MINNEHAHA CREEK
WATERSHED DISTRICT
QUALITY OF WATER, QUALITY OF LIFE

Meeting: Board Meeting
Meeting date: 4/10/2020
Agenda Item #: 10.1
Item type: Permit Requiring Board Approval

Title:	Permit 20-088: Wassermann West Park, Victoria- Phase II
Prepared by:	Name: Grace Barlow Phone: 952-641-4518 gbarlow@minnehahacreek.org

Purpose:
Recommendation: Approval of MCWD permit application.

Background:
The Minnehaha Creek Watershed District (Applicant) has submitted a permit application for Phase II of the Wassermann Park master plan. The MCWD, in partnership with the City of Victoria, is proposing a nature-based park and natural resource restoration referred to as Wassermann Lake Park. The Wassermann Lake Park Project is a nature-based park situated on Wassermann Lake, an impaired waterbody. The 30.5 acre site encompasses a six acre pond, a1st order, non-public water, stream, 16.5 acres of wetland, eight acres of upland, and 1,500 feet of undisturbed shoreline. The project's goals are to public recreation and enjoyment through active and passive engagement with the lake and wetland and to improve water quality and habitat.

The project is a Minnehaha Creek Watershed District (MCWD or District) Capital Improvement Project. The Applicant's stated goals are to improve the onsite natural resources and downstream Lake Wassermann water quality while improving public access to the resource and amenities. Restoration activities will consist of a 370 linear feet of stream channel restoration, 1.56 acres of prairie restoration, 1.62 acres of oak-savannah restoration, and 2.94 acres of wetland vegetation restoration.

Construction on the site is split into two phases- Phase I included the construction of boardwalks on the site, which was approved by the Board in December of 2019 under Permit 19-661. Permit 19-661 also included approval of an Exception from d wetland buffer requirements, largely supported by beyond-compliance stormwater management to be provided by the project overall (as detailed in this report shown in Attachment 2). Phase II construction consists of a 1st order stream restoration, vegetation restoration and establishment of wetland buffers, and the construction of recreation amenities including walking trails, a nature-play area, the entry road and parking lot, a fishing pier, and picnic shelters.

Phase II work is subject to the District's Erosion Control, Wetland Protection, Shoreline and Streambank Stabilization, Waterbody Crossings and Structures, and Stormwater Management rules. Normally, this permit would also require an Exception to the Wetland Protection rule for reduced buffers, however the buffer reduction that will be applicable for this phase of work was approved under Permit 19-661. All necessary materials were submitted to complete the applications on March 25th, 2020 and a public notification for the board meeting was sent to residents within 600 feet of the project on March 25th, 2020. Additionally, the Applicant is seeking a Wetland Conservation Act (WCA) No-Loss determination for the proposed wetland vegetation restoration work.

There is no proposed work within a public water other than the installation of the fishing pier. The Applicant has applied separately for a DNR permit for the work. This application is pending approval.

The application is before the board of managers and in keeping with MCWD policy directing board review and determination of permits for MCWD projects.

District Rule Analysis:

Erosion Control Rule

The District's Erosion Control Rule is applied to projects proposing at least 5,000 square feet of land disturbance or 50 cubic yards of fill, grading, digging, or stockpiling. The Applicant is proposing 4.19 acres of land disturbance, therefore, the project subject to the Erosion Control rule. In accordance with the rule provisions, the Applicant has submitted an erosion control plan which identifies best management practices for the control of sedimentation and erosion. Proposed best management practices include silt fences, biologs, and erosion control blankets. A contractor responsible for the erosion control plan has been submitted to the District and supplemental information including the location of concrete washout and final stabilization practices have identified. Based on the submitted erosion control plan, the project meets the Erosion Control Rule.

Wetland Conservation Act (WCA)

There have been two Notice of Decisions issued determining the boundary and type of wetlands within the project area, W17-47 & W18-39. There are a total of four delineated wetlands within the property owned by the Applicant. Wetland 1 is the DNR public waters with wetland fringe above ordinary high water level (OHWL). The OHWL for Wassermann Lake is 944.3'. Wetland area above the OHWL is protected under WCA. Wetlands 2, 3, and 4 are protected by the WCA.

The WCA regulates draining, filling, and excavation in wetlands. The project does not propose to drain, fill, or excavate in any of the wetlands onsite. The project is proposing to remove and restore 2.91 acres of vegetation in Wetland 1 above the OHWL. Additionally, the project is proposing 0.03 acres (1,216 square feet) of temporary disturbance to Wetland 4 to access the stream channel for restoration.

Under MN WCA Rule 8420.0415 No-Loss Criteria, A- an activity that will not impact a wetland, and a temporary impact that is rectified by repairing, rehabilitating, or restoring the affected wetland qualify for no permanet loss, or impact, to wetlands.

The Notice of Application for the No-Loss application for the proposed vegetation restoration in Wetland 1 and the temporary wetland disturbance and vegetation restoration in Wetlands 3& was provided to the Technical Evaluation Panel (TEP) on April 1st, 2020 (Attachment 3). The Board of Soil and Water Resources (BWSR) provided comment on April 3rd, 2020, supporting the No-Loss determination. No other comments were received by the Technical Evaluation Panel (TEP).

Staff have reviewed the WCA No-Loss application and have determined that the proposed 2.91 acres of wetland vegetation restoration proposed for Wetland 1 meet No-Loss criteria under MN WCA Rule 8420.0415 A- an activity that will not impact a wetland. Furthermore, staff have determined that the proposed 66 sf of temporary disturbances to Wetland 3 and the proposed 1,216 sf of temporary wetland disturbance to Wetland 4 to access the stream channel meet No-Loss criteria H- a temporary impact that is rectified by repairing, rehabilitating, or restoring the affected wetland.

Staff recommends approval of the No-Loss determination.

Wetland Protection

The Wetland Protection Rule is applied to any project that proposes excavation, filling, or drainage of wetlands that are protected under the Wetland Conservation Act (WCA). The Wetland Protection Rule contains a buffer provision which requires the establishment of vegetative buffers around the entirety of wetlands that are subject to wetland disturbance by project actives, and on the downgradient from other site disturbances.

There are four delineated wetlands within the Wassermann Park area, as seen in Attachment 4. Wetland 1 is a DNR public water wetland for area below the OHWL (944.3'), wetland area above the OHWL is protected under WCA, and wetlands 2, 3, and 4 are protected under WCA. In Permit Report 19-661, only three wetlands were referenced- Wetland 3 and Wetland 4 were referred to as 'Wetland 3.' This permit report makes the distinction between Wetland 3 and Wetland 4 as the provided attachment labels them as such.

The District's Wetland Protection Rule applies to Phase II construction based on the following work. First, on-site stream restoration work will result in 66 square feet of temporary impact to Wetland 3 and 1,216 square feet of temporary impact to Wetland 4. This is a result of the site's layout and having no alternative access to the stream. Second, the buffers for all four wetlands will be established during Phase II work.

Per section 5(a) of the Wetland Protection rule, buffers must be provided around all disturbed wetlands and on wetland edges downgradient of disturbance. Wetland buffers will be established around wetlands 1, 2, 3, and 4. The addition of buffers around Wetlands 3 and 4 represents the only change in buffer requirements between the requirements permitted in Phase I. The buffer plan has been updated to show conformance with applying a buffer around the entirety of the wetland. Additional buffer width analysis width has been provided under section 6(c).

