Chandler stated that this is a draft report and that she would add in the "professional judgment" numbers on pollutant removals in Winnetka Pond, add in the possibility of installing a buffer on the pond and investigate the savings resulting from the City of Crystal using excavated sediment in their Bassett Creek Park project.

Mr. Asche noted that the Commission invested heavily in the P8 model and it was developed for the purpose of comparing outcomes of projects. He noted that the study should include other benefits of the project, including pollinator habitat, increased dissolved oxygen, etc. There was discussion about the need for on-going maintenance, such as regular dredging of the pond like West Medicine Lake Pond, which is on Plymouth Creek. It was noted that maintenance is a city responsibility and the distinction between maintenance dredging and this larger CIP project should be identified in the feasibility report.

Commissioner Mueller stated his support for the Engineer's recommendation, but also noted that the Commission needs to look at different alternatives or it will become a dredging commission. He described the idea of a "grand bargain" in that during a future CIP project, the Commission dredges Bassett Creek Park Pond and installs a forebay that will be maintained by the city with regular dredging that should eliminate the need for a large CIP project to again dredge the pond in 30 years.

[Commissioner Stacy Harwell arrives and Alternative Commissioner Jane McDonald Black departs]

Commissioner Mueller continued, stating that the P8 model might be selectively steering the Commission toward solutions whose benefits are measurable by the model and thus limiting the Commission's consideration of alternatives, typically to those that involve the use of pipes, pumps, and ponds. He noted that the model doesn't consider wetland functions and biological benefits and that controlling the source of the runoff (before it gets to ponds) should be considered. Commissioner Mueller recommended the creation of a task force to study ways to retain and infiltrate storm water runoff at its source before it enters the ponds along the BCWMC Trunk System.

Commissioner Welch restated that cities are responsible for pond dredging and maintenance, not the

Commission. He noted that these ponds are different in that they are part of the North Branch of Bassett Creek and part of the BCWMC Trunk System. He further noted that the 2015 BCWMC Watershed Management Plan lays out studies, plans, and programs for reducing the source of pollution.

Mr. Asche inquired about impairments along the North Branch and indicated that the feasibility study and project focuses on phosphorus pollution but that there are other factors to consider including macroinvertebrate communities, dissolved oxygen levels, bacteria, etc. It was noted that the creek is only impaired for bacteria right now. Mr. Asche pointed out that he appreciates Commissioner Mueller's comments on looking at long-term ideas.

There was a discussion about removing geese around Winnetka Pond and how that might significantly reduce phosphorus and bacteria loads in the pond. Commissioner Prom mentioned how removing geese on Bass Lake improved water quality and was cost effective. Goose management should be added to feasibility study.

[Commissioner Welch departs.]

Chair de Lambert remarked that a good discussion was held and he was looking for a summary. He noted there seemed to be general consensus for the Engineer's recommendation.

Engineer Chandler recapped the discussion and noted that the following items would be added to the final feasibility study that would come to the Commission at their next meeting:

1. Include the professional judgement figures for pollutant removal from Winnetka Pond deepening
2. Work with City of Crystal on possibility of using dredged material on nearby park land
3. Inquire with the Winnetka Apartments owner/manager about installing a native buffer
4. Investigate the possibility and effects of goose management around Winnetka Pond
5. Consider wetland functions and additional benefits including pollinator habitat
6. Include distinction between this dredging project and city-maintained pond dredging projects and why this project is proposed as a Commission project

B. Receive Update on Curly-leaf Pondweed Control on Medicine Lake

i. Ratify Agreement with Three Rivers Park District for Cooperation of Curly-leaf Pondweed Control

ii. Ratify Contract with PLM Lake and Land Management for Curly-leaf Pondweed Treatment

Administrator Jester reported that she (with City of Plymouth's assistance) developed and disseminated a request for quotes from herbicide applicators and applied for a DNR herbicide application permit. She also coordinated with Three Rivers Park District to perform surveys of the curly-leaf pondweed before and after the herbicide treatment and to share in the cost of the treatment. She noted that since the treatment was needed before water temperatures reach 60 degrees, there wasn't time to get Commission approval of agreements with Three Rivers Park District and the contractor before work needed to be done. She requested Commission ratification of the executed agreements.

MOTION: Commissioner Carlson moved to ratify the agreement with Three Rivers Park District for cooperation of curly-leaf pondweed control and to ratify the contract with PLM Lake and Land Management for curly-leaf pondweed treatment. Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-0. [The City of Minneapolis was absent from the vote.]

Commissioner Carlson inquired about historical curly-leaf pondweed control locations. Mr. Asche remarked that curly-leaf pondweed treatment locations are included in reports that are on the city's website. Commissioner Carlson commented that the City of Medicine Lake is appreciative of curly-leaf pondweed control.

C. Receive Correspondence from Former Commissioner Regarding Pending Environmental Bills.

Administrator Jester reported the Commission received an email from former Commissioner Stauner who is concerned about the Omnibus Environmental Bill that recently passed the Minnesota House of Representatives and the Minnesota State Senate. There was a lengthy discussion about whether the Commission should submit

comments to the Governor before he acts on the bill and whether or not it was appropriate for the Commission to weigh in on political issues such as this. Some commissioners thought the Administrator should write a letter to the Governor from the Commission while others indicated that the Commission should stay out of partisan politics and noted that individuals could contact politicians on their own without representing the Commission, specifically. There was further discussion on the particular provisions in the omnibus bill and whether or not they directly affected the Commission's work. Commissioners also discussed and considered sending a postcard rather than a letter and keeping the message non-political and simply in support of clean water.

MOTION: Commissioner Carlson moved to direct the Administrator to draft a simple, friendly, non-offensive, letter with history of Commission support of clean water. Commissioner Harwell seconded the motion. Upon a vote, the motion tied 4-4 and thus failed. [In favor: Commissioners Mueller, Harwell Carlson, Crough. Opposed: Commissioners, Scanlon, Byrnes, de Lambert, Fruen. City of Minneapolis was absent from the vote.]

[Commissioner Crough departs.]

MOTION: Commissioner Carlson moved to direct the Administrator to draft a postcard in support of clean water without the Commission logo for use by individuals. There was no second.

D. Consider Approval of CAMP (Citizen Assisted Monitoring Program) Agreement with Met Council

Administrator Jester reported that this is an annual agreement with Met Council to participate in the Citizen Assisted Monitoring Program. She noted that there are 7 BCWMC lakes in the program this year.

MOTION: Commissioner Scanlan moved to approve the CAMP agreement with the Met Council. Commissioner Prom seconded the motion. Upon a vote, the motion passed 7-0. [The cities of Minneapolis and New Hope were absent from the vote.]

6. COMMUNICATIONS

a. Administrator's Report

i. Update on Minor Plan Amendment
Administrator Jester reported that the minor amendment process was underway, including the 30-day comment period for agencies. She noted the public hearing would be held on May 18th at the beginning of the Commission meeting. She also noted the upcoming Westwood Nature Center event with Great River Greening, a cleanup in Bassett Creek Park in Minneapolis on April 22, and two upcoming committee meetings.

b. Chair

Chair de Lambert noted that the Westwood Nature Center event last year was very enjoyable and hoped the Commission could be involved again this year.

c. Commissioners

Commissioner Harwell provided Commissioners with Governor Dayton's phone number so individuals could give comments on the omnibus environmental bill. Commissioner Mueller announced that the there is also a cleanup at Bassett Creek Park in Crystal. Commissioner Carlson asked if the APM/AIS committee would be meeting in time to impact the 2018 budget. Commissioner Prom gave an update on the Agora development and noted that there is still no purchase agreement with Walmart. Engineer Chandler stated that Barr received a resubmittal of the Agora development plans in response to Commission comments. Mr. Ray reminded people that it is severe weather week with sirens planned for 1:45 p.m. and 6:45 p.m.

d. TAC Members - No comments

e. Committees

i. Report on March 27th Budget Committee Meeting – Committee is working through options and will present recommendations at the May Commission meeting

ii. Upcoming Education and Budget Committees Meetings – to be held also on April 24th at 1:00 p.m. and 8:00 a.m., respectively.

f. Legal Counsel

i. No comments.

g. Engineer

Engineer Chandler reported progress on the Schaper Pond project, noting the contractor reinstalled anchors and weights and the baffle is back in place. She noted that plants will be established this spring and that effectiveness monitoring will start next month.

7. **INFORMATION ONLY (Information online only)**
   - **a. CIP Project Updates: Now Available Online http://www.bassettcreekwmo.org/projects**
   - **b. Grant Tracking Summary and Spreadsheet**
   - **c. WMWA January and February Meeting Minutes**
   - **d. Impacts of Salt in the News**
     - **i. Star Tribune Article**
     - **ii. Channel 12 News Clip**
   - **e. WCA Notice of Decision, Golden Valley**
   - **f. WCA Notice of Decision, Plymouth Creek Restoration Project**

8. **ADJOURNMENT –** Chair de Lambert adjourned the meeting at 10:45 a.m.

_____ _____

Signature/Title Date Signature/Title Date

DRAFT

Item 4B.
BCWMC 6-15-17

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday May 18, 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	*Absent*	Mark Ray
Golden Valley	Stacy Harwell (voting member 1st ½)	Jane McDonald Black (voting member 2nd ½)	Jeff Oliver
Medicine Lake	*Absent*	*Absent*	Susan Wiese
Minneapolis	Michael Welch	NA	Liz Stout
Minnetonka	Mike Fruen	*Absent*	Tom Dietrich
New Hope	*Absent*	Pat Crough	Megan Albert, Chris Long
Plymouth	Jim Prom (voting member for agenda items 5 & 6C)	John Byrnes (voting member on all other items)	Derek Asche
Robbinsdale	Michael Scanlan	*Absent*	Richard McCoy, Marta Roser
St. Louis Park	Jim de Lambert	*Absent*	Erick Francis

Staff and Others Present:	
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	Steve Christopher (Board of Water and Soil Resources)

1. CALL TO ORDER AND ROLL CALL

On Thursday May 18, 2017 at 8:31 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. Medicine Lake was absent from the roll call.

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None. Chair de Lambert introduced a new TAC member from Robbinsdale, Marta Roser.

3. APPROVAL OF AGENDA

Administrator Jester requested moving the item 6C to top of the business agenda. She also requested the addition of item 6F for authorization to enter a cooperative purchasing agreement with the Minnesota Department of Administration.

MOTION: Commission Harwell moved to approve the agenda as amended. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0. [City of Medicine Lake was absent from the vote.]

4. CONSENT AGENDA

Administrator Jester, Commissioners Harwell, Byrnes and Mueller requested some changes to the minutes. Commission Engineer Chandler noted a correction in the memo in 4D. She reported the memo should read the proposed but not yet adopted floodplain elevation at the Theodore Wirth Park inundation areas is 826.5 feet (not 226.5 feet). The April meeting minutes were taken out of the consent agenda and will be revised and brought to the next meeting.

MOTION: Alternative Commissioner Byrnes moved to approve the consent agenda as amended. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0. [City of Medicine Lake was absent from the vote.]

The following items were approved as part of the consent agenda: the May 2017 Financial Report, the payment of invoices, the BNSF bridge 1.7 project in Minneapolis, the Golden Valley-Minneapolis interceptor rehabilitation project, the 10th Avenue North culvert replacement project in Golden Valley, and the 2016 BCWMC annual report.

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

Checking Account Balance	$743,269.90
TOTAL GENERAL FUND BALANCE	$743,269.90
TOTAL CASH & INVESTMENTS ON-HAND (5/10/17)	$2,358,869.26
CIP Projects Levied – Budget Remaining	($4,493,368.14)
Closed Projects Remaining Balance	($2,134,498.88)
2012-2016 Anticipated Tax Levy Revenue	$9,476.76
2017 Anticipated Tax Levy Revenue	$1,303,600.00
Anticipated Closed Project Balance	($821,422.12)

5. **PUBLIC HEARING**

A. Receive Comments from Member Cities and the Public on Proposed Minor Amendment to 2015 Bassett Creek Watershed Management Plan

i. Receive Comments from Review Agencies

ii. Consider Extending Comment Period to June 28, 2017 per Hennepin County Request

[Derek Asche and Commissioner Prom arrive]

The public hearing was opened by Chair de Lambert at 8:37 a.m. Administer Jester reminded the Commission that this hearing is to receive comments on the proposed minor plan amendment to update the CIP with the changes approved in March including revising the Lakeview Park Pond project. This project, once slated as a water quality project in Golden Valley, is proposed to be changed to a flood reduction project. Some additions to the CIP include: two projects in Plymouth, one in Medicine Lake, revising and adding to the large flood reduction mitigation project in the cities of New Hope, Golden Valley, and Crystal to implement the Medicine Lake Road and Winnetka Avenue long-term flood mitigation plan, and to remove the Wirth Park area water quality improvement project from the CIP because the work will be done by the Met Council with the construction of the Blue Line LRT.

Administrator Jester reported that a letter was received from the DNR in support of the proposed minor amendment. A letter was also received from the Metropolitan Council stating that the changes were consistent with their policies and the Commission's plan, however they did recommend that the changes to the Lakeview Park Pond Project be added to the CIP list. The Board of Water and Soil Resources and the Department of Agriculture had no comments. There also weren't any comments from any of the member cities or the public. Administrator Jester noted there was a request by Hennepin County to extend the comment period to June 28, 2017.

The public hearing was closed by Chair de Lambert at 9:42 a.m.

MOTION: Commissioner Scanlan moved to extend the comment period to June 28, 2017 as per Hennepin County request. Alt. Commissioner Crough seconded the motion. Upon a vote, the motion carried 8-0. [City of Medicine Lake was absent from the vote.]

Commissioner Welch requested that staff review background materials for the proposed changes to the Lakeview Park Pond Project with the goal of better explaining how the project does not result in the Commission providing funding to a project that must be done by Golden Valley to meet water quality treatment requirements. Further, Commissioner Welch requested that at the July meeting, the Lakeview Park Pond Project request for action be separate from the request for action on the rest of the plan amendment.

6. **BUSINESS**

C. Review Recommendations from Technical Advisory Committee

i. **Consider Approval of Final XP-SWMM Phase II Report**

ii. **Consider Adoption of New Floodplain Elevations**

iii. **Consider Revising Water Quality Requirements for Linear Projects**

TAC member Erick Francis gave an overview of the TAC meeting items. Commission Engineer Chandler reported that Barr staff held individual meetings with six of the nine BCWMC cities to review the XP-SWMM model results and that minor adjustments were made based on feedback from the cities. Engineer Chandler feels confident in the model results. She reviewed the following recommendations from the TAC memo:

1. The TAC recommends that the Commission approve the XP-SWMM Phase II model and final report.

2. The TAC recommends that the Commission adopt the new floodplain elevations within its floodplain jurisdiction, which lies along the BCWMC Trunk System, and begin reviewing development/redevelopment

projects against these new elevations.

3. The TAC recommends that the Commission should not, at this time, begin the process of requesting an official map revision with the Federal Emergency Management Administration (FEMA).

4. The TAC recommends that the Commission allow only member cities to request the model on behalf of themselves and other entities working in the city.

5. The TAC recommends that the Commission develop a user agreement for entities that wish to use the model.

6. The TAC recommends that in order to maintain the integrity of the model, only the Commission Engineer be authorized to revise and update the model.

Alt. Commissioner Byrnes asked whether models can only be used by cities and Ms. Chandler responded that they can be used by others, but they can only be requested by the cities. Attorney Gilchrist clarified that if a data practices act request was made, the data would need to provided regardless of whether or not the request came through a city.

Engineer Chandler clarified that the Commission should have restrictions on the model's use as noted in numbers 4,5,6 (above) to ensure that the Commission maintains the final, most up-to-date model. Engineer Chandler further described that the model is broken up into three pieces so developers (and others) can more easily run the model to figure out what is needed for their development/project or to find out how the work would affect flood levels. Only the Commission would be able to officially revise the model, and that would typically be done on an annual basis. To ensure that extra expenses are not incurred, Derek Asche suggested that the user agreement include language indicating that Barr Engineering does not provide technical support for the model. Engineer Chandler replied that using the model itself should not require guidance. Typically, those requesting to use the model can do so without asking for assistance. Sometimes users don't have enough XP-SWMM licenses so the model needs to be broken into smaller pieces, but this would be a minimal expense in the Engineer's time. Engineer Chandler commented that the biggest issue is with accurate inputs and outputs from the model.

Administrator Jester noted that the member cities must adopt Commission-adopted elevations within the city where the Commission has jurisdiction.

The next discussion revolved around flood insurance requirements. Commissioner Welch wondered if these new elevations will impact property owners; i.e. will property owners need to get flood insurance? Engineer Chandler responded that flood insurance is required only for properties within FEMA floodplains, but cities can and should share the new flood elevations with residents. Commissioner Harwell added that FEMA information is out of date, these model results are more current, and that it is the obligation of BCWMC to let residents and developers know if they are in a floodplain so they can get insurance if desired. There was also discussion that communication of these results needs to be developed by the TAC, cities, and Commission. Another point of discussion was that it will likely be frustrating for homeowners because the flood elevations from the city and FEMA will be different. Mr. Oliver explained that Golden Valley is already working directly with landowners sharing the new data. Commissioner Harwell agreed with Engineer Chandler that since BCWMC has this new information, it should be adopted so the public can be informed in a timely manner.

Commissioner Prom asked whether other watersheds are updating elevation levels through FEMA. Engineer Chandler replied that other watersheds have developed new models and are managing to new levels. She is not sure whether other watersheds are working through FEMA, but she considers it unlikely. There was further discussion on the high costs and long timeframe needed to go through an official map revision with FEMA. It was also noted that it is not unusual for the BCWMC to have different floodplain elevations than FEMA. Engineer Chandler stated that the Commission needs to follow up with the DNR on possible funding to go through the FEMA map revision process. The TAC also indicated it would make sense to adopt and use these elevations first before starting the long process of changing the FEMA numbers. Engineer Chandler reported that she would bring back more information about the FEMA process including possible funding.

MOTION: Commissioner Welch moved to approve the TAC recommendations for the XP-SWMM model (numbers 1-6 as noted above) including approving the XP-SWMM final report and adopting the new floodplain elevations in BCWMC jurisdictions. Commissioner Prom seconded. Upon a vote, the motion carried 8-0. [City of Medicine Lake was absent from the vote.]

Francis gave an overview of item #2 on the TAC memo, reporting that the TAC recommends that the Commission revise its water quality performance standards for linear projects with the following:

1. Trails and sidewalks are exempt from BCWMC water quality performance standards, and that buffers be provided where possible.
2. For projects that create less than 1 acre of net new impervious surface, the project must include the installation/construction of best reasonable technologies to improve water quality conditions and reduce stormwater runoff.
3. Net new impervious surface calculations will be based on the street surface from back of curb to back of curb; trails/sidewalks (as noted above) and driveways are not included in the net new impervious surface calculations.
4. For linear projects that create 1 acre or more of net new impervious surface, the project must capture and retain 0.55 inches of runoff off of the net new impervious area.
5. The project must use the MIDS flexible treatment options for the net new impervious area if it is not possible to capture and retain 0.55 inches of runoff from these areas.

Commission Engineer Chandler commented that the TAC was presented with and discussed a very complicated table with various triggers and different standards. She noted that while the TAC-recommended trigger is reasonable, the treatment requirement is far less than required by other watersheds. Engineer Chandler's recommendation is to have a one-acre net new impervious trigger, but with a requirement to capture and retain 1.1 inches of runoff off the net new impervious (rather than the 0.55 inches recommended by the TAC). Commissioner Mueller asked if there is consistency between what we require from private developers and cities. Mr. Oliver and Mr. Dietrich replied that there are big differences between typical private developments and roads with limited space and multiple challenges.

After reviewing Table 1 of the TAC memo, Commissioner Welch pointed out the Commission will be losing many possible water quality treatments that have been realized with current standards. He further added that policy makers and engineers really need to strike the right balance for decision makers. He suggested that this should be brought back with more information showing different scenarios.

Mr. Oliver told the Commission that the City of Golden Valley can accept a requirement for capturing 1.1 inches off net new impervious with a one-acre net new impervious trigger, if trails and sidewalks are exempt. Mr. Long agreed that that would also work for the City of New Hope. Ms. Stout also agreed with Mr. Oliver and added that if creating more than one acre of net new imperviousness, it would be a major transportation project with more room to mitigate stormwater runoff. Mr. Oliver discussed the difficulty of getting infiltration/buffers along sidewalks. Commissioner Mueller thought that one acre of net new impervious seemed like a high trigger. Commissioner Prom added that if the numbers are different for developers and public entities, there would be increased animosity and noted that the Met Council is looking for higher residential density.

Commissioner Harwell brought up adding water quality to the table especially noting the impacts of chloride and running it through a MIDS calculator. Engineer Chandler pointed out that private development uses more salt than cities (on a per-acre basis_. Commissioner Mueller asked whether "best possible technologies" can be coordinated between city engineers and the Commission Engineer. Engineer Chandler remarked that the 2004 Plan had that standard and the Commission Engineer did discuss with city staff about possibilities. She said the Engineer could develop checklists for cities to use. Engineer Chandler noted she could analyze and add the 1.1-inch retention requirement to the table with lower triggers and bring results to a future meeting.

MOTION: Commissioner Harwell moved to approve the TAC recommendations 1-5 above but modifying the treatment requirement from 0.55 inches to 1.1 inches in numbers 4 and 5. Commissioner Scanlan seconded the motion. The vote was taken by roll call: Crystal voted no, Golden Valley voted yes, Medicine Lake was absent, Minneapolis voted no, Minnetonka voted yes, New Hope voted yes, Plymouth voted yes, Robbinsdale voted yes, St. Louis Park voted no. Motion carried 5 to 3.

MOTION: Commissioner Mueller moved to direct the Commission Engineer to bring more analyses on the revised requirements to the Commission. Commissioner Welch seconded the motion. Upon a roll call vote, with all members voting yes, Golden Valley abstaining, and Medicine Lake absent, the motion carried 7-0.

There was a short discussion about how long it would take the Commission Engineer to put this information together and the Engineer Chandler estimated three hours.

[Commissioner Harwell departs and Alt. Commissioner McDonald Black becomes the voting member for Golden Valley.]

A. Consider Accepting Final Feasibility Report for Bassett Creek Park Pond/Winnetka Pond Dredging Project (BCP-2) and Choose Alternative to Implement

Commission Engineer Chandler gave an overview of the project and reported that her recommendation is for the Commission to complete the Winnetka Pond dredging and delay the Bassett Creek Park Pond dredging. She reported that she received updated dredging costs that lowered the estimated project costs. She also gave a PowerPoint presentation with site conditions and alternatives, particularly for Winnetka Pond, along with discussion about the native vegetated buffer and goose management options. As Engineer Chandler continued, she reviewed issues with the P8 model in estimating pollutant removals because it does not account for scour during rain events, among other potential sources. She then reviewed results of professional judgment analyses that indicate dredging Winnetka Pond to 6 feet (alternative 3) could reduce total phosphorus by 51.7 lbs/year (compared to 7.1 lbs/year predicted by the P8 model) and total suspended solids by 1,823 lbs/year. Further, Commission Engineer Chandler recommended adding a vegetated buffer and goose management to the project, although there may be possible maintenance issues to consider.

MOTION: Commissioner Scanlan moved to approve the Engineer's Recommendation to complete alternative 3 of the Winnetka Pond dredging project, including a native buffer and goose management and to delay the Bassett Creek Park Pond dredging. Commissioner Mueller seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

There was discussion about goose management problems throughout the watershed. The question of whether it makes sense to manage geese on one site without managing them watershed-wide was raised. Commissioner Fruen stated that goose management should be considered as an inexpensive way to address pollution. Ms. Stout reported that the City of Minneapolis is doing intensive genetic bacteria studies. She noted that preliminary findings are showing the majority of bacteria are coming from avian sources. The City of New Hope reported they have been reducing goose populations in the Northwood Lake area by swapping real eggs for fake eggs so the geese don't lay more.

[Commission Prom departs.]

Mr. Asche requested that the TAC and Commission review the need for a 30% construction contingency and 30% engineering/design costs within project estimates.

Commissioner Welch indicated he is not confident that this is a great project, but it seems like it is necessary and also improves flood control. Administrator Jester stated she feels comfortable with the Engineer's recommendation because the pond is clearly in need of dredging, the project does reduce pollutants and creates flood storage. She also noted it is also well within the BCWMC policies and CIP program to perform this type of project.

B. Set 2018 Maximum Levy and Direct Staff to Submit to Hennepin County

Administrator Jester reported that a maximum 2018 levy amount for collection by Hennepin County on behalf of the Commission should be set at this meeting. She recommended a maximum levy of $1,346,815 which includes 2nd year costs for the Plymouth Creek Restoration Project and the Main Stem Erosion Repair Project, along with the estimated cost of the Bassett Creek Park Pond Dredging Project. She noted the Commission can lower the levy

request when it submits its final levy amount in September of this year, but that it cannot request more than the maximum levy amount.

MOTION: Commissioner Scanlan moved to set the 2018 maximum levy amount at $1,346,815 and to direct staff to submit the amount to Hennepin County. Alt. Commissioner McDonald Black seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

D. Discuss Recommendations from Budget Committee on 2018 Operating Budget and Consider Purchasing Monitoring Equipment in 2017

Alt. Commissioner McDonald Black reviewed a PowerPoint presentation with recommendations from the Budget Committee. She noted the committee is reviewing long-term expenses and looking for savings where feasible. She noted that the optimal fund balance is 50% of the annual operating costs but that the fund balance has been decreasing over the last few years because it is being used for the operating budget. She reported that suggestions from the committee to lower expenses in 2018 include: limiting water monitoring to minimal data collection, using partners to help with monitoring efforts, adjusting sampling to spread out monitoring over 6 years, and to purchase equipment with 2017 budget rather than purchasing in 2018.

Alt. Commissioner McDonald Black reported that the Budget Committee recommends increasing city assessments by 3% over 2017 levels and to purchase up to $10,900 of water monitoring equipment with the 2017 Surveys and Studies funding. She noted if there are questions or other suggestions from the Commission or member cities, that adjusted budget numbers could be brought before the Commission in June.

Commissioner Welch thanked the committee and staff. Chair de Lambert remarked that it is nice to have an accountant's perspective on the budget. Mr. Asche added that spending $10,900 on equipment now will save money long term. It was noted that Barr Engineering would house and maintain the equipment and thus the equipment would be insured by them.