Section 5(b) of the rule outlines that buffer width will be determined in accordance with section 6. This analysis is provided below.

Per section 5(c), buffers must be documented by a declaration or other recordable instrument. Sale of the park property to the City of Victoria will be finalized at the beginning of April 2020. The applicant, MCWD, will retain an easement over the wetland buffer areas in perpetuity. The Applicant has provided documentation of the easement to demonstrate compliance with maintenance requirements of the rule (Attachment 5). There are areas of wetland buffer that are proposed outside of the MCWD easement, maintenance requirements for wetland buffers outside of the easement will be met through the existing executed programmatic maintenance agreement between the City of Victoria and the District,

Section 5(d) of the rule requires a permanent wetland buffer monument to be installed at each lot line where it intersects the buffer and where needed to indicate changes in contour. Monuments shall be installed at a maximum spacing of 100 feet. Buffer monumentation is shown on Attachment 4. Staff has reviewed the buffer exhibit and determined that the buffer monumentation plan is in accordance with the rule provision, meeting the requirements.

Per section 6(a) of the rule, buffer width requirements are determined by the management class of a wetland, as provided by the District's Functional Assessment of Wetlands (FAW). Table 1 below shows the management classifications and associated buffer widths of each wetland.

Wetland #	Management Class	Base Buffer Width	Required Minimum Buffer Width	Required Buffer Area	Provided Buffer Area	Linear Feet Not Meeting Buffer Width Requirement
1	Preserve	75'	37.5'	4.00 ac / 174,385 SF	3.55 ac / 154,795 SF	1,090'
2	Manage 2	30'	15'	9,252 SF	9,603 SF	15'
3	Manage 2	30'	15'	27,420 SF	27,940 Sf	0'
4	Manage 2	30'	15'	10,700 sF	11,070 SF	0'

Table 1: Buffer Area Summary

The non-compliant buffer widths for Wetland 1 and Wetland 2 were the subject of the Exception approved under Permit 19-661.

As shown in Table 1, the buffer widths for Wetlands 3 and 4 meet the required minimum widths and required base widths making the proposed buffers in compliance with the provisions of the rule.

Staff have determined that between the previously approved Exception and the adherence of Wetland 3 and 4 to the required widths and areas, this portion of the rule is being met.

Section 6(b) specifies two ways in which base buffer widths can be reduced via decrease in average buffer slopes or predominant buffer soil conditions. This section is not applicable as the reduction in buffer widths for Wetland 1 and 2

were previously approved under permit 19-661 and there are no proposed reductions in buffer widths for Wetlands 3 or 4.

Section 6(c) states that buffer with may vary based on site constraints provided that a width of at least 50% of the Applied Buffer Width is maintained at all points, there is no reduction in total buffer area, and any area of the buffer exceeding 200 percent of the Applied Buffer Width will not be counted toward the buffer area calculation. As seen in Section 6(a) of this rule, the deviation in Buffer Widths for Wetlands 1 and 2 has been previously approved with an Exception in permit 19-661, while Wetlands 3 and 4 propose no reduction in area. Based on this, Staff have determined that this portion of the rule is being met.

Section 6(d) is not applicable as the Applicant is not requesting a reduction in base buffer width.

Section 6(e) is not applicable as this is not a Linear Reconstruction Project.

Section 6(f) is not applicable as this project is not a New Principal Residential Structure.

Section 7(a) of the rule prohibits actions such as mowing, fertilizing or placement of yard waste within the buffer area. A maintenance plan that includes these provisions has been submitted. Staff review of the maintenance plan determined that the language of the maintenance plan specifies that the listed actions of mowing, fertilizing, and placement of yard waste are prohibited within the buffers and the provision of the rule has been met.

Section 7(b) of the rule allows public land, homeowners associates, and right of way to comply with buffer documentation, buffer monitoring, and vegetation management though a written maintenance agreement with the District that provides for compliance with the MCWD monumentation, monitoring and vegetative-management requirements. Protocols for buffer maintenance have been submitted with this permit application. Staff review of the maintenance plan, buffer monumentation, easement, and programmatic agreement with the City of Victoria determined that all applicable criteria are addressed and the criteria of the rule has been met.

Section 7(c) Buffer areas, or portions thereof, that are not vegetated or will be disturbed by grading or other site activities during construction shall be replanted and maintained according to the following standards. Portions of the area surrounding Wetlands 1, 2, 3, and 4 that will be established as buffer areas will be impacted by work associated with the stream restoration and site grading. The planting plans and site plans have been updated to include soil decompaction to 18" in order to address any negative impacts associated with the disturbance. Staff review of this language determined that providing soil decompaction in these areas prior to establishment of the buffers meets this portion of the rule.

In summary, based on Staff review this project meets the requirements of the Wetland Protection Rule.

<u>Streambank Stabilization</u>

The streambank stabilization rule outlines that no person shall install an improvement of alteration of the bank of a watercourse without first securing a District permit. Phase II of this project, as outlined in the summary, proposes to restore 370 linear feet of stream channel on the site, thus triggering the Streambank Stabilization rule.

Currently, the on-site stream is under MCWD jurisdiction as it is a non-public water. The stream is characterized as an intermittent 1st order stream. As it exists on the property, the channel is somewhat defined but lacks bank stabilization or vegetation resulting in the flow of sediment through the channel.

This restoration will occur through regrading a 15 foot area on each side of the stream, re-vegetation of these banks, and incorporating check dams to slow the velocity of the flow in order to preserve the banks and create a pool system for habitat through the channel.

Per section 4(a)1, streambank stabilization applications shall be required to complete and report the calculations detailed thorough Manning's equation and shear stress equations to document bank-ful stream velocity and shear

stress. Based on these equations, the shear stress within this stream is 1.2 pounds per square foot (lbs/sf) and the max velocity is 5.14 feet per second (fps).

Per Section 4(a)2, the proposed streambank stabilization practice shall be consistent with the shear stress calculated. A shear stress of 1.2 lbs/sf indicates low erosion intensity, dictates that biological stabilization practices in accordance with section 6 of the rule must be used.

Staff and District Engineer reviewed the provided shear stress and bank-ful stream velocity calculations and determined that this section of the rule is being met as the proposed stabilization techniques are dependent on vegetation. Use of vegetation as the main stabilization technique meets the criteria of biological stabilization practices as discussed in section 6 below.

Per section 6(a)1, The District shall only permit the installation of structural stabilization practices where there is a demonstrated need to prevent erosion or to restore eroded streambank. The applicant has demonstrated that the onsite stream has experienced down cutting and bank destabilization resulting in the potential for increase sediment transport to Wassermann Lake. Based on staff review, the proposed work to stabilize the stream bank meets the criteria of this rule.

Per section 6(a)2, the removal of native vegetation within the streambank stabilization zone shall be limited in accordance with the listed provisions- clear cutting shall be prohibited except within the access corridor and native vegetation shall be preserved outside of the access corridor. The access corridor is defined and demarcated on site plans and located so that disturbance is minimized. There is no clear cutting proposed for this restoration project and the banks will be re-planted with stabilizing vegetation. Staff has determined that the criteria of this portion of the rule is being met.