MOTION: Commissioner Scanlan moved to approve the proposed 2018 operating budget as presented and to purchase up to $10,900 of water monitoring equipment this year. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

E. Review Recommendations from Education Committee

i. Consider Approval of Additions to 2017 Education Work Plan and Budget

ii. Consider Approval of Amended Contract with Dawn Pape

Administrator Jester gave an overview of the proposed additions to the 2017 Education Work Plan and Budget as recommended by the Education Committee. Derek Asche commented that he would like to see the outreach spread among more cities as currently two of the projects are focusing on Golden Valley. Chair de Lambert wondered if the salt cup give-away might make people use more salt. Ms. Pape mentioned that the salt cup should say the first step is shoveling and using salt is a last resort. There was some discussion about the effectiveness of stream signs at road crossings and who would maintain the signs.

MOTION: Commissioner Mueller moved to approve the Education Committee recommendations. Commissioner Welch seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

MOTION: Commissioner Welch moved to amend the contract with Dawn Pape to include education activities as recommended by the Education Committee. Alt. Commissioner Byrnes seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

F. Cooperative Purchasing Agreement with Minnesota Department of Administration

Administrator Jester explained that the agreement would result in cost-savings to the Commission because it's a cooperative agreement for purchasing items, including services such as herbicide treatments on Medicine Lake.

Commissioner Welch noted that Hennepin County might have a similar cooperative purchasing agreement.

MOTION: Commissioner Welch moved to approve the cooperative purchasing agreement. Alt. Commissioner McDonald Black seconded the motion. Upon a vote, the motion carried 8-0. [The City of Medicine Lake was absent from the vote.]

7. COMMUNICATIONS

A. Administrator's Report
- i. Administrator Jester noted the need for volunteers for New Hope City Day and the Westwood Nature Center event on June 3rd.

B. Chair
- i. No comments.

C. Commissioners
- i. No comments.

D. TAC Members
- i. No comments.

E. Committees
- i. APM/AIS Committee – Upcoming Meeting 5/23/17

F. Legal Counsel
- i. No comments.

G. Engineer
- i. Engineer Chandler noted that the Commission Engineer reviewed the City of Crystal code, per city request.

8. INFORMATION ONLY (Information online only)

A. CIP Project Updates: Now Available Online http://www.bassettcreekwmo.org/projects
B. Medicine Lake Curly-leaf Pondweed Treatment Report
C. WMWA March and April Meeting Minutes
D. WCA Notice of Decision, Plymouth

9. ADJOURNMENT

Meeting concluded at 11:14 a.m.

_____ _____

Signature/Title Date Signature/Title Date

DRAFT

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report
Fiscal Year: February 1, 2017 through January 31, 2018
MEETING DATE: June 15, 2017

Item 4C.
BCWMC 6-15-17

(UNAUDITED)

BEGINNING BALANCE	**10-May-17**				**743,299.58**
ADD:					
General Fund Revenue:					
Interest less Bank Fees				36.63	
Permits:					
	Room & Board	BCWMC 2017-14		2,200.00	
	Banner Engineering	BCWMC 2017-15		2,200.00	
	Robbinsdale Area Schoc	BCWMC 2017-16		2,200.00	
	Home2 Suites by Hilton	BCWMC 2017-17		1,700.00	
	Robbinsdale Area Schoc	BCWMC 2017-22		3,000.00	
	Glory of Christ Luth	BCWMC 2017-22		2,200.00	
	Hennepin County	BCWMC 2017-19		1,700.00	
	Hennepin County	BCWMC 2017-20		2,200.00	
	Creekside Plymouth LLC	BCWMC 2017-21		1,500.00	
	PAC Properties	BCWMC 2017-14		1,700.00	
Reimbursed Construction Costs				15,092.18	
		Total Revenue and Transfers In			**35,728.81**
DEDUCT:					
Checks:					
2973	Barr Engineering	May Engineering		49,035.82	
2974	Kennedy & Graven	April Legal		718.22	
2975	Keystone Waters LLC	May Admin/Mtg Material		5,703.31	
2976	Lawn Chair Gardener	Minutes/newsletter/Socia		782.47	
2977	Triple D Expresso	June Meeting		103.98	
2978	Wenck Associates	Outlet Monitor/Lake Mor		2,278.86	
2979	ECM Publishers	Plan Amendment Hearing		511.50	
2980	MMKR	Audit-Final		850.00	
2981	Metro Blooms	Neighborhood Engageme		23,174.79	
		Total Checks/Deductions			**83,158.95**
Outstanding from previous month:					
2970	Metro Conservation Dis	Childrens Water Festival		350.00	
ENDING BALANCE	**10-May-17**				**695,869.44**

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2017 through January 31, 2018
MEETING DATE: June 15, 2017

	2017 / 2018 BUDGET	CURRENT MONTH	YTD 2017 / 2018	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSEMENTS TO CITIES-PREPAID			0.00	
ASSESSEMENTS TO CITIES	500,000	0.00	500,001.00	(1.00)
PROJECT REVIEW FEES	60,000	20,600.00	45,400.00	14,600.00
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
MET COUNCIL REIMBURSEMENTS-LRT PROJECTS	7,000	0.00	6,933.59	66.41
MET COUNCIL - METRO BLOOMS	0	0.00	17,272.51	(17,272.51)
TRANSFERS FROM LONG TERM FUND & CIP	38,072	0.00	0.00	38,072.00
REVENUE TOTAL	**610,072**	**20,600.00**	**574,107.10**	**35,964.90**
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	125,000	8,322.50	45,698.00	79,302.00
DEV/PROJECT REVIEWS	65,000	9,971.87	34,504.91	30,495.09
NON-FEE/PRELIM REVIEWS	15,000	2,733.92	7,556.63	7,443.37
COMMISSION AND TAC MEETINGS	14,000	1,156.00	5,180.00	8,820.00
SURVEYS & STUDIES	20,000	1,610.78	1,610.78	18,389.22
WATER QUALITY/MONITORING	74,300	7,900.50	23,363.75	50,936.25
WATER QUANTITY	11,500	414.97	2,593.16	8,906.84
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	12,000	0.00	0.00	12,000.00
REVIEW MUNICIPAL PLANS	8,000	1,179.00	1,179.00	6,821.00
WOMP	15,500	1,794.46	5,586.24	9,913.76
XP-SWMM MODEL UPDATES/REVIEWS	10,000	0.00	0.00	10,000.00
APM / AIS WORK	35,000	0.00	19,350.45	15,649.55
ENGINEERING & MONITORING TOTAL	**406,300**	**35,084.00**	**146,622.92**	**259,677.08**
ADMINISTRATION				
ADMINISTRATOR	67,200	5,285.00	21,690.00	45,510.00
LEGAL COSTS	18,500	718.22	6,270.78	12,229.22
AUDIT, INSURANCE & BONDING	15,500	850.00	10,350.00	5,150.00
FINANCIAL MANAGEMENT	3,200	0.00	40.76	3,159.24
MEETING EXPENSES	2,000	103.98	519.90	1,480.10
ADMINISTRATIVE SERVICES	18,000	1,200.78	3,998.67	14,001.33
ADMINISTRATION TOTAL	**124,400**	**8,157.98**	**42,870.11**	**81,529.89**
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	2,500	1,138.50	1,138.50	1,361.50
WEBSITE	4,400	0.00	525.99	3,874.01
PUBLIC COMMUNICATIONS	2,500	511.50	511.50	1,988.50
EDUCATION AND PUBLIC OUTREACH	20,000	23,174.79	33,382.08	(13,382.08)
WATERSHED EDUCATION PARTNERSHIPS	15,500	0.00	3,850.00	11,650.00
OUTREACH & EDUCATION TOTAL	**44,900**	**24,824.79**	**39,408.07**	**5,491.93**
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**	**68,066.77**	**229,443.60**	**416,156.40**

BCWMC Construction Account
Fiscal Year: February 1, 2017 through January 31, 2018 **(UNAUDITED)**
June 2017 Financial Report

Cash Balance 05/10/2017				
Cash		1,366,869.59		
	Total Cash		1,366,869.59	
Ally Bk Midvale Utah C/D (9/25/2017 1.25%)		248,000.00		
Capital One Bk-McLean VA C/D (9/25/2017 1.15%)		248,000.00		
Capital One Bk-Glen Allen VA C/D (9/25/2017 1.15%)		248,000.00		
Key Bk Natl Assn Ohio C/D (10/02/2017 1.15%)		248,000.00		
	Total Investments		992,000.00	
	Total Cash & Investments			2,358,869.59
Add:				
State of MN - BWSR 16		200,000.00		
State of MN - BWSR 17		267,298.00		
Interest Revenue (Bank Charges)		119.45		
	Total Revenue			467,417.45
Less:				
CIP Projects Levied - Current Expenses - TABLE A		(7,145.50)		
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(5,555.68)		
	Total Current Expenses			(12,701.18)
	Total Cash & Investments On Hand 06/07/17			**2,813,585.86**

Total Cash & Investments On Hand	2,813,585.86
CIP Projects Levied - Budget Remaining - **TABLE A**	(4,486,222.64)
Closed Projects Remaining Balance	**(1,672,636.78)**
2012 - 2016 Anticipated Tax Levy Revenue - **TABLE C**	9,476.76
2017 Anticipated Tax Levy Revenue - TABLE C	1,303,600.00
Anticipated Closed Project Balance	**(359,560.02)**
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	5,933.50	7,486.50	149,338.34	840,661.66	
2014								
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)			612,000	1,212.00	3,538.50	306,801.95	305,198.05	
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	0.00	946,447.15	556,552.85	
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)	670,000
2017								
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy	580,930	863,573	0.00	196.00	114,757.79	748,815.21	
	2018 Levy	282,643						
Plymouth Creek Restoration (CR-P)	2017 Levy	400,000	1,064,472	0.00	918.70	66,522.83	997,949.17	267,298
	2018 Levy	664,472						
			7,886,715	7,145.50	12,555.70	3,400,492.36	4,486,222.64	

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)		5,555.68	28,931.20	60,250.25	(60,250.25)
2018 Project Totals	0	5,555.68	28,931.20	60,250.25	(60,250.25)
2019					
Bryn Mawr Meadows (BC-5)	0	0.00	0.00	5,282.80	(5,282.80)
2019 Project Totals	0	0.00	0.00	5,282.80	(5,282.80)
Total Proposed & Future CIP Projects to be Levied	0	5,555.68	28,931.20	65,533.05	(65,533.05)

BCWMC Construction Account
Fiscal Year: February 1, 2017 through January 31, 2018 **(UNAUDITED)**
June 2017 Financial Report

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			1,303,600.00	1,303,600.00
2016 Tax Levy	1,222,000.00	(6,075.91)	1,215,924.09	0.00		1,210,956.46	4,967.63	1,222,000.00
2015 Tax Levy	1,000,000.00	1,935.37	1,001,935.37	0.00		1,000,037.76	1,897.61	1,000,000.00
2014 Tax Levy	895,000.00	(7,436.49)	887,563.51	0.00		886,182.01	1,381.50	895,000.00
2013 Tax Levy	986,000.00	(10,440.29)	975,559.71	0.00		974,717.80	841.91	986,000.00
2012 Tax Levy	762,010.00	(7,488.24)	754,521.76	0.00		754,133.65	388.11	762,010.00
				0.00			**1,313,076.76**	

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	2,391.00	14,098.00	319,928.41	
Less: State of MN - DNR Grants		(9,300.00)	(9,300.00)	(93,000.00)	
	673,373.00	(6,909.00)	4,798.00	226,928.41	446,444.59
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	0.00	35,915.00	157,157.95	192,842.05
Total Other Projects	1,658,373.00	(6,909.00)	40,713.00	491,851.51	1,166,521.49

Cash Balance 05/10/2017		**1,057,111.44**
Add:		
Transfer from GF		0.00
Less:		
Current (Expenses)/Revenue		6,909.00
Ending Cash Balance	**06/07/17**	**1,064,020.44**
Additional Capital Needed		(102,501)

Bassett Creek Construction Project Details 6/7/2017

CIP Projects Levied

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 CR-P)
Original Budget	**7,275,115**	**196,000**	**990,000**	**612,000**	**250,000**	**163,000**	**1,503,000**	**810,930**	**822,140**	**863,573**	**1,064,472**
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	**12,555.70**		7,486.50	3,538.50					416.00	196.00	918.70
Total Expenditures:	**3,400,492.36**	**11,589.50**	**149,338.34**	**306,801.95**	**250,000.00**	**91,037.82**	**946,447.15**	**25,307.00**	**1,438,689.98**	**114,757.79**	**66,522.83**
Project Balance	**4,486,222.64**	**184,410.50**	**840,661.66**	**305,198.05**		**71,962.18**	**556,552.85**	**785,623.00**	**(4,949.98)**	**748,815.21**	**997,949.17**

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 CR-P)
Project Totals By Vendor											
Barr Engineering	**389,689.73**	6,338.95	50,507.04	78,790.00	13,089.74	15,712.00	15,825.00	13,157.98	17,966.00	111,939.39	66,363.63
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	**1,414,281.03**			213,668.55	230,401.91	66,812.17	903,398.40				
City of Minneapolis											
City of Plymouth	**75,759.35**		75,759.35								
City of New Hope	**1,413,267.55**								1,413,267.55		
City of Crystal											
MPCA	**2,500.00**									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	**3,394,737.38**	**11,589.50**	**149,338.34**	**306,801.95**	**250,000.00**	**91,037.82**	**946,447.15**	**25,307.00**	**1,432,935.00**	**114,757.79**	**66,522.83**