Per Section 6(a) 3, stabilization practices shall be installed at a 3:1 slope or flatter where practical and feasible. The Applicant has submitted plans and a cross-section detail that demonstrates that the slopes of the stream channel will be 3:1. Staff and the District engineer have reviewed the cross-section detail and have confirmed that a slope of 3:1 will be maintained throughout the stream corridor. The slope criteria of this portion of the rule are being met.

Per Section 6(a)4, horizontal encroachment from a streambank shall be minimized to the greatest extent practical to limit hydraulic impacts. Staff and the District engineer have determined that no horizontal encroachment is associated with this stream restoration project and that this section of the rule is met.

Per Section 6(a)5, streambank stabilization shall not reduce the cross sectional area of the channel nor result in a net increase in the flood stage upstream or at the site of the stabilization practice unless it can be demonstrated to not exacerbate existing high water conditions. The project proposes to install a series of ditch checks with the stream channel and has submitted modeling to demonstrate that there will be no increase in the 953.54 high water level upstream. -Staff and the District Engineer have reviewed the submitted HydroCAD models confirming that there will be no increase or decrease in flood stages, nor will the 953.54 High Water Level reach the residential parcels to the southeast of the stream, as the low openings fall at the 960 elevation. This section of the rule is met.

Per Section 6(a)6, streambank stabilization practices shall conform to the natural alignment of the bank. The restoration project does not propose to change the alignment of the stream in anyway, only improve the surrounding streambank, therefore the criteria of this section of the rule is met.

Per Section 6(a)7, streambank design shall conform to engineering principles for the hydraulic behavior of open channel flow. The Applicant has submitted calculations that demonstrate the sheer stress and maximum velocity of the stream (discussed above in section 4(a)) that indicate that that a biological bank stabilization is required for the stream. Staff and the District Engineer have reviewed the plans and calculations and have determined that the biological bank stabilization and 3:1 sloping of the bank is in conformance with engineering principals for the hydraulic behavior of the stream channel. This criteria of the rule is met.

Section 6(a)8 is not applicable as there is no proposed removal of aquatic vegetation within a public watercourse or waterbasin. This section of the rule is met.

Per Section 6(a)9, any work below the ordinary high water level shall be encircled by a floating silt curtain. No work below the ordinary high water level is proposed within this project.

Per Section 6(b) live plantings incorporated into the shoreline or bank shall be native aquatic and or native upland vegetation. The Applicant provided a planting plan requiring the use of native plantings for the bank stabilization plan. Staff have reviewed the planting plan and determined that bank will be vegetated with a native savanna and woodland edge mix appropriate for the site. This section of the rule is met.

Section 6(c) outlines criteria for structural stabilization and bioengineered stabilization. No structural stabilization or bioengineered stabilization is proposed with the project, therefore the criteria of section 6(c) is not applicable.

In Summary, based on Staff and District Engineer review, the proposed stream restoration meets the criteria of the Streambank Stabilization Rule.

Waterbody Crossings and Structures

The Waterbody Crossings and Structures Rule is applied whenever construction of a boardwalk, bridge, or structure is proposed to come into contact with the bed or bank of a waterbody. Phase II proposes to install a 30" culvert within the 1st order stream channel to allow for the construction of a trail in the south-eastern corner of the property. Because the culvert will come into contact with the bed and bank of the stream channel the rule is triggered.

Per Section 3(a) of the rule, the use of the bed or bank shall meet a demonstrated public benefit for projects involving crossings or structures in public waters, and meet a demonstrated need for all other projects The Applicant has provided a narrative stating that the proposed trail crossing will serve the purpose of connecting the park to an existing trail network and establish an interconnected network of parks, trails, and open space. Connecting the proposed trail to the existing trail will also provide alternative, non-motorized access to the park and provide safer access for those looking to access the park by bike or by foot. Staff have reviewed the narrative and plans (Attachment 6) and concur with the Applicant's findings that the proposed trail will meet a demonstrated need. Therefore the Applicant has met this portion of the rule.

Section 3(b) of the rule states that any use of the bed or bank shall allow for hydraulic capacity to be retained. Specifically, for watercourses, changes in hydraulic capacity may not result in upstream or downstream increases in the floodstage The Applicant has submitted calculations (Attachment 7) demonstrating that the proposed 30" culvert provides the appropriate sizing to accommodate 100-year flows under the trail crossing. Staff and the District Engineer have reviewed the calculations and have determined that there will be no measureable effect on floodstage and that adequate capacity will be retained in the stream, meeting the criteria of this portion of the rule.

Per Section 3(c) of the rule, the use of the bed or bank shall retain adequate navigational capacity pursuant to any requirements of the waterbody's classification by the District. Based on Staff and District Engineer's analysis of the stream, navigation has been determined to not be feasible and analysis of the rule provision is not relevant to project.

Per section 3(d) of the rule, aquatic and wildlife passage must be preserved. Staff and the District engineer have determined that the 30" culvert size will not isolate the stream upstage or downstage of the culvert and will allow aquatic passage. In addition, upland wildlife passage is still available.

Per Section 3(e) of the rule, use of the bed or bank shall not adversely affect water quality. The creation of the trail crossing will occur under proper District erosion control protocols and is sized for optimal hydraulic capacity. In addition, the creation of the culvert and trail will occur in conjunction with a stream restoration project. The stream restoration project is analyzed specifically under the streambank stabilization rule, however the project will have an overall positive effect on water quality. Staff have determined that this portion of the rule has been met.

Per Section 3 (f), the use of the bed or bank shall represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives, including, but not limited to vegetation or bioengineering for bank stabilization, structural bank stabilization, acquisition of additional easements, or installation of upstream controls to manage stream flow. The Applicant has submitted two alternatives that were considered to demonstrate that the proposed culvert represents the minimal impact solution. Alternative one consisted of a no-build scenario, which would not meet the state project goals of connecting trails and providing pedestrian access. Alternative two consisted of a culvert with a smaller diameter to minimize surrounding disturbance, however the smaller diameter was determined to have an impact on hydraulic capacity. Staff have reviewed the two cited alternatives and concur that the construction of the 30" culvert underneath the proposed trail represents the minimal impact solution.

Section 3 (g) is not applicable as no bored utility lines are proposed within the scope of this project.

Section 3(h) is not applicable as no modification of sanitary sewer lines is proposed within the scope of this project.

Per section 6 of the rule, maintenance requirements for the culvert will be met through the existing executed programmatic maintenance agreement between the City of Victoria and the District.
In summary, based on the analysis of Staff and the District Engineer provided above, the Applicant has met all the applicable criteria of the Waterbody Crossings and Structures Rule.

Stormwater Management

The Stormwater Management Rule is applied to any new development or redevelopment project that proposes to create new or replace impervious surface. The project proposes to increase impervious surface by 1.06 acres on the 30.5 acre site, therefore the rule is applicable.

For Phase II, the project proposes to increase the amount of impervious surface by 1.06 acre on the site through the creation of paved trails, picnic areas, and an entry drive. The impervious surface created by the boardwalks approved under Phase I were exempted from the Districts Stormwater Management rule per the linear trail exemption under section 2(d)2. This increase in impervious surface is broken down into both linear and non-linear components. The proposed new impervious surface includes 0.15 acres of new entry drive and 0.38 acres of paved trail, both reviewed as linear, and 0.53 acres of picnic shelters and the parking lot, reviewed as non-linear impervious. There is currently 0.17 acres of existing linear impervious surface on the site.

This project is considered to be both a redevelopment project and a linear project per sections 2 and 5 of the Stormwater Management Rule.

Per section 2(d) of the stormwater management rule, Linear Transportation projects that will create less than 10,000 square feet (sf) of new impervious surface or will result in the construction of trails not exceeding 12 feet in width and will be bordered on the downgradient sides by a pervious buffer that averages at least one-half the width of the sidewalk or trail are exempt from the stormwater management rule. The proposed new linear entry drive is less than 10,000 sf at 0.15 acres and the proposed trails will not exceed 8' in width and will include pervious buffer in excess of 4' on the downgradient side. This component of Phase II has been determined to be exempt from stormwater management.

For the remaining 0.53 acres of proposed impervious surface, Section 5 of the Stormwater Management Rule is applicable to determine the treatment scope. Per Section 5(b), sites greater than one acre with less than 40% site disturbance and a greater than a 50% increase in impervious surface are require to provide rate, volume, and phosphorous control for the site's impervious surface. Rate, volume, and phosphorous control for the site will be provided through the creation of a biofiltration basin on site. Table 2 below summarizes the site acreage and disturbance thresholds used to determine the treatment scope.

Size of Site (ac)	Site Drains To	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Proposed Net Increase in Impervious Area (ac)
30.5 acre (4.19 acres disturbed)	Wassermann Lake	0.17 ac linear	0.53 ac 0.53 ac linear	1.06 ac

Table 2: Site Disturbance Summary

The specific requirements for rate, volume, and phosphorous required by Section 5 are further outlined in Section 3 and Section 8 of the Stormwater Management Rule.

Per section 3(a)2, Redevelopment projects must provide phosphorous control in accordance with subsection 3(c)2, where applicable. Phosphorous control for this project is analyzed under that subsection.

Per section 3(b)1, rate control shall be provided so that no net increase in the peak runoff rate for the 1-year, 10-year, and 100-year design storms where stormwater discharges across the downgradient site boundary. The area of the site in which the new impervious is proposed drains to Lake Wassermann. Table 3 below summarizes the existing and proposed rates leaving the site. Staff and the District Engineer have reviewed the plans and stormwater management report provided by the applicant and have determined that rates discharging from the site will not increase from existing to proposed conditions for the 1-year, 10-year, and 100-year storm event.

Downstream Drainage to Wassermann Lake	1-year Storm (cfs)		10-year Storm (cfs)		100-year Storm (cfs)	
	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Total	**9.1**	**7.5**	**23.7**	**23.5**	**51.4**	**45.5**

Table 3: Existing and Proposed Rates Leaving the Site

Per Section 3(b)2, peak runoff rates for the 1-year, 10-year, and 100-year design storms may not increase within a specific drainage area of the site so as to create or exacerbate drainage or erosion problems. As shown in Table 3, rates discharging to Wassermann Lake from the project property decrease from existing conditions, meeting the MCWD rate-control requirements. While reviewing for rate increases, Staff and the District Engineer determined that erosion problems will not be exacerbated on the site and that this portion of the rule is met.

Per Section 3(c)1, stormwater management on the site must provide for the abstraction of the first one inch of rainfall from the site's impervious surface. Credit toward compliance with the one inch volume control standard will be calculated using Appendix A: Volume Abstraction. The Applicant has submitted a geotechnical report that demonstrates that the onsite soils are not suitable for infiltration based on their hydrologic class, therefore a biofiltration basin is proposed to filter the 0.53 acres of impervious surface. The proposed biofiltration basin will provide two inches of filtration for 0.53 acres of impervious area. This is in accordance with Appendix A which provides a 50% credit for filtration practices. The project is proposing 0.53 acres of impervious surface, which requires 3,846.67 cubic feet of volume control. The Applicant has submitted a plan that demonstrates that the project will treat 0.74 acres of impervious surface and provide 5,378 cubic feet of volume control. Staff and the District Engineer have reviewed the plans and modeling and have determined that the proposed plan meets and exceeds the District's volume control requirement.

Per Section 3(c)2, phosphorous control must be provided in an amount equivalent to that which would be achieved through abstraction of one inch of rainfall from the site's impervious surfaces. Because the volume control requirements are being met, Staff and the District Engineer have determined that phosphorous control is also being met.

Section 3(e) states that at least two vertical feet of separation between low openings of structures and the 100-year high water elevations must be provided. This section of the rule is not applicable as there are no structures with low openings in the vicinity of the biofiltration basin.

Per section 8(a), no new point source may discharge to a waterbody in a way that impacts the bounce, inundation, and runout control elevations of waterbodies. The project does not propose a new point source or a change in the runout control elevation of any waterbody. Downstream impacts to the wetlands and Wassermann Lake were reviewed by District Staff and District Engineer and determined to be within the parameters of allowable bounce in downstream water level and inundation of downstream water bodies outlined within Table 1 of the Stormwater Management Rule, as seen below.

Wetland Management Class/Waterbody	**Permitted Bounce for 1-, 10-, and 100- Year Event**	**Inundation Period for 1-Year Event**	**Inundation Period for 10- and 100- Year Event**
Preserve	Existing	Existing	Existing
Manage 2	Existing Plus 1.0 Feet	Existing Plus 2 Days	Existing Plus 14 Days
Lakes	Existing	N/A	N/A

Table One from MCWD's Stormwater Management Rule

The project as proposed is in conformance with the downstream waterbody requirements of the rule.

The maintenance requirements for the biofiltration basin will be met through the existing executed programmatic maintenance agreement between the City of Victoria and the District
In summary, based on the analysis of Staff and the District Engineer provided above, the Applicant has met all the applicable criteria of the Stormwater Management Rule.

Summary:
The Minnehaha Creek Watershed District has applied for a MCWD permit for Erosion Control, Wetland Protection, Shoreline and Streambank Stabilization, Waterbody Crossings and Structures, and Stormwater Management for Phase II of the Lake Wassermann Park. The proposed Phase II construction of an entrance drive, parking lot, nature play area, picnic shelters, paved trails, stream restoration, and wetland restoration meets the applicable requirements, upon satisfaction of the recommended conditions, Staff recommend approval of the permit. Furthermore, Staff recommend approval of the WCA No-Loss application.

Supporting documents (list attachments):
1. Permit Application
2. W20-05 WCA NOA & Site Plan
3. Buffer and Wetland Exhibit
4. MCWD Easement
5. Stormwater Narrative
6. Culvert Sizing Calculations

Print Form

WATER RESOURCE PERMIT APPLICATION FORM

Use this form to notify/apply to the Minnehaha Creek Watershed District (MCWD) of a proposed project or work which may fall within their jurisdiction. Fill out this form completely and submit with your site plan, maps, etc. to the MCWD at:
15320 Minnetonka Blvd. Minnetonka, MN 55345.
Keep a copy for your records.

YOU MUST OBTAIN ALL REQUIRED AUTHORIZATIONS BEFORE BEGINNING WORK.