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 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											
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	**6,579,600**	196,000	990,000	534,000	218,800	142,200	1,503,000	810,930	1,203,740	580,930	400,000
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					
	Total Proposed & Future CIP Projects (to be Levied)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	2019 Bryn Mawr Meadows		Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Original Budget					**1,278,373.00**	**105,000.00**	**500,000.00**	**748,373.00**	**175,000.00**	**8,553,488.00**
Added to Budget					**(250,000.00)**			(250,000.00)		**361,600.00**
				DNR Grant	**93,000.00**			93,000.00		93,000.00
				From GF	**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	**28,931.20**	28,931.20			**49,997.00**			14,082.00	35,915.00	91,483.90
Total Expenditures:	**65,533.05**	**60,250.25**	**5,282.80**		**584,851.51**	**107,765.15**		**319,928.41**	**157,157.95**	**4,050,876.92**
Project Balance	**(65,533.05)**	**(60,250.25)**	**(5,282.80)**		**1,166,521.49**	**27,234.85**	**500,000.00**	**446,444.59**	**192,842.05**	**5,587,211.08**

	Total Proposed & Future CIP Projects (to be Levied)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	2019 Bryn Mawr Meadows	Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Project Totals By Vendor									
Barr Engineering	**65,533.05**	60,250.25	5,282.80	**387,125.50**	104,888.70		282,236.80		842,348.28
Kennedy & Graven				**2,648.25**	1,164.30		1,099.35	384.60	14,609.95
City of Golden Valley				**55,287.50**				55,287.50	1,469,568.53
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									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	**65,533.05**	**60,250.25**	**5,282.80**	**548,936.51**	**107,765.15**		**319,928.41**	**121,242.95**	**4,009,206.94**

	Total Proposed & Future CIP Projects (to be Levied)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	2019 Bryn Mawr Meadows		Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Levy/Grant Details										
2010 -2014 Levies				2010-2013		30,000		100,000	100,000	1,881,000
2014/2015 Levy				2014/2015	**50,000.00**			25,000	25,000	1,050,000
2015-2016 Levy				2015/2016						
2016-2017 Levy				2016/2017						
2017-2018 Levy				2017/2018						
Construction Fund Balance				2015/2016	**50,000.00**			25,000	25,000	753,000
BWSR Grant- BCWMO				2016/2017	**50,000.00**			25,000	25,000	520,000
DNR Grants-LT Maint				DNR Grant	**93,000.00**			93,000		
Total Levy/Grants					**473,000.00**	30,000		268,000	175,000	4,204,000

Item 4E.
BCWMC 6-15-17

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BARR

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4E – CSAH 66 Culvert Replacement – Golden Valley, MN
BCWMC June 15, 2017 Meeting Agenda
Date: June 7, 2017
Project: 23270051 2017 2119

4E CSAH 66 Culvert Replacement – Golden Valley, MN BCWMC 2017-19

Summary:

Proposed Work: Removal of existing corrugated metal pipe culvert and installation of a precast concrete arch bridge structure for CSAH 66 (Golden Valley Road) crossing

Basis for Commission Review: Work in the floodplain, creek crossing

Impervious Surface Area: No change

Recommendation: Conditional Approval

General Background & Comments

The proposed project includes the removal of an existing 16.2 feet x 10.2 feet corrugated metal arch pipe, installation of a precast concrete arch bridge structure, storm sewer replacement, watermain relocation, and scour protection. The project is located in the Bassett Creek Main Stem subwatershed. The project results in 0.6 acres of disturbance (grading), 0.24 acre of reconstructed impervious, and no new impervious surface.

Floodplain

The proposed project includes work in the floodplain of Bassett Creek. The BCWMC requires that projects within the floodplain maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at least a precision of 0.00 feet). At its May 18, 2017 meeting, the BCWMC approved the XP-SWMM Phase II (Atlas 14) model and adopted the revised (Atlas 14) floodplain elevations for Bassett Creek. Based on this approval and adoption, the floodplain elevation of Bassett Creek downstream of CSAH 66 (Golden Valley Road) is 828.2 feet NAVD88 and the floodplain elevation of Bassett Creek upstream of CSAH 66 (Golden Valley Road) is 833.8 feet NAVD88.

The applicant used an existing, truncated Bassett Creek HEC-RAS model, extending from Golden Valley Road to Hwy 100, to perform a hydraulic risk assessment study for the CSAH 66 (Golden Valley Road) crossing. This HEC-RAS model appears to have been developed in November 1996 and revised in January 1999. It does not appear that model was revised to reflect updated hydrologic parameters. The existing conditions model indicates that the existing 100-year flood elevation immediately upstream of CSAH 66

(Golden Valley Road) is 828.52 feet NAVD88 and the proposed 100-year flood elevation immediately downstream of CSAH 66 (Golden Valley Road) is 826.85 feet NAVD 88. However, these floodplain elevations are lower than both the revised (Atlas 14) floodplain elevations as well as the previous TP-40 floodplain elevations. In addition, the HEC-RAS model for the project does not appear to accurately represent existing conditions at Golden Valley Road. Specific items of concern in the model include the culvert, road embankment, and upstream/downstream ineffective flow areas.

The model was modified by the applicant to assess floodplain impacts of the proposed project. The model provided by the applicant indicates that the proposed 100-year flood elevation immediately upstream of CSAH 66 (Golden Valley Road) is expected to decrease by 0.96 feet and the proposed 100-year flood elevation immediately downstream of CSAH 66 (Golden Valley Road) is expected to decrease by 0.22 feet as a result of the project. However, the downstream boundary condition (i.e. end point) in the HEC-RAS model is too close to the project site to allow for complete assessment of downstream impacts. The proposed project will increase the waterway opening from 124 square feet in existing conditions to 211 square feet in proposed conditions. Flows are backed up upstream of CSAH 66 (Golden Valley Road) during the 100-year event in existing conditions, therefore increasing the conveyance through the crossing may increase flood elevations downstream. Comments related to the HEC-RAS modeling are included in the Recommendation section.

Wetlands

The project appears to involve work adjacent to wetlands. The City of Golden Valley is the LGU for administering the Minnesota Wetland Conservation Act of 1991.

Stormwater Management

The drainage patterns under existing and proposed conditions will remain the same; this project will not result in changes to land use or topography.

Water Quality Management

The project results in 0.24 acre of reconstructed impervious surface and therefore does not trigger water quality review or treatment to MIDS performance goals.

Erosion and Sediment Control

Since the area to be graded for the project is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include silt fence, floating silt curtain, sediment control logs, construction entrances, and rapid stabilization. Permanent erosion and sediment control features include seeding and erosion control blanket.

Recommendation

Conditional approval based on the following comments:

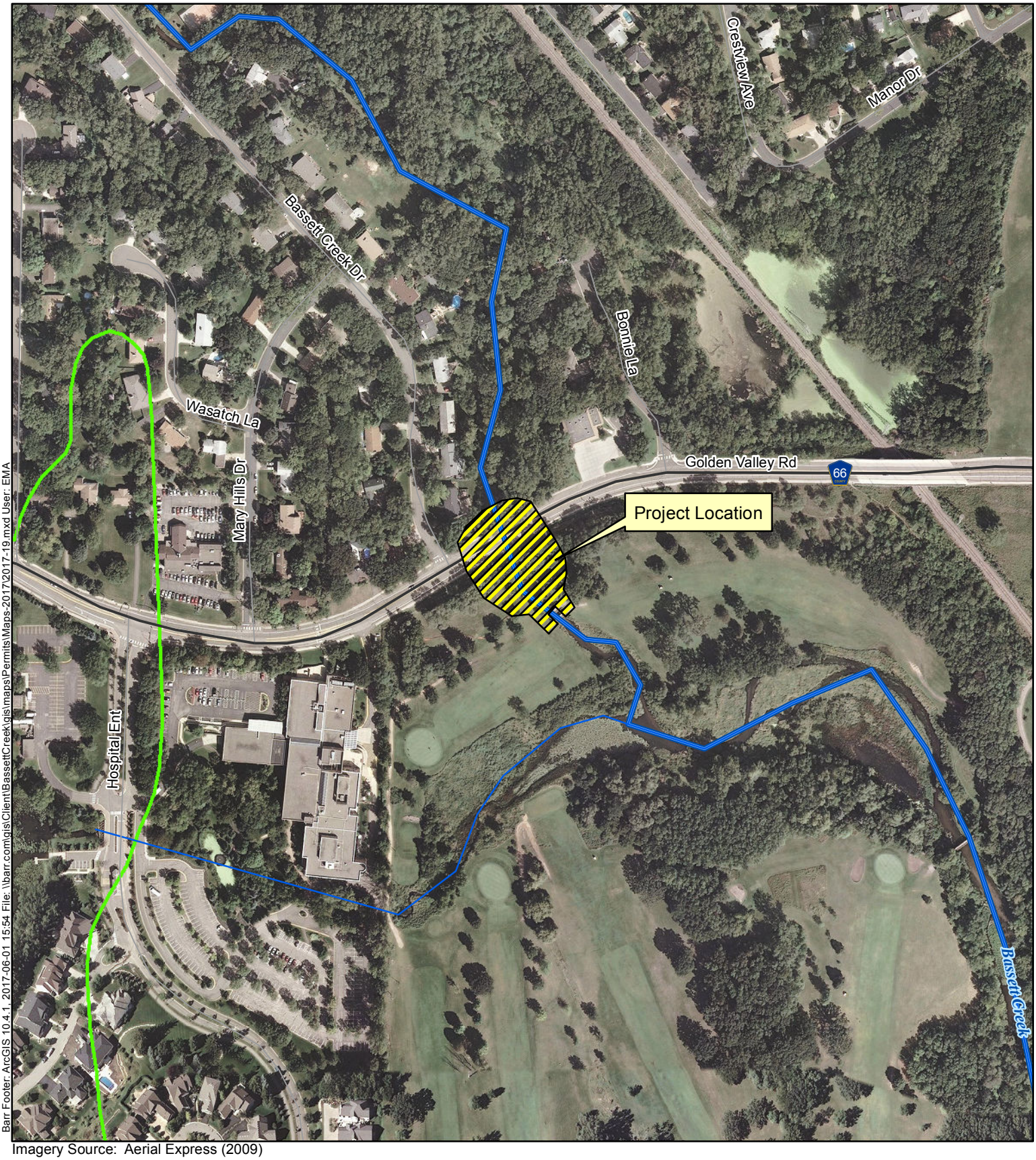
1. Applicant must review downstream impacts due to the increased waterway opening and demonstrate the project does not increase downstream flood levels. This may require modifying

the proposed structure. Due to the BCWMC's recent approval of the XP-SWMM Phase II model and adoption of revised floodplain elevations, revised modeling efforts should be coordinated between the applicant and Barr.

   a. The HEC-RAS model for the project does not appear to accurately represent existing conditions at Golden Valley Road. Specific items of concern in the model include the culvert, road embankment, and upstream/downstream ineffective flow areas. A corrected effective HEC-RAS model must be developed to accurately compare existing and proposed conditions floodplain elevations for the project. Alternatively, we recommend the applicant request and use the BCWMC's XP-SWMM Phase II (Atlas 14) model, which accurately represents existing conditions at the crossing.

   b. The downstream boundary condition (i.e. end point) in the HEC-RAS model is too close to the project site to allow for complete assessment of downstream impacts. The HEC-RAS model must be extended downstream to ensure that the downstream floodplain elevations are not artificially altered by the downstream boundary condition.

2. The location of rock construction entrances must be shown on the plans.
3. Inlet protection must be shown on the plans for inlets that receive drainage from the project area.
4. Require that soils tracked from the site be removed from all paved surfaces within 24 hours of discovery throughout the duration of construction.
5. Require that all exposed soil areas be stabilized as soon as possible, but in no case later than 14 days after the construction activity has temporarily or permanently ceased or within 7 days if the project is within 1 mile of a special or impaired water.
6. Revised Drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



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Imagery Source: Aerial Express (2009)

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

N

Feet

0 300 600

Bassett Creek Watershed Management Commission

LOCATION MAP
APPLICATION 2017-19
CSAH 66 Culvert Replacement
Golden Valley, MN

Item 4F.
BCWMC 6-15-17

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BARR

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – Creekside Woods I & II – Plymouth, MN
BCWMC June 15, 2017 Meeting Agenda
Date: June 7, 2017
Project: 23270051 2017 2128

4F Creekside Woods I & II – Plymouth, MN BCWMC 2017-21

Summary:

Proposed Work: Subdivision development

Basis for Commission Review: Work in the floodplain

Impervious Surface Area: Increase 0.6 acres

Recommendation: Conditional Approval

General Background & Comments

The proposed project includes the construction of 10 new single family homes, 11 new driveways, sidewalks, grading, stormwater treatment, and utilities. The project is located in the Plymouth Creek subwatershed. The project results in 3.85 acres of disturbance (grading), 1.37 acres of new/fully reconstructed impervious, and an increase of 0.60 acres of impervious surfaces from 0.77 acres in existing conditions to 1.37 acres in proposed conditions.

Floodplain

The proposed project includes work in the floodplain of Bassett Creek. The September 2015 BCWMC Requirements for Improvements and Development Proposals (Requirements) document requires that projects within the floodplain maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at least a precision of 0.00 feet). At its May 18, 2017 meeting, the BCWMC approved the XP-SWMM Phase II (Atlas 14) model and adopted the revised (Atlas 14) floodplain elevations for Bassett Creek. Based on this approval and adoption, the floodplain elevation of Bassett Creek at the project site is approximately 986.2 feet NAVD88.