1. Name of each property owner: Minnehaha Creek Watershed District
Mailing Address: 15320 Minnetonka Blvd City: Minnetonka State: MN Zip: 55417
Email Address: abrown@minnehahacreek.org Phone: 952-641-4522 Fax:

2. Property Owner Representative Information (not required) (licensed contractor, architect, engineer, etc…)
Business Name: Representative Name:
Business Address: City: State: Zip:
Email Address: Phone: Fax:

3. Project Address: CR 43, Address unassigned City: Victoria
State: MN Zip: 55417 Qtr Section(s): Section(s): 23 Township(s): 116 Range(s): 24
Lot: Block: Subdivision: PID: 650230700 and 650230600

4. Size of project parcel (square feet or acres): 30.5 Acres
Area of disturbance (square feet): Volume of excavation/fill (cubic yards): N/A
Area of existing impervious surface: .17 acres Area of proposed impervious surface: .85 ac (trails not included)
Length of shoreline affected (feet): N/A Waterbody (& bay if applicable): Lake Wassermann

5. Type of permit being applied for (Check all that apply):

- ☑ EROSION CONTROL
- ☐ FLOODPLAIN ALTERATION
- ☑ WETLAND PROTECTION
- ☐ DREDGING
- ☑ SHORELINE/STREAMBANK STABILIZATION
- ☑ WATERBODY CROSSINGS/STRUCTURES
- ☑ STORMWATER MANAGEMENT
- ☐ APPROPRIATIONS
- ☐ ILLICIT DISCHARGE

6. Project purpose (Check all that apply):

- ☐ SINGLE FAMILY HOME
- ☐ ROAD CONSTRUCTION
- ☐ UTILITIES
- ☐ DREDGING
- ☐ SHORELINE/STREAMBANK STABILIZATION
- ☐ MULTI FAMILY RESIDENTIAL (apartments)
- ☐ COMMERCIAL or INSTITUTIONAL
- ☐ SUBDIVISIONS (include number of lots)
- ☐ LANDSCAPING (pools, berms, etc.)
- ☑ OTHER (DESCRIBE): Park/recreation

7. NPDES/SDS General Stormwater Permit Number (if applicable): N/A

8. Waterbody receiving runoff from site: Wassermann Lake

9. Project Timeline: Start Date: 5/1/2020 (Est.) Completion Date: 11/1/2020

Permits have been applied for: City ☐ County ☐ MN Pollution Control Agency ☐ DNR ☐ COE ☐
Permits have been received: City ☐ County ☐ MN Pollution Control Agency ☐ DNR ☐ COE ☐

By signing below, I hereby request a permit to authorize the activities described herein. I certify that I am familiar with MCWD Rules and that the proposed activity will be conducted in compliance with these Rules. I am familiar with the information contained in this application and, to the best of my knowledge and belief, all information is true, complete and accurate. I understand that proceeding with work before all required authorizations are obtained may be subject to federal, state and/or local administrative, civil and/or criminal penalties.

Signature of Each Property Owner — 3/25/2020 — Date: 2/28/2020

MINNEHAHA CREEK WATERSHED DISTRICT

QUALITY OF WATER QUALITY OF LIFE

PERMIT REPORT

To: Board of Managers

From: Heidi Quinn, Permitting Technician

Date: December 19th, 2019

Re: Permit 19-661: Wassermann Park, Victoria- Phase I Boardwalks & Exception Request for Phases I & II

Recommendation:
Approval of the MCWD permit application with the following conditions:

1. Submission of a binding, enforceable instrument providing preservation and maintenance of buffer areas in accordance with subsections 5(c), 7(a) - (b) of the Wetland Protection Rule after approval of a draft by Staff.
2. Submission of a wetland buffer monumentation plan in accordance with section 5(d) of the Wetland Protection Rule for approval by Staff.

Background:
The Minnehaha Creek Watershed District (Applicant) has submitted a permit application for the Phase I construction of two boardwalks over a Department of Natural Resources (DNR) public water wetland located west of Wasserman Lake at an unassigned address in the City of Victoria. The two proposed boardwalks are Phase I of the master plan for Wassermann Park.

The Wasserman Park masterplan consists of two phases. Phase I consists of the construction of two boardwalks, and Phase II is proposed to include a nature-based park, entry road, parking lot, shelter, walking trails, a stream channel restoration, vegetation restoration across three ecosystems, and a fishing pier. The project is a Minnehaha Creek Watershed District (MCWD or District) Capital Improvement Project and the Applicant's stated goal of the project is to provide a public amenity along with improvements to the natural resources onsite and to improve the water quality to the downstream Wassermann Lake. The application was received on December 2nd, 2019 and was completed on December 13th, 2019. A public notice was sent to property owners within 600 feet of the project on December 5th, 2019.

The Applicant has requested an Exception to the Wetland Buffer Provision of the District's Wetland Protection Rule, which is applicable to both Phases of the Wassermann Park master plan. While Phase II has not competed 100% designs, the Applicant has submitted sufficient information for the Board of Managers to consider the Exception to the Wetland Protection Rule for the entirety of the Wasserman Park Masterplan (both Phase I & II).

Phase I of the project triggers the District's Waterbody Crossings & Structures, Floodplain Alteration, and Wetland Protection Rules. The proposed construction of the two boardwalks is exempt from the District's Erosion Control Rule as the Phase I project will result in approximately 360 square feet of land disturbance and approximately 2.8 cubic yards of fill, which is below the 5,000 square foot of land

disturbance and 50 cubic yards of excavation or fill threshold to trigger the rule. Additionally, both of the boardwalks are approximately 7 feet wide, located over a wetland, and therefore are exempt from the District's Stormwater Management Rule per section 2(d). The exemption is applicable for trails not exceeding 12 feet in width and are bordered by a permeable buffer at least ½ the width on the downgradient. The Phase I and II work together triggers the MCWD Wetland Protection Rule buffer requirements, mandating buffer around three onsite wetlands. As noted above, the Applicant has also requested an exception (attachment 2) from the minimum wetland buffer width requirement around two of the three wetlands that are within the property boundary.

The Applicant has received a DNR individual permit #2019-3488 stating that no DNR permit is needed for the proposed work (attachment 3), therefore, the Applicant is seeking authorization under DNR General Permit 2001-6009, which authorizes work in public waters subject to MCWD Rules.

The application is before the board of managers because of the exception request, and in keeping with MCWD policy directing board review and determination of permits for MCWD projects.

(The rule-by-rule analysis that follows pertains exclusively to Phase I unless explicitly stated otherwise.)

District Rule Analysis:

Waterbody Crossings and Structures

The Waterbody Crossings and Structures Rule is applied whenever construction of a boardwalk, bridge, or structure is proposed to come into contact with the bed or bank of a waterbody. Per the District's definitions, a wetland is also considered a waterbody. The project proposes to construct two boardwalks over a DNR public water wetland adjacent to Wassermann Lake. No work or impacts are proposed within or to Wassermann Lake. The proposed boardwalks include helical piers in contact with the bed of the DNR public water wetland, therefore the rule is applicable to the project.

Per section 3(a) of the rule, the use of the bed or bank shall meet a demonstrated public benefit. The Applicant has provided a narrative that states that the boardwalks will be located in a public park, provide public access to a unique upland "island", and provide access to a future fishing pier. Staff have reviewed the narrative and plans (attachment 4) and concur with the Applicant's findings that the proposed boardwalk will provide the public benefit cited. Therefore, the Applicant has met this criterion of the rule.

Per section 3(b) of the rule, use of the bed or bank shall retain adequate hydraulic capacity. The Applicant has submitted calculations (attachment 5) demonstrating the installation of helical piers will have a negligible effect on a hydraulic capacity (less than 0.0044'). Staff and the District Engineer have reviewed the calculations and have determined that there will be no measurable effect on floodstage, meaning that adequate hydraulic capacity will be retained in the wetland and the criteria of rule has been met.

Per section 3(c) of the rule, the use of the bed or bank shall retain adequate navigational capacity pursuant to any requirements of the waterbody's classification by the District. Based on Staff and the District Engineer's analysis of the public water wetland's existing condition, the wetland adjacent to o

Wassermann Lake has been determined unnavigable, analysis of the rule provision is not relevant to the project.

Section 3(d) of the rule requires waterbody crossings and structures to preserve aquatic and wildlife passage. Per the plan specifications, the boardwalk decking is proposed 29 inches above the 100-year floodplain elevation of 946.6'. Staff and the District Engineer have reviewed the existing conditions of the wetland and have determined that the proposed boardwalk deck heights of 29 inches will preserve existing aquatic and wildlife passage as the boardwalk will not isolate any habitat corridors from the existing condition. Staff and the District Engineer concur that this provision of the rule has been met.

Per section 3(e) of the rule, use of the bed or bank shall not adversely affect water quality. The boardwalk construction is proposed during frozen conditions to minimize land disturbance and potential sediment movement. The boardwalk abutments are proposed to be enclosed in a silt fence to ensure sediment does not enter the wetland or downstream waterbody. Staff have reviewed the erosion control plan provided and determined that sufficient erosion control detail has been shown to verify that water quality will not be adversely affected by sedimentation. Staff have determined that the criteria of the rule is met.

Per section 3(f) of the rule, the use of the bed or bank shall represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives, including, but not limited to vegetation or bioengineering for bank stabilization, structural stabilization, acquisition of additional easements, or installation of upstream control to manage stream flow. The Applicant has submitted two alternatives that were considered to demonstrate that the proposed boardwalks represent the minimal impact solution. Alternative one consisted of a no-build scenario, which would not meet the stated project goals. Alternative two consisted of a bituminous trail requiring fill within the DNR public water wetland, resulting in a greater wetland and floodstage impact. Staff have reviewed the two alternatives cited and concur that the proposed boardwalks represent the minimal impact solution as it does not impact a DNR public water wetland or the associated floodstage.

Regarding section 3(g) of the rule no bored utility lines are proposed underneath the bed or bank of a waterbody.

Regarding section 3(h) of the rule no installation, modification, or excavation of sanitary sewer beneath a waterbody is proposed as a component of this project.

In summary, based on the analysis of Staff and the District Engineer provided above, the Applicant has met all the applicable criteria of the Waterbody Crossings and Structures Rule.

Floodplain Alteration

The Floodplain Alteration Rule is applied whenever land altering activity is proposed beneath the 100-year floodplain elevation of any waterbody. The 100-year floodplain elevation for Wassermann Lake is 946.6 feet (NGVD 29). The entire DNR public water wetland, which is connected hydraulically to Wasserman Lake, but a distinct waterbody, is below the 100-year flood elevation and within the floodplain of Wasserman Lake. The Applicant is proposing to drill 76 helical piers to support the boardwalks in the wetland, therefore the rule is applicable to the project.

Section 3(a) of the rule requires the creation of floodplain storage capacity to be created for any fill placed below the 100-floodplain elevation to ensure that the fill shall not cause a net decrease in storage capacity below the projected 100-year floodplain elevation of a waterbody. The Applicant has requested to apply section 3(c) of the rule for placement of a total 2.5 cubic of feet of fill for the 76 helical piers within the 100-year floodplain without providing compensatory storage. The criteria of 3(c) is discussed below.

Section 3(b) of the rule requires no increase in the 100-year flood elevation of a watercourse. Staff have reviewed the site plan and have determined that the criteria of rule is not applicable to the Phase I project as there no work within a watercourse.

Section 3(c) of the rule states that section 3(a) of this rule does not apply to fill in a waterbasin if the applicant shows that the proposed fill, together with the filling of all other properties on the waterbody to the same degree of encroachment will not cause high water or aggravate flooding on other properties. Calculations provided by the Applicant demonstrate that the net amount of fill associated with the helical piers will be 2.5 cubic feet. The Applicant then applied the net amount of fill to each property on Wassermann Lake (30 properties), which resulted in a total of 76 cubic feet. Based on the calculation provided by the Applicant, 76 cubic feet of fill will result in an amount of bounce that is within the margin of modeling uncertainty (i.e., effectively 0) (attachment 6). Staff and the District Engineer have reviewed the calculations and have determined that the calculations are correct and the bounce is considered to be negligible and will not cause high water levels. The criteria of 3(c) has been met therefore the requirements of 3(a) do not apply to the project.

Section 3(d) of the rule requires that no new impervious surface be created in the lesser of 25 feet of the centerline of a watercourse or the 10-year floodplain of a waterbody, unless that surface is an integral component of a linear public roadway or trail. The boardwalks are considered to be an integral component of a public trail system that will provide riparian access to a future fishing pier. Staff have reviewed the plans and agree that the boardwalks are an integral component of a public trail, therefore the criteria of rule has been met.

Section 3(e) of the rule is not applicable, as no ice ridge grading is proposed.

Section 3(f) of the rule requires that the low openings to all structures be a minimum of 2 feet above the 100-year floodplain elevation. Staff have reviewed the proposed plan and have determined that no new buildings are proposed with the Phase I project, therefore section 3(f) is not applicable.

In summary, based on the analysis of Staff and the District Engineer provided above, the Applicant has met all the applicable criteria of the Floodplain Alteration Rule.

Wetland Protection

The Wetland Protection Rule is applied to any project that proposes to excavation, filling or drainage of wetlands protected by the Wetland Conservation Act (WCA) and the buffer provisions of the rule are applicable whenever the District's Waterbody Crossings and Structures Rule is applied. The boardwalks do not propose any impact to WCA wetlands, and as noted the applicant has received approval from the

project work in the public water wetland adjacent to Wasserman Lake from DNR. Since the boardwalks are analyzed under the Waterbody Crossings and Structures Rule, the buffer provisions of the Wetland Protection Rule are applicable.

There have been two Notice of Decisions issued determining the boundary and type of wetlands within the project area, W17-47 & W18-39 (attachment 7). There are a total of three delineated wetlands within the property owned by the Applicant. Wetland 1 is the DNR public waters wetland, and Wetlands 2 and 3 are protected by the WCA.

Per section 5(a) of the Wetland Protection rule, buffers must be provided around all disturbed wetlands and on wetland edges downgradient of disturbance. The drilling of the helical piers for the boardwalks into Wetland 1 is considered to be a disturbance and the Applicant has submitted a plan that provides a wetland buffer around the entirety of Wetland 1 that is within the property. For Phase II of the project, wetland buffers will be required around Wetlands 2 & 3 that are downgradient of site disturbance. The Applicant has submitted a plan that shows wetland buffers provided downgradient of site disturbance around Wetlands 2 and 3 that are within the property. Additional analysis on buffer width has been provided under section 6(c) below.

Per section 5(b) of the rule, buffers are required, and have been analyzed under section 6, below.