Prior to the adoption of the revised floodplain elevations, it appears the proposed project was outside of the floodplain, therefore the applicant did not provide documentation to demonstrate floodplain compliance. Floodplain compliance documentation must be provided as noted in the Recommendation Section.

Wetlands

The project appears to involve work adjacent to wetlands. The City of Plymouth is the LGU for administering the Minnesota Wetland Conservation Act of 1991.

Stormwater Management

The BCWMC Requirements document requires that projects that contain more than one (1) acre of new or fully reconstructed impervious area must manage stormwater such that peak flow rates leaving the site are equal to or less than the existing rate leaving the site for the 2-, 10-, and 100-year events, based on Atlas 14 precipitation amounts and using a nested 24-hour rainfall distribution. As discussed below, the proposed peak flows meet the BCWMC requirement.

Under existing conditions, stormwater runoff flows to an existing wetland on the southeast corner of the site and eventually discharges into Plymouth Creek.

The proposed stormwater management system includes a grassed swale, overland flow, and a stormwater pond. Drainage from a portion of the northwest corner of the site drains to the north to Old Rockford Road. Drainage from the majority of the proposed development site as well as a portion of offsite area flows to the proposed stormwater pond. Overflows from the stormwater pond are routed into the existing wetland and eventually to Plymouth Creek. Drainage from the southwest and a portion of the proposed development flows overland to the existing wetland and eventually to Plymouth Creek.

The following table summarizes the existing and proposed peak discharges from the project area to the existing wetland on the southeast corner of the site.

Storm Event	Existing Peak Discharge (cfs)	Proposed Peak Discharge (cfs)
2-year	6.07	2.97
10-year	11.51	6.29
100-year	24.31	23.98

Water Quality Management

The BCWMC Requirements document requires that projects that contain more than one (1) acre of new or fully reconstructed impervious area must treat stormwater in accordance with the MPCA's Minimal Impact Design Standards (MIDS) performance goals. If the MIDS performance goal is not feasible and/or is not allowed for a proposed project, then the project proposer must implement MIDS flexible treatment options.

The proposed project results in 1.37 acres of new/fully reconstructed impervious surfaces. Flexible Treatment Option (FTO) #2 was selected for the proposed project due to the presence of tight clay soils that are not conducive to infiltration. FTO #2 requires that the project provide 60% removal of total phosphorus (TP). The proposed stormwater pond was modeled in P8 to quantify TP removal rates. The stormwater pond was then plugged into MIDS as an "other" device along with the iron-enhanced sand filter bench, overland flow, and grassed swale.

The following table summarizes the proposed TP removal rates for the proposed BMPs.

BMP	TP Removal (lbs/year)	Percent Removal (%)
Stormwater Pond (from P8)	1.90	64
Iron-Enhanced Sand Filter Bench (within Stormwater Pond)	0.47	43
Overland Flow	0.05	14
Grassed Swale	0.26	43
Total	2.68	64

Erosion and Sediment Control

Since the area to be graded for the project is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include silt fence, a rock construction entrance, and inlet protection. Permanent erosion and sediment control features include stabilization through seeding and sod.

Recommendation

Conditional approval based on the following comments:

1. Documentation must be provided demonstrating compliance with BCWMC floodplain policies.
2. Detail 2 on sheet C7.6 shows a proposed sand filter bench, but the grading plan on Sheet C3.1 does not appear to show a bench within the pond. In addition, contours around the proposed plan on Sheet C3.1 are not clearly labeled and the elevation associated with each contour is unclear. Please revise and clarify.
3. Detail 2 on sheet C7.6 shows an existing clay layer of separation dividing the iron-enhanced sand filtration bench from the rest of the proposed stormwater pond. However, this existing clay layer is lower than the normal water elevation of the pond, therefore it appears that the pond would continue to draw down to the elevation of the existing clay layer of separation, lowering the normal water level of the pond. This may affect the stormwater pond's ability to effectively treat runoff. Please revise and clarify.
4. FES 300 should be extended to discharge at or below the normal water level of the receiving wetland. As an alternative, adequate erosion protection must be provided between FES 300 and the receiving wetland to prevent channelization and erosion.
5. We recommend using the MSE 3 nested distribution for the HydroCAD rainfall events.
6. In the proposed conditions HydroCAD model, the Pond 5P stage storage areas do not appear to match the grading plan on Sheet C3.1. Please revise and clarify.
7. A P8 model was run to determine phosphorus removals from the proposed pond. These results were then input into an "Other" BMP in MIDS. However the outputs in P8 do not match what was input into MIDS. The inputs in MIDS must be revised to match what was calculated in the P8 model.

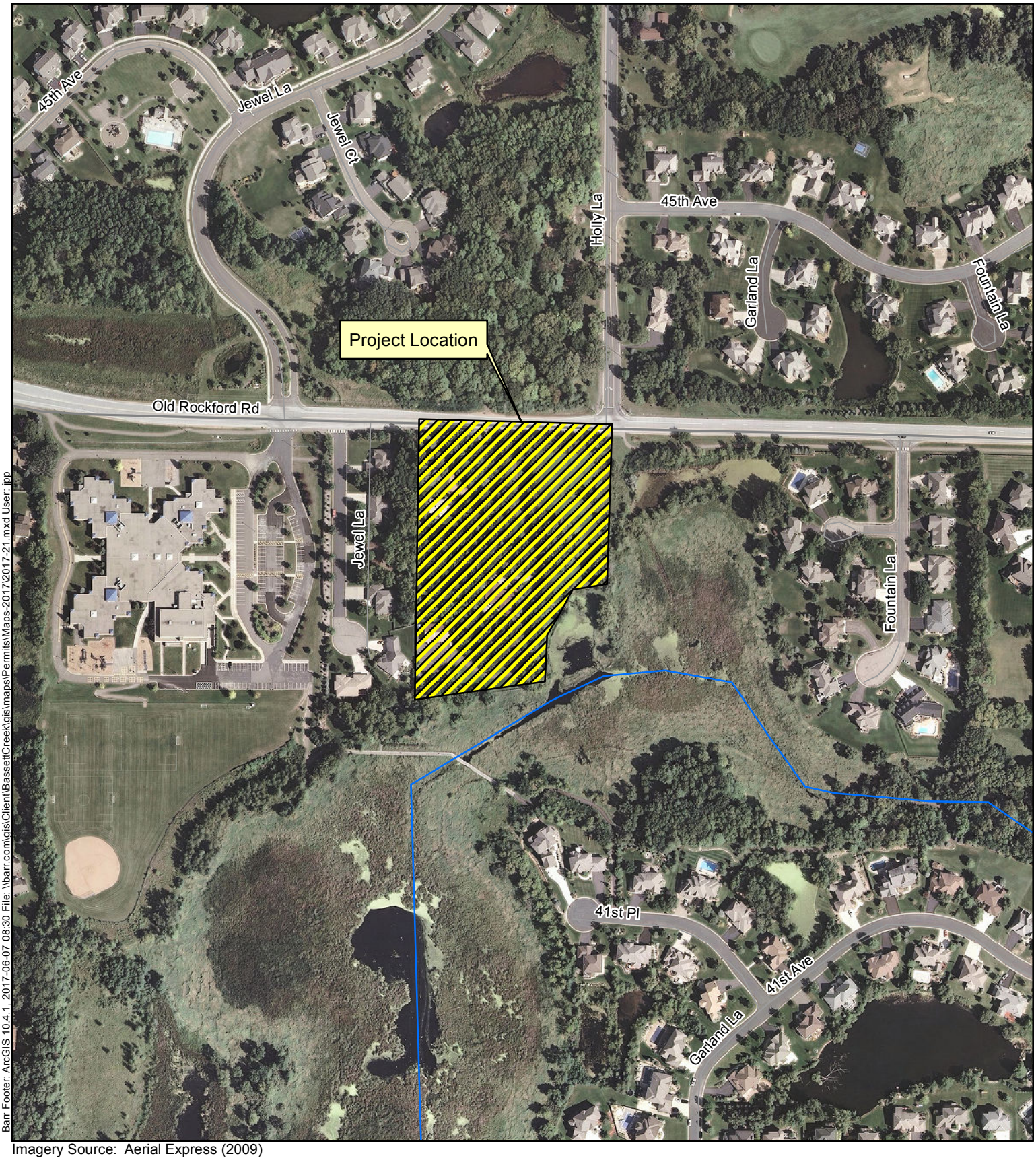
a. MIDS Calculator shows 25% dissolved phosphorus removal for the proposed pond, but P8 does not indicate any dissolved phosphorus removal.

b. MIDS Calculator shows 95.3% particulate phosphorus removal for the proposed pond, but P8 indicates 69.3% particulate phosphorus removal for the proposed pond

8. Revise *Erosion Prevention and Sediment Control Note #5* on Sheet C3.2 to require that all exposed soil areas be stabilized as soon as possible, but in no case later than 7 days after the construction activity has temporarily or permanently ceased, due to the project's location within 1 mile of an impaired water.

9. For *Erosion Prevention and Sediment Control Note #10* on Sheet C3.2, require that soils tracked from the site be removed from all paved surfaces within 24 hours of discovery throughout the duration of construction.

10. Revised Drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



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Imagery Source: Aerial Express (2009)

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

N

Feet

0 300 600

Bassett Creek Watershed Management Commission

LOCATION MAP
APPLICATION 2017-21
Creekside Woods I & II
Plymouth, MN

Item 5A.
BCWMC 6-15-17
See planset online

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BARR

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5A – Consider Approval of 60% Design Plans for 2017 Plymouth Creek Stream Restoration Project, Plymouth (CIP 2017CR-P)
BCWMC June 15, 2017 Meeting Agenda
Date: June 7, 2017
Project: 23270051 2017 635

5A Consider Approval of 60% Design Plans for 2017 Plymouth Creek Stream Restoration Project, Plymouth (CIP 2017CR-P)

Summary:

Proposed Work: 2017 Plymouth Creek Stream Restoration Project (CIP 2017CR-P)

Basis for Commission Review: 60% Design Plans Review

Change in Impervious Surface: N.A.

Recommendations:

1) Conditional approval of 60% drawings
2) Authorize the City of Plymouth to proceed with final plans and contract documents

The 2017 Plymouth Creek Restoration project (CIP 2017CR-P) is being funded by the BCWMC's ad valorem levy (via Hennepin County), a Minnesota Board of Water and Soil Resources Clean Water Fund Grant, and a Hennepin County Opportunity Grant. The City of Plymouth provided the 60% design plans to the BCWMC for review and comment, as set forth in the BCWMC CIP project flow chart developed by the TAC.

Feasibility Study Summary

The BCWMC completed the 2017 Plymouth Creek Restoration Project Feasibility Report (Barr, March 2016) to examine the feasibility of restoring sites along the 2,500-foot reach of the creek in Plymouth Creek Park and between Fernbrook Lane North and Annapolis Lane North (Figure 1). The feasibility report identified 21 sites where bank erosion, bank failure, and infrastructure repairs were needed, in addition to removal of debris and fallen trees.

The feasibility report identified 2-4 design options for each site and a final recommendation for each site. For most sites, the feasibility report included two alternative designs: 1) a bioengineering (or soft armoring) approach that uses techniques that rely primarily on vegetation; 2) a more structural (or hard armoring) approach that uses rock and other non-vegetative materials. Some sites included additional alternatives that did not focus on preserving the existing alignment or channel configuration, such as

Barr Footer: ArcGIS 10.4.1, 2017-06-07 11:21 File: i:\Client\BassettCreek\gis\maps\Permits\Maps-2017\2017CR-P.mxd User: jrv

Imagery Source: Aerial Express (2009)

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

N

Feet

0 300 600

Bassett Creek Watershed Management Commission

LOCATION MAP
APPLICATION 2017CR-P
Plymouth Creek Stream Restoration Project
Plymouth, MN

remeandering the channel or reconnecting to the floodplain. Recommendations, based on site-specific considerations, included a mix of hard and soft armoring approaches, and additional alternatives to realign the channel.

The feasibility report estimated that this restoration project would require the removal of approximately 100-150 trees and estimated that project implementation would reduce the total phosphorus load by 52 pounds per year and the total suspended sediment load by 90,800 pounds per year.

60% Design Plans

The 60% design plans follow many of the recommendations from the feasibility study and include the use of root wads, log vanes, rock/cross vanes, debris clearing and vegetation management. The plans also include the use of vegetated riprap and specific measures to improve the disc golf course adjacent to the creek in Plymouth Creek Park. Measures to improve the disc golf course include a low flow crossing where it was observed that golfers are frequently retrieving discs; disc stop poles to prevent discs from damaging trees and going into the creek; installation of boardwalk sections; and improvements to greens to improve erosion control.

The following table was extracted from the 60% plan submittal to provide a concise summary of the feasibility study recommendations along with explanations for how and why the 60% plans differ from the recommendations. They include a mix of hard and soft armoring methods with the chosen methods utilizing hard armoring methods slightly more than the recommendations in the feasibility study. For example, the vegetated riprap can still be considered as hard armoring even if the riprap is effectively hidden below topsoil and grasses; and sections of root wads with stone toe are also a "harder" approach than just using root wads. The design plans also include infrastructure repairs, and removal of debris and fallen trees. The 60% design plan sheets show the total approximate tree removal to be from 50 to 75 trees.

The submitted drawings were at a 60% design stage, which means there are a number of details yet to be worked out before the design is final. The Commission Engineer expects the majority of the comments below to be addressed in the 90% design stage drawings.