Per section 5(c) of the rule, buffers must be documented by a declaration or other recordable instrument. Sale of the park property that is the subject site to the City of Victoria is planned. The applicant, MCWD, will retain an easement over the wetland buffer areas in perpetuity. The Applicant will provide a draft of the easement for review to demonstrate compliance with maintenance requirements of the rule. This has been included among the conditions of approval.

Section 5(d) of the rule requires a permanent wetland buffer monument to be installed at each lot line where it intersects the buffer, and where needed to indicate the contour of the buffer, with a maximum spacing of 100 feet. Submission of a draft buffer monumentation plan for approval as compliant with the rule provision is listed as a recommended condition of approval to satisfy this requirement.

Per section 6(a) of the rule, buffer width requirements are determined by the management class of a wetland, as provided by District's Functional Assessment of Wetlands (FAW). Table 1 below shows the management classifications and associated buffer widths of each wetland within the property boundary.

Wetland #	Management Class	Base Buffer Width (ft)	Required Minimum Buffer Width (ft)	Allowable Maximum Buffer Width (ft)	Public Water Wetland
1	Preserve	75	37.5	150	Y
2	Manage 2	30	15	60	N
3	Manage 2	30	15	60	N

Table 1: Wetland Summary

Per section 6(c) of the rule, buffer averaging is permitted based upon demonstrated site constraints. Under this provision of the rule, buffer must meet the applicable minimum buffer width of 50% of the base buffer width, and can extend to a maximum width of 200% of the base buffer, provided that there is no reduction in total buffer area (refer to above Table 1 for base, minimum, and maximum buffer widths). The Applicant has requested to apply buffer averaging for both Phase I (proposed) and Phase II (future). The buffer averaging has been requested to accommodate the future locations of walking trails, a stormwater filtration basin, and an access road proposed with Phase II. Based on review of the wetland buffer plan submitted for both Phase I and Phase II (attachment 8), the Wassermann Park master plan does provide not provide the required buffer area for Wetland 1 and the plan does not meet the required MCWD minimum buffer width requirement for Wetland 1 or Wetland 2. Specifically, the applicant has not maintained the minimum buffer width requirement at all locations on the edges of Wetland 1 and Wetland 2 that are within the property boundary. The Applicant has requested an Exception from compliance with section 6(c) of the Wetland Protection rule, which has been analyzed under the Exception criteria below.

Section 6(d) of the rule does not apply as the Applicant is not requested a reduction in base buffer width.

Section 6(e) of the rule does not apply as this is not a Linear Reconstruction Project.

Section 6(f) of this rule does not apply as this project is not a New Principal Residential Structure.

Section 7(a) of rule, prohibits actions such as mowing, fertilizing or placement of yard waste within the buffer area. Submission of a maintenance plan that includes these provision is listed as a recommended condition of approval to satisfy this requirement.

Section 7(b) of the rule allows public land, homeowners associations, and right-of-way to comply with buffer monumentation, buffer monitoring, and vegetation management through a written maintenance agreement with the District that provides for compliance with the MCWD monumentation, monitoring and vegetative-management requirements. Submission of a draft maintenance plan in accordance with the District's Project Maintenance and Land Management Department is listed as a recommended condition of approval to satisfy this requirement.

Per section 7(c) of the rule, any buffer areas that will be disturbed by grading or other site activities during construction must be replanted and maintained according to the specific standards. Staff have reviewed the proposed Phase I project and have determined that areas of proposed buffer will not be graded or compacted and there is an existing vegetated buffer, therefore the specific site standards criteria of the rule are not applicable. Phase II will disturb areas of the proposed wetland buffer for Wetlands 1, 2, and 3 and the Applicant has submitted a planting plan that will be reviewed for conformance with the rule criteria under the Phase II application.

In summary, upon satisfaction of the recommended conditions, the project meets the requirements of the Wetland Protection Rule, apart from section 6(c), as noted above, for which the Applicant has requested an Exception.

Exception

The Variance and Exception Rule allows the Board of Managers to grant exceptions from a provision of the rules on a determination that the proposed application will achieve a greater degree of water resource protection than strict compliance with the provision. The Applicant has requested an exception from the buffer provisions of section 6(c) of the Wetland Protection Rule for both Phase I and the future Phase II of the Wasserman Park master plan.

The Applicant has provided a plan that demonstrates that there are several locations that the minimum buffer width is not provided due to the future location of trails, a stormwater filtration basin, and a road expansion to meet safety standards. Based on Staff's review of the proposed wetland buffer exhibit, which is representative of the buffer requirements for both of the project phases, there are six segments within the project in which the minimum buffer width is not maintained at all locations for Wetland 1 and one segment within the project in which the minimum buffer width is not maintained at all locations for Wetland 2. Table 2 below summarizes the average shortfall from the required minimum buffer width for the six segments of Wetland 1, a Preserve wetland.

Segment	Linear Feet of Segment	Average Minimum Buffer Width Provided (ft)	Average Shortfall from Required Minimum Buffer Width of 37.5 (ft)
1	175	27.5	10
2	60	33	4.5
3	20	21.75	15.75
4	320	27.5	10
5	395	22.5	15
6	150	22	15.5

Table 2: Minimum Buffer Width Provided Shortfall for Wetland 1, Preserve Management Class

For Wetland 2, a Manage 2 wetland, an averaged minimum buffer width of 9.75 feet is provided for 15 linear feet which is 5.25 foot shortfall from the required minimum width of 15 feet. Table 3 below

summarizes the area of the minimum buffer width not met for Wetland 1 and Wetland 2 based on the linear distance and provided buffer width.

Wetland #	Size of Wetland	Management Class	Base Buffer Width	Required Minimum Buffer Width	Required Buffer Area	Provided Buffer Area	Linear Feet Not Meeting Minimum Buffer Width Requirement	Area of Minimum Buffer Width Not Met
1	23.21 ac	Preserve	75'	37.5'	4.00 ac (174,385) sf	3.55 ac (154,795 sf)	1,090	0.34 ac
2	0.18 ac	Manage 2	30'	15'	0.21 ac (9,252 sf)	0.22 ac (9,603 sf)	15	79 sf

Table 3: Minimum Buffer Width Provided Shortfall Summary

The wetland buffer provision per section 6(c) of the Wetland Protection Rule is intended to provide water quality treatment to stormwater runoff prior to entering a waterbody and to provide habitat adjacent to waterbodies. The Applicant has provided a detailed exception application that demonstrates a plan for a restoration project with the goals of water quality treatment and habitat restoration. The Wasserman Park master plan involves vegetation restoration across three ecosystems (1.56 acres of prairie, 2.14 acres of wetland, and 1.62 acres of oak savannah), provides wetland buffers to the greatest extent feasible, avoids impacts to wetlands, proposes 370 feet of stream channel restoration, and will treat approximately 0.13 acres of impervious surface that would be exempt under the District's linear reconstruction provisions of the Stormwater Management Rule. In addition to the proposed improvements, the Applicant has completed an alum treatment to the Wassermann West Pond in the Spring of 2019 that resulted in an estimated 75 pounds of phosphorous reduction annually into Wassermann Lake.

Staff and the District Engineer have reviewed the narrative and plan provided by the applicant to support the exception request and have determined that sufficient technical basis has been provided to support the exception.

The policy and intent of the Wetland Protection rule is to achieve no net loss in wetland quantity, quality, and biological diversity; to enhance the quality, quantity, and biological diversity of wetlands; and minimize wetland impact. Based on review of the provided materials, Staff and the District Engineer have determined that the proposed 2.14 acres of wetland restoration will result in an enhancement to the quality, quantity, and biological diversity of Wetland 1 by replacing a monoculture of cattails with native vegetation. The 370 feet of stream restoration will improve biological diversity for approximately 0.33 acres of riparian habitat and reduce sediment loading into Wetland 1, and the stormwater management treatment of 0.13 acres of linear impervious surface that would sheet flow into Wetland 1 will also reduce sediment loading into Wetland 1.

In summary, Staff and the District Engineer agree that the Applicant has provided sufficient evidence that the proposed project will achieve a greater natural resource benefit, as outlined above, than strict compliance with providing the minimum buffer width in all locations around the edges of Wetland 1 and Wetland 2 per section 6(c) of the Wetland Protection Rule

Summary:
The Minnehaha Creek Watershed District has applied for a Minnehaha Creek Watershed District permit for Waterbody Crossings and Structures, Floodplain Alteration and Wetland Protection rules, and an Exception to providing the required minimum buffer width for 1,090 linear feet around Wetland 1 and 225 linear feet around Wetland 2 for the proposed nature-based Wassermann Lake Park Project. The proposed Phase I boardwalk project meets the applicable requirements under the applicable rules, upon satisfaction of the recommended conditions and approval of the Exception by the Board of Managers. Therefore, staff recommends approval of the Phase I permit application with the conditions listed at the beginning of the report.

Additionally, Staff requests that the Board of Managers consider delegating authority to approve a permit for Phase II of the Wasserman Park project to the District Administrator.
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Attachments:
1. Water Resources Application Form
2. Exception Application
3. DNR Individual Permit
4. Site Plans
5. Waterbody Crossings & Structures Calculation
6. Floodplain Alteration Calculation
7. WCA NODs (W17-47 & W18-39)
8. Wetland Buffer Plan

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select "Minnesota" from the contact Information box. Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Minnehaha Creek Watershed District (MCWD), Anna Brown
Mailing Address: 15320 Minnetonka Boulevard, MN 55345
Phone: 952-641-4522
E-mail Address: abrown@minnehahacreek.org

Authorized Contact (do not complete if same as above):
Mailing Address:
Phone:
E-mail Address:

Agent Name:
Mailing Address:
Phone:
E-mail Address:

PART TWO: Site Location Information

County: Carver County **City/Township: Victoria**
Parcel ID and/or Address: 650230600 & 650230700
Legal Description (Section, Township, Range): SEC 23, TWP 116, RNG 024
Lat/Long (decimal degrees): 44°50'17.05"N, 93°40'49.41"W
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): 30.56 ac

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

The MCWD, in partnership with the City of Victoria, is proposing a nature-based park and natural resource restoration referred to as Wassermann Lake Park. The Wassermann Lake Park Project is a nature-based park situated on the last remaining undeveloped parcel on Wassermann Lake, an impaired waterbody. The 30.5 acre site encompasses a six acre pond, 16.5 acres of wetland, eight acres of upland, and 1,500 feet of undisturbed shoreline. The project not only provides public recreation and

enjoyment through active and passive engagement with the lake and wetland, but also improves water quality and habitat on the last remaining undeveloped parcel on Wassermann Lake.

Restoration activities will consist of a 370 linear feet of stream channel restoration, 1.56 acres of prairie restoration, 1.62 acres of oak-savannah restoration, and 2.94 acres of wetland vegetation restoration. To access the stream channel restoration, 1,216 square feet of wetland fringe will be temporarily disturbed and restored.

The southern edge of the park property contains a small intermittent stream channel. The channel has experienced down cutting and bank destabilization, resulting in the potential for increased sediment transport to the lake. The restoration plan proposes to stabilize the banks using a single FES lift. This approach will regrade an approximate 15 foot area on either side of the creek, and the banks will be replanted with stabilizing vegetation. In order to enhance light penetration to the creek to establish bank vegetation and enhance the existing red oak grove habitat, ash and box elder removal will occur on the northern bank of the stream channel. The stream channel restoration component will also incorporate check-dams to slow the velocity of flow, further preserving the banks and creating a pool system through the channel. The plan spec details state that no riprap will be placed outside of the stream channel or in the wetland area. The proposed restoration will encompass 0.33 acres across 370 feet of stream channel.

A majority of the wetlands on site are a cattail monoculture with minimal opportunity to enhance vegetative diversity. The team has identified several discrete areas along the wetland fringe currently dominated by reed canary grass where restoration to mesic meadow edge has a better chance of success. All ash and boxelder will be removed from those areas with willows maintained. Wooded debris and snags will be maintained for habitat improvement.

There is no proposed grading within the delineated wetlands onsite nor any proposed placement of fill. In addition to the wetland vegetation restoration, wetland areas will have an upland buffer established with native plants.

There have been two Notice of Decisions (NOD) confirming the boundary and types of wetlands on the property (W17-47 & W18-39). Majority of the wetland vegetation restoration is proposed within Wetland 1, which is adjacent to Lake Wassermann, a DNR Public Water. The OHWL of Wassermann Lake is 944.3' and the restoration activities are proposed upland of the OHWL in areas delineated as Type 1, Floodplain Forest and Type 2, Fresh (Wet) Meadow. The temporary wetland disturbance of 1,216 square feet is proposed in Wetland 4 (per W17-47, identified as Wetland 2 per W18-39), a Type 1/2, Floodplain Forest/Fresh (Wet) Meadow, to implement the stream channel restoration.

In addition to the wetland vegetation restoration, the Wassermann Lake Park project is being reviewed under MCWD permit application #20-088 for conformance with the Watershed District's rules for Erosion Control, Wetland Protection, Waterbody Crossings & Structures, Streambank Stabilization, and Stormwater Management.

Project Name and/or Number:

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
Wetland 1	wetland	Remove and Restore Vegetation	T (180)	2.91 ac	n/a	Type 1/2	n/a
Wetland 4	wetland	Remove and Restore Vegetation	T (180)	0.03 ac (1,216 sf)	n/a	Type 1/2	n/a

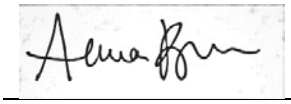
[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:  Date: 4/1/2020

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

I hereby authorize to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

Project Name and/or Number:

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☐ **Wetland Type Confirmation**

☐ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☒ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

8420.0415 NO-LOSS CRITERIA

A. an activity that will not impact a wetland;

H. a temporary impact that is rectified by repairing, rehabilitating, or restoring the affected wetland. No-loss under this item only applies if all of the following conditions are met:

- the physical characteristics of the affected wetland, including ground elevations, contours, inlet dimensions, outlet dimensions, substrate, plant communities, and hydrologic regime, are restored to preproject conditions sufficient to ensure that all preproject functions are restored;
- the activity is completed and the physical characteristics of the wetland are restored within six months of the start of the activity, unless an extension is granted by the local government unit after consultation with the technical evaluation panel;
- the landowner provides sufficient financial assurance acceptable to the local government unit to cover the estimated cost to restore the wetland to preproject conditions. The local government unit must return any remaining financial assurance to the landowner upon a determination by the local government unit that the conditions in this item have been met by the landowner; and
- a no-loss has not been approved