Table 5-1 Plymouth Creek feasibility study recommended alternatives summary

Reach	Site	Alternative	Alternative Description	Advantages	Disadvantages	Wenck Rational
Reach 1	Site 1	Alternative C	Stabilize erosion areas with root wads, log vanes, and vegetation	Contributes to habitat, provides grade control, and utilizes materials generated on site.	Does not use historic channels, vegetation limited to shade-tolerant species.	Vegetation establishment will stabilize the banks. Crossing point will use stone steps & steppers across creek and function as grade control in addition to controlling foot traffic and disturbance of new vegetation.
Reach 1	Site 2	Alternative C	Stabilize erosion areas with root wads, log vanes, and vegetation	Contributes to habitat, provides grade control, and utilizes materials generated on site.	Does not use historic channels, vegetation limited to shade-tolerant species.	Remove trees so vegetation will stabilize area with use of deep rooted grasses. Vegetated riprap proposed from 24+80 to 25+60 to reinforce bridge abutments.
Reach 1	Site 3	Alternative B	Install log vanes within reach	Improves habitat by deepening channel, provides grade control, reduces upper bank stress.	Does not create vegetated floodplain.	Same as recommended but fewer, also use boulders to keep log vanes in place.
Reach 1	Site 3	Alternative C	Upper bank vegetation	Improves aesthetics of stream bank, reduces erosion.	Requires careful coordination with disc golf users, vegetation limited to shade-tolerant species.	Same as recommended. Selective tree and brush clearing. Hydroseeding with shade tolerant native seed. Follow up with spring plug planting?
Reach 1	Site 4	Alternative A	Establish vegetated buffer	Improves aesthetics of riparian area, reduces erosion.	Requires careful coordination with disc golf users, vegetation limited to shade-tolerant species.	Same as recommended.
Reach 1	Site 5	Alternative B	Vegetate steep, eroding bank with VRSS	Contributes to habitat, improves aesthetics.	More costly to install, vegetation limited to shade-tolerant species.	Vegetate steep eroded bank with Vegetated Riprap. Propose using vegetated riprap for longevity of stabilization and less distrubance. Creek turns a mjor bend and the existing bank is tall and steep. Building VRSS would impinge on the channel or require pulling the existing bank back.
Reach 1	Site 6	Alternative A	Stabilize bridge abutments with riprap and log vanes	Reduces erosion, reduces erosive pressure on abutments for added protection.	Riprap does not provide natural habitat, more complex design.	Stabilize bridge abutments with Vegetated Riprap. No log vanes proposed to minimize bank and bridge distrubance.
Reach 1	Site 7	Alternative A	Stabilize bridge abutments with riprap and log vanes	Reduces erosion, reduces erosive pressure on abutments for added protection.	Riprap does not provide natural habitat, more complex design.	Stabilize bridge abutments with Vegetated Riprap. No log vanes proposed to minimize bank and bridge distrubance.
Reach 2	Site 8	Alternative A	Stabilize bridge abutments with riprap and log vanes	Reduces erosion, reduces erosive pressure on abutments for added protection.	Riprap does not provide natural habitat, more complex design.	Stabilize bridge abutments with Vegetated Riprap. No log vanes proposed to minimize bank and bridge distrubance.
Reach 2	Site 9	Alternative A	Stabilize bridge abutments with riprap and log vanes	Reduces erosion, reduces erosive pressure on abutments for added protection.	Riprap does not provide natural habitat, more complex design.	Stabilize bridge abutments with Vegetated Riprap. No log vanes proposed to minimize bank and bridge distrubance.
Reach 2	Site 10	Alternative C	Raise channel bed using cross vanes/constructed riffles	Reduces bed and bank erosion, improves stream access to floodplain.	Decreases already shallow slope, does not address stream cross-section in other locations.	Same as recommended. Raise channel bed using cross vanes.
Reach 2	Site 10	Alternative D	Lower adjacent floodplain	Improves stream access to floodplain, improves buffer habitat, reduces flood elevation.	Significant disturbance of wetland, may require significant grading, requires coordination with sanitary manholes.	No excavation in floodplain (delineated wetland) to minimize wetland distrubance, minimize permitting and avoid wetland mitigation costs.
Reach 2	Site 11	Alternative B	Stabilize banks with root wads	Reduces bank erosion, improves in- stream habitat, utilizes materials generated on site.	Requires tree removals, more complex design.	Same as recommended.

Reach 2	Site 12	Alternative B	**Stabilize banks with root wads**	Reduces bank erosion, improves in- stream habitat, utilizes materials generated on site.	Requires tree removals, more complex design.	Same as recommended.
Reach 2	Site 13	Alternative B	Stabilize banks with root wads	Reduces bank erosion, improves in- stream habitat, utilizes materials generated on site.	Requires tree removals, more complex design.	Stabilize bank with vegetated riprap & bareroot shrub/livestakes instead of rootwads to minimize distrubance of dleineated wetland.
Reach 2	Site 14	Alternative A	**Stabilize culvert outfall with hard armor**	Inexpensive, effectively stabilizes outfall from erosion.	Does not provide natural habitat, not aesthetically pleasing.	Same as recommended .
Reach 3	Site 15	Alternative C	Install bank stabilization measures at eroding banks using toe wood	Stabilizes bank and reduces stress and erosion, provides habitat, utilizes materials generated on site.	Installation can be challenging, useful life is less than other options, requires significant woody debris.	Stabilize bank with vegetated Riprap & Boulder vanes to direct flows to center of channel. Did not propose toe wood to minimize distrubance to tall steep bank leading to property we do not have permission to work on.
Reach 3	Site 16	Alternative C	Install bank stabilization measures at eroding banks using **toe wood**	Stabilizes bank and reduces stress and erosion, provides habitat, utilizes materials generated on site.	Installation can be challenging, useful life is less than other options, requires significant woody debris.	Same as recommended. Added excavated wetland depression ~2ft deep + vegetate to create a canopy opening to allow stronger vegetation establishemnet on new toe wood installation.
Reach 3	Site 17	Alternative B	Install 4 rock vanes for bank protection	Reduces erosive stress and bank erosion, improves in-stream habitat.	Can result in increases in flood elevations, less effective at high flows.	Stabilize bank with vegetated Riprap & cross vane/constructed riffle. Did not propose toe wood to minimize distrubance to tall steep bank leading to property we do not have permission to work on.
Reach 3	Site 18	Alternative A	**Remove large woody debris**	Reduces flooding potential and bank erosion.	Decreases stream roughness and may increase flow velocity.	Same as recommended.
Reach 3	Site 19	Alternative A	**Remove large woody debris**	Reduces flooding potential and bank erosion.	Decreases stream roughness and may increase flow velocity.	Same as recommended.
Reach 3	Site 20	Alternative D	Realign channel and stabilize meanders with vanes and **toe wood**	Stabilizes bank and reduces stress and erosion, provides habitat, utilizes materials generated on site, improves cross section stability.	Reduces stream length and increases stream slope, installation can be challenging, useful life is less than other options, requires significant woody debris.	Propose leaving forming oxbow channel in place and increasing vegetated buffer around it. Hig flows are bypassing oxbow as channel cutoff is forming. Propose vegetated riprap to lock in the cuttoff bypass and not shortening the channel length.
Reach 3	Site 21	Alternative B	Install log vanes within reach	Improves habitat by deepening channel, provides grade control, reduces upper bank stress.	Does not create vegetated floodplain.	Install Rootwads with log toe. Propose rock cross vanes for longevity of stabilization and to keep flow centered on the culvert. Pull outfall back and create riprap plunge pool for additional treatment outside of the channel.

Table 5-1 Alternatives

Table extracted from 60% plan submittal. Green text signifies direct match with feasbility study recommendations. Red text signifies a deviation from the feasibility study recommendation.

Recommendations

A. Conditional approval of 60% drawings based on the following comments, recognizing that the current plans are preliminary:

1) The BCWMC does not allow filling in the floodplain unless compensatory storage is created, or it can be demonstrated that the fill will not adversely impact flood levels. Although the current design does not include significant earthen fill areas, the vegetated riprap and boulders that will be added to the channel banks may constitute fill. Modeling or other documentation must be submitted to verify no change in the flood level caused by the proposed design.

2) Modeling or other documentation must be provided to verify that the proposed rock sizes are adequate to meet the design stability criteria, including for vegetated riprap.

3) The plans call for riprap to be placed in swales near Station 24+00 and 21+00 on Sheet C-104; however the size of the riprap is not specified. Please specify a riprap class to be used.

4) The plans call for brush mattress to be used in two locations between Stations 23+00 and 21+50. The willow cuttings used in brush mattress require significant sunlight to grow; however the clearing plan indicates that much of the canopy in this area may remain intact. Please consider if the project will provide sufficient sunlight for this stabilization technique to be successful at this location.

5) The plans call for a double tall cross vane near Station11+75, which may lead to two unintended impacts: 1) a double tall cross vane may create a deeper than expected scour pool, which may undermine the footer boulders for the cross vane and result in failure; 2) the double tall cross vane may be an obstacle for aquatic organism passage. Please consider these potential impacts and consider if an alternate layout, such as two regular cross vanes near each other, may achieve the same result with reduced impacts.

6) The plans call for root wads with log toe from Station 7+00 to 8+50 in the left overbank. This segment contains tall banks with steep existing slopes. Please verify whether grading the 3:1 slope as shown on detail 3/D-101 is feasible given the existing conditions.

7) The proposed berm at the culvert outfall near Station 1+50 does not appear on any details. Please include the berm design on the design drawings.

8) Based on stream walks in 2016, significant woody debris was present between Sta. 2+50 and 4+00. The summary table indicated that the debris would be removed; however it is not called out on the plans. Please verify if debris removal will be conducted in this area and modify the plans accordingly.

9) The seed mix specified throughout the project is 34-262. Many species in this mix prefer full or partial sun; however it appears that much of the existing canopy will remain in place. Please consider the anticipated canopy after the project is complete and if an alternative or custom seed mix will be more appropriate than mix 34-262.

10) Instructions for the contractor to limit tree clearing as much as possible and only at the direction of the Engineer should be included on the plans.

11) Elevations and upstream/downstream stationing should be provided for all proposed toe stabilization measures.

B. Authorize the City of Plymouth to proceed with final plans and contract documents.

Item 5A.
BCWMC 6-15-17
Full planset online

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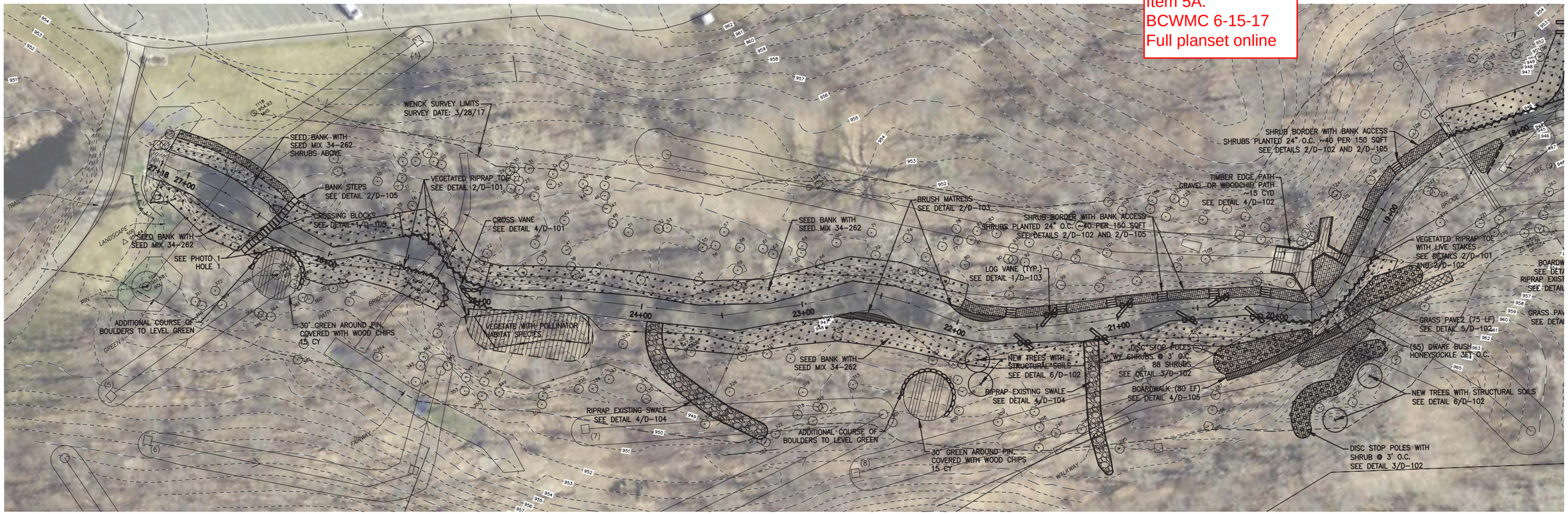
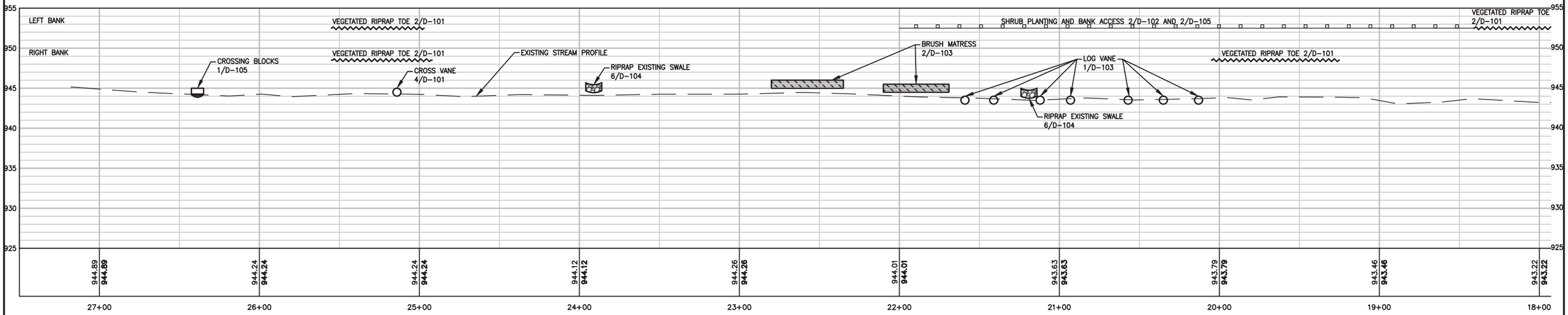


PLYMOUTH CREEK CENTERLINE STA 27+18 TO 18+00



LEGEND

- DECIDUOUS TREE
- ACCESS ROUTE BOUNDARY
- EXISTING FENCE
- PROPERTY LINE
- ROOTWAD WITH STONE TOE
- BARE ROOT SHRUB PLANTING
- SHRUB PLANTING WITH BANK ACCESS
- WATER EDGE
- RETAINING WALL
- PROPOSED CHANNEL CENTERLINE
- PROJECT AREA LIMITS
- ROOTWAD WITH LOG TOE
- VEGETATED RIPRAP TOE

0 30 60
GRAPHIC SCALE IN FEET

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
0	60% DESIGN	SJB	EAM	04/20/17

SEAL

NOT FOR CONSTRUCTION

PRIME CONSULTANT

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

PROJECT TITLE

PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

STABILIZATION PLAN AND PROFILE 27+18 TO 18+00

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SJB	LNJ	EAM	MAR 2017

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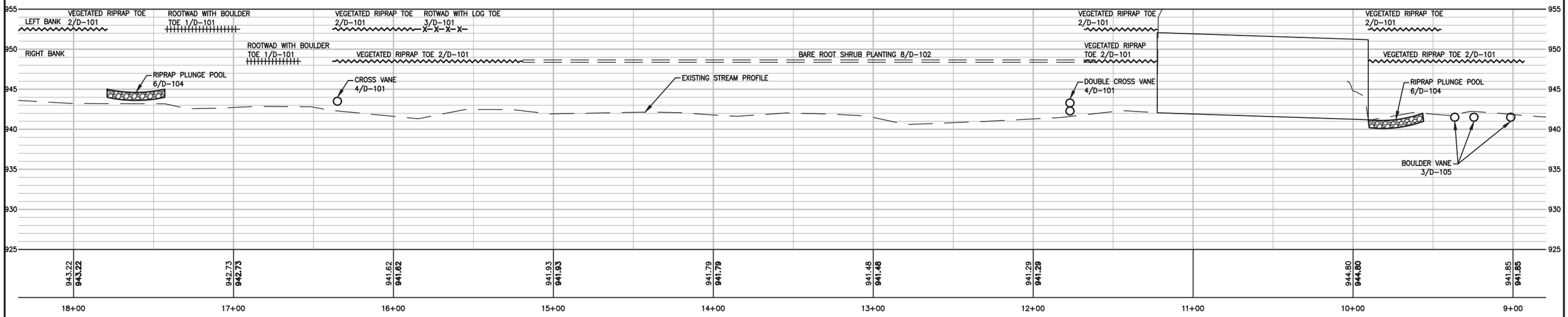
PLYMOUTH CREEK CENTERLINE STA 18+00 TO 9+00



LEGEND

- DECIDUOUS TREE (XXX)
- ACCESS ROUTE BOUNDARY
- EXISTING FENCE
- PROPERTY LINE
- ROOTWAD WITH STONE TOE
- BARE ROOT SHRUB PLANTING
- SHRUB PLANTING WITH BANK ACCESS
- WATER EDGE
- RETAINING WALL
- PROPOSED CHANNEL CENTERLINE
- PROJECT AREA LIMITS
- ROOTWAD WITH LOG TOE
- VEGETATED RIPRAP TOE

0 30 60
GRAPHIC SCALE IN FEET

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PLYMOUTH CREEK
CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

STABILIZATION
PLAN AND PROFILE
18+00 TO 9+00

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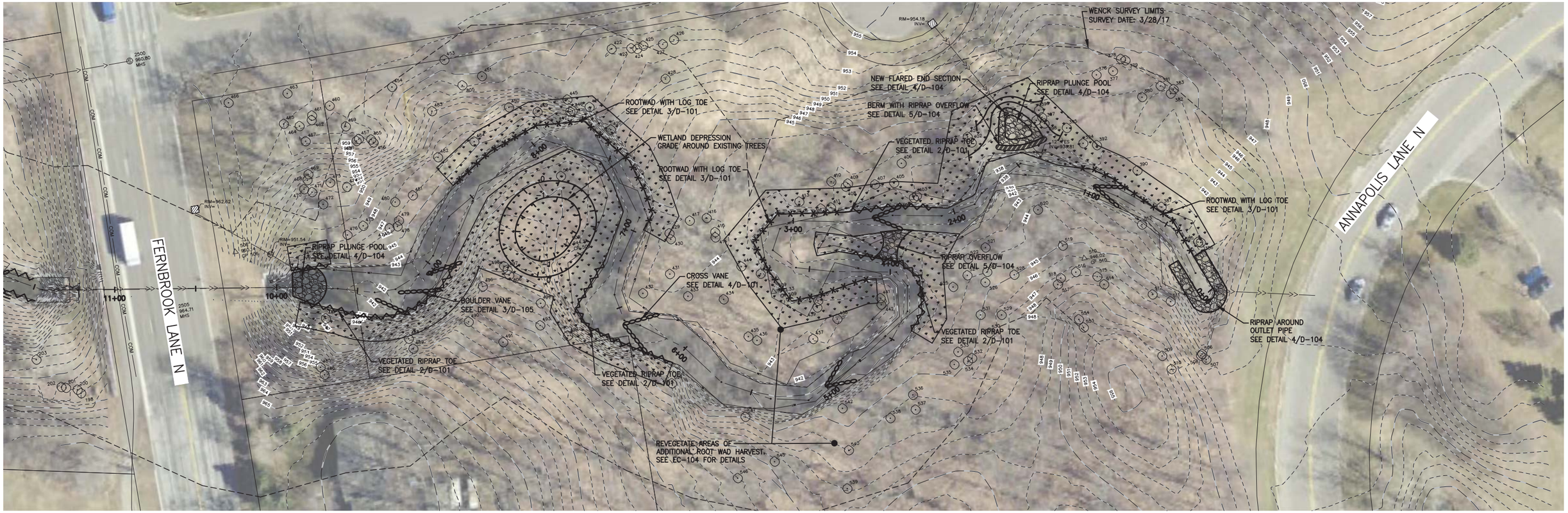
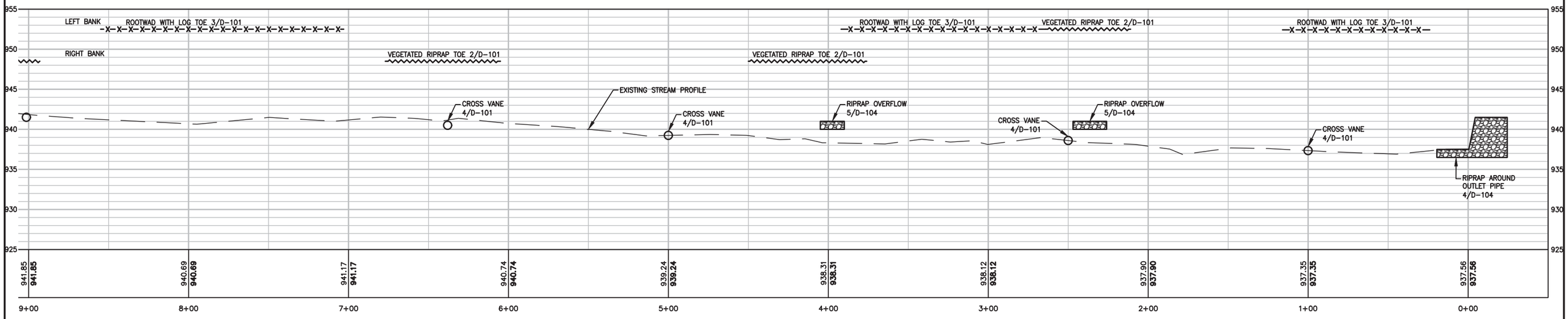


PLYMOUTH CREEK CENTERLINE STA 9+00 TO 0+00



LEGEND

- DECIDUOUS TREE (XXX)
- ACCESS ROUTE BOUNDARY
- EXISTING FENCE
- PROPERTY LINE
- ROOTWAD WITH STONE TOE
- BARE ROOT SHRUB PLANTING
- SHRUB PLANTING WITH BANK ACCESS
- WATER EDGE
- RETAINING WALL
- PROPOSED CHANNEL CENTERLINE
- PROJECT AREA LIMITS
- ROOTWAD WITH LOG TOE
- VEGETATED RIPRAP TOE

0 30 60
GRAPHIC SCALE IN FEET

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CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

STABILIZATION
PLAN AND PROFILE
9+00 TO 0+00

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HOLE 1: STREAM CROSSING

SHRUB PLANTINGS

STONE STEPS

ADDITIONAL BOULDER COURSE

NATIVE GRASS PLANTINGS

GRADE 30' PUTTING AREA FLAT

30FT MULCH RING TO ELIMINATE MUD AND EROSION

GRANITE STEPPERS
60" LONG x 18" WIDE x 7" THICK

HOLE ONE CURRENTLY HAS BANK EROSION WHERE THE FAIRWAY MEETS PLYMOUTH CREEK. THE METHODS PROPOSED TO FIX THE PROBLEM ARE BY INTRODUCING A NEW LOW-FLOW CROSSING POINT WITH BANK STEPS LEADING TO STEPPERS WITHIN THE CREEK BED. INCREASING THE AMOUNT OF VEGETATION THROUGH SHRUB PLANTINGS AND NATIVE GRASSES. THE PUTTING GREEN FOR HOLE FIVE IS LOCATED CLOSE AND TO MITIGATE THE SOIL EROSION THE PROPOSED SOLUTION INCLUDES INCREASING THE HEIGHT OF THE EXISTING BOULDER WALL AND FLATTENING OUT THE "GREEN" AREA. IN ADDITION, ADDING WOOD CHIPS IN THE HIGH TRAFFIC 30 RADIUS OF THE PIN WILL REDUCE THE AMOUNT OF MUD AND IMPROVE PLAY CONDITIONS.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
0	60% DESIGN	SJB	EAM	04/20/17

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CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

REFERENCE PICTURES

DWN BY	CHK'D	APP'D	DWG DATE
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PROJECT NO.	SHEET NO.	REV NO.
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HOLE 8 LOOKING ACROSS TO TEE BOX OF HOLE 12: STREAM ACCESS + STABILIZATION

STONE STEPS TO CREEKS EDGE

SHRUB PLANTINGS

ON HOLE 8 HAS IS A HIGH POTENTIAL FOR DISC'S TO ENTER THE CREEK. THE EXISTING BANKS ARE IN NEED OF EROSION MITIGATION VEGETATION AND ARMORING. IN ORDER TO ACCOMPLISH BOTH DESIRED OUTCOMES A COMBINATION OF SHRUB PLANTINGS TO STABILIZES THE BANK WITH ACCESS STEPS LEADING TO THE CREEK EDGE FOR FISHING DISC'S OUT. THE OUTSIDE BEND WILL BE ARMORED WITH VEGETATED RIPRAP TO COMBAT FLOW VELOCITY AND PRESERVE THE VISUAL AESTHETIC WITH TALL GRASSES GROWING OVER THE ARMORING.

EXISTING SWALES

RIPRAP SWALE

MULTIPLE EXISTING DRAINAGE SWALES OCCUR WITHIN THE DISC GOLF COURSE. THE ADDITION OF RIPRAP TO STABILIZE THE SOILS WILL MITIGATE SOIL MIGRATION INTO THE CREEK. PLAYABILITY OF THE COURSE WILL NOT BE AFFECTED AND A REDUCTION OF OVERALL MUD WILL BE ACHIEVED.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
0	60% DESIGN	SJB	EAM	04/20/17

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HOLE 8: MUDDY PATH OPTIONS

EXISTING TREES WITHIN THE FLIGHT PATH ARE SCARRED BY DISCS REPEATEDLY HITTING THE SOFT TISSUE OF YOUNG TREES. TO PROTECT THE TREES DISC STOP POLES WOULD BE PLACED BETWEEN THE TREE AND THE DIRECTION OF FLYING DISCS. WITH STAGGERED ROWS OF POLES DEFLECTION WILL SERVE TO PROTECT TREES.

SHRUB PLANTINGS

DISC STOP POLES

STEEP SLOPES CAN BE RECTIFIED THROUGH THE USE OF BOARDWALKS WHICH ALSO MINIMIZES THE FOOT TRAFFIC TRAMPLING ANY VEGETATION. THE ADDITION OF DISC STOP POLES WILL PROTECT EXISTING/NEWLY PLANTED TREES AND ADD A NEW ELEMENT OF DIFFICULTY FOR PLAYERS TO SHOOT AROUND.

BOARDWALK TO MATCH EXISTING

FOR AREAS OF HEAVY FOOT TRAFFIC IN SUNNY LOCATIONS THE USE OF GRASSPAVE2 WOULD ALLOW FOR REDUCED COMPACTION AND TRAMPLING OF TURF GRASS COVER. THE SOILS IN THESE LOCATIONS WOULD THUS BE STABILIZED WHILE ALLOWING FOR CONSISTENT GOLFER TRAFFIC. IN AREAS OF HEAVILY SHADE DUE TO TREE CANOPY THE USE OF ADDITIONAL BOARDWALKS WILL SERVE TO FOCUS TRAFFIC MOVEMENTS AROUND TREE ROOTS AND BARE SOILS.

GRASS PAVE2

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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PROJECT NO.	SHEET NO.	REV NO.
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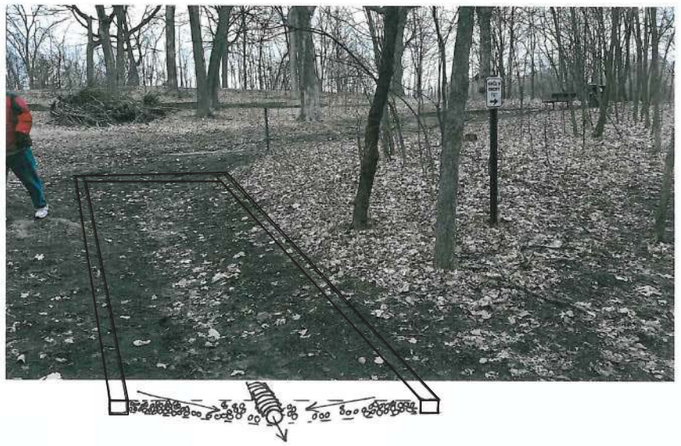
HOLE 11: MUDDY TEE BOX OPTIONS



FOR AREAS OF HEAVY FOOT TRAFFIC IN AND AROUND SHADY TEE BOXES THE PATHWAYS CAN BE BOXED IN USING PRESSURE TREATED TIMBERS AND THE BOXES FILLED WITH EITHER WOODCHIPS OR GRAVEL. THIS WILL SERVE TO REDUCE THE AMOUNT OF MUD AND KEEP THE SOIL MIGRATION DOWN.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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OXE–BOW: POLINATOR HABITAT + FOOD

THE RUSTY PATCHED BUMBLEBEE BECAME THE FIRST BEE SPECIES EVER LISTED UNDER THE ENDANGERED SPECIES ACT IN MARCH OF THIS YEAR; HOWEVER, POLLINATORS OF ALL KINDS (BEES, MOTHS, AND BUTTERFLIES) ARE CURRENTLY IN A DECLINING STATE ACROSS THE U.S. FOR THE ISLAND OFF THE EDGE OF THE COURSE BEHIND THE OXE–BOW A DEDICATED POLLINATOR HABITAT AND NECTAR SOURCE IS PLANNED. A COMBINATION OF SEEDING NATIVE GRASSES AND FORBS ARE PROPOSED, AS WELL AS, POTTED FORBS TO INCREASE THE DENSITY. IN ORDER TO ACHIEVE THE NECESSARY SUNLIGHT FOR THESE SPECIES THE CURRENT TREES WILL BE REMOVED.

IN ADDITION TO THE POLLINATOR SPECIFIC ISLAND, NATIVE SEED MIXES AND FLOWERING SHRUB SPECIES WILL BE USED TO STABILIZE THE BANKS OF THE CREEK. THE DENSITY OF FLOWERS WILL NOT BE AS INTENSE BUT THEY WILL SERVE AS A CONNECTIVE PATHWAY ALONG THE CREEK TO THE THE GREATER LANDSCAPE WITHIN PLYMOUTH. LIKE THE POLLINATOR ISLAND, TREES ALONG THE CORRIDOR WILL NEED TO BE REMOVED TO ALLOW NEEDED SUNLIGHT FOR THE NEW COVER TYPES. REMOVALS WILL BE LIMITED TO ONLY WHAT IS NECESSARY AS TO NOT CHANGE THE CHARACTER OF THE PARK AND THE DISC GOLF COURSE.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE
0	60% DESIGN	SJB	EAM	04/20/17

SEAL

NOT FOR CONSTRUCTION

PRIME CONSULTANT

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

PROJECT TITLE

PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

REFERENCE PICTURES

DWN BY	CHK'D	APP'D	DWG DATE	MAR 2017
SJB	LNJ	EAM	SCALE	AS SHOWN

PROJECT NO.	SHEET NO.	REV NO.
1756–10	C–605	0

M:\1756\10\CAD\Civ\C-601 Reference Pics.dwg

Item 6A.
BCWMC 6-15-17

Bassett Creek Watershed Management Commission

MEMO

Date: June 8, 2017
From: Laura Jester, Administrator
To: BCWMC Commissioners
RE: Administrator's Report

Aside from this month's agenda items, the Commission Engineers, city staff, committee members, and I continue to work on the following Commission projects and issues.

CIP Projects (more resources at http://www.bassettcreekwmo.org/projects.)

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P): (See Item 5A) The final feasibility study and project information are available online at http://www.bassettcreekwmo.org/index.php?cID=284. The BCWMC recently executed agreements with the BWSR for a $400,000 Clean Water Fund grant and with Hennepin County for a $50,000 Opportunity Grant A subgrant agreement with the City will be developed and executed. Project design is underway through a contract between the City and Wenck Associates. The City will soon apply for permits from the U.S. Army Corps of Engineers and the Department of Natural Resources. Sixty-percent designs were submitted to the Commission Engineer and will be presented at this meeting. 90% plans are slated to be presented at the July Commission meeting. A public open house on the project will be held on Monday June 26th, 4:00 – 6:00 p.m. at Plymouth City Hall. I plan to attend that meeting to hear the questions and concerns from residents in the area. The project is slated for construction next winter.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M): The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: http://www.bassettcreekwmo.org/index.php?cID=281. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. The County Board approved the 2017 maximum levy request at their meeting on July 28th. At the September meeting, the Commission held a public hearing on the project and adopted a resolution ordering the project and certifying a final levy to Hennepin County. Also at that meeting, the Commission entered an agreement with the City of Minneapolis to design and construct the project. The Commission was awarded an Environmental Response Fund grant from Hennepin County for $150,300 and a grant agreement is in the process of being signed by the county. A subgrant agreement with the City will be developed. The City recently entered a contract with Barr Engineering to design and construct the project.

2013 Four Season Area Water Quality Project/Agora Development (NL-2): At their meeting in December, the Commission took action to contribute up to $830,000 of Four Seasons CIP funds for stormwater management at the Agora development on the old Four Seasons Mall location. At their February meeting the Commission approved an agreement with Rock Hill Management and an agreement with the City of Plymouth allowing the developer access to a city-owned parcel to construct a wetland restoration project and to ensure ongoing maintenance of the CIP project components. The developer recently submitted plans for the wetland restoration portion of the project to the Commission Engineer for review. The plans were submitted to the Commission Engineer in late May. The Commission Engineer and the developer's consultant, Solution Blue, are working through some details. The plans with Commission Engineers comments and recommendations are slated for presentation at the July Commission meeting. At this time, the development parcel has not yet been sold to Rock Hill Management.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): Last August, the Commission Engineer reported that the structure had been vandalized and repair was needed. The City executed a change order with Sunram Construction (the contractor for the project) to add weights to some of the baffle anchors. The weights will provide more support against wind loading on the baffle. Ice formed on the pond before the contractor could perform the work last fall. The contractor performed more seeding in the two access areas, which improved vegetation coverage, but more coverage is required to achieve final stabilization. The contractor returned to the site in Mid-April to reinstall baffle anchors. The contractor also added weights to the baffle anchors to hold them in place in windy conditions. Staff will continue to monitor the baffle and anchors to ensure that they stay in place. The contractor has some final vegetation establishment to complete before the contract can be closed. Erosion control will be removed once the final stabilization is completed. The Commission Engineer recently began the effectiveness monitoring with equipment purchase; coordination with vendors on equipment options/system design; obtaining quotes and place equipment orders; and visiting the site and preparing the shelter for equipment and start up.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No update since January.) At their March 2015 meeting, the Commission approved the project specifications and directed the city to finalize specifications and solicit bids for the project. The contract was awarded to HAB Aquatic Solutions. The alum treatment spanned two days: May 18- 19, 2015 with 15,070 gallons being applied. Water temperatures and water pH stayed within the desired ranges for the treatment. Early transparency data from before and after the treatment indicates a change in Secchi depth from 1.2 meters before the treatment to 4.8 meters on May 20th. There were no complaints or comments from residents during or since the treatment. Water monitoring continues to determine if and when a second alum treatment is necessary. Lake monitoring this summer will help determine if a second dose of alum is needed to retain water quality.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR): (No update since May) The restoration project is being constructed in two phases, each under separate contract. Phase one included stream bank shaping, placement of field stone rock and 12-inch bio-logs, and repair of storm sewer outlets. The first phase of the project began in November 2015 and was finished in June 2016. Turf establishment and minor restoration repairs in Phase 1 were accepted in late October 2016. Repairs to some areas where flooding impacted rocks or biologs were completed and accepted in mid-December 2016. Phase 1 of the construction project has entered the warranty period.

Phase 2 of the project includes the establishment of native vegetation along the stream, including grasses, wildflowers, shrubs, live stakes and fascines, and cordgrass plugs. The second phase of the contract, Native Buffer Vegetation installation is underway. The project has been seeded and stabilized and maintenance mowing and spot treatments have been completed. Applied Ecological Services (AES) has installed live stakes and fascines this spring. Shrubs and trees will be planted later this month. The contractor also will touch up some areas that were damaged by high water and ice over the winter and will replace erosion control blanket where needed. AES will continue to monitor and maintain the native vegetation through 2018. It is anticipated that the total contract amount for both Phase one and Phase two will be within the Watershed's overall project budget.

2016 Northwood Lake Improvement Project, New Hope (NL-1): Northwood Lake Improvement Project is nearing completion with all major work complete. The storm water tank was fully operational as of yesterday and will be irrigating the fields for the summer. The educational sign is being designed and will be installed within the next two months. Grading and seed touch ups will occur over the next month. The 2nd rain garden will be planted with the fescue grass this month.

Grant reporting is up to date although I need to perform a grant audit with MPCA per the grant agreement. A grand opening of the park is scheduled for the evening of May 15th. Friends of Northwood Lake will disseminate water quality educational materials, including BCWMC materials. At a Friends of Northwood Lake annual meeting

in May, Hennepin County Commissioner Opat mentioned the project and indicated it was a good example of a partnership. The city held a grand opening of the park on May 15th; the Friends of Northwood Lake distributed BCWMC education materials. The educational signage for the project is currently being designed and will be installed this summer. I recently completed forms and provided materials for a MPCA financial audit for the Clean Water Partnership grant.

Photos and construction progress are available at: http://www.ci.new-hope.mn.us/departments/publicworks/2016infrastructure.shtml

2016 Honeywell Pond Expansion Project, Golden Valley (BC-4) (No update since May): In spring 2016, the Honeywell Pond Project was bid as part of the City of Golden Valley and Hennepin County's Douglas Drive (CSAH 102) Reconstruction Project. The reconstruction project began in June 2016. Excavation of the pond basin is complete and the disturbed soils around the pond were temporarily stabilized. The contractor will finish installation of the storm sewer and install the pumps for the water reuse system next month. Final grading and stabilization will also be completed within the next month.

2018 Bassett Creek Park Pond & Winnetka Pond Dredging, Crystal (BCP-2): The final feasibility study for this project was approve at the May 2017 meeting and is now available on the project page online at http://www.bassettcreekwmo.org/index.php?cID=403. The Commission also approved a maximum levy amount for this project at its May 2017 meeting. I will attend a Hennepin County Commission committee meeting regarding the maximum levy (along with the Commission Engineer and Crystal staff) on June 20th. At its September 2017 meeting, the Commission will hold a public hearing on the project and consider a resolution to order the project and enter an agreement for design and construction with the City of Crystal.

Other Work

Administrative and Financial:

- Submitted proposed 2018 operating budget to cities for comment by August 1st
- Prepared maximum levy document for Hennepin County and coordinated with County staff to describe 2018 projects and funding needs
- Finalized and posted 2016 annual report; submitted to the State
- Updated website with Flood Control Project policies (adopted Sept 2016) and background materials: http://www.bassettcreekwmo.org/projects
- Posted final XP-SWMM Report and presentation: http://www.bassettcreekwmo.org/projects

Volunteers and Education:

- Prepared and distributed letter of understanding to cities reporting on 2016 BCWMC education activities for their MS4 permit reports
- Coordinated volunteers for June 3rd events
- Delivered education materials for Westwood Nature Center event
- Secured venue for Parking Lot and Sidewalk Winter Maintenance Training Course, Oct 13th, Crystal Community Center
- Coordinated with Dawn Pape regarding newly approved educational activities

Other Activities:

- Attended meeting with Blue Line LRT Project Office staff, Commission Engineer, and city representatives. The Commission will likely hear a presentation on the Blue Line LRT project at their July meeting.
- Prepared for and attended APM/AIS Committee meeting
- Met with Winnetka Apartment managers, Commission Engineer, and city staff to discuss pond dredging project, native buffer and goose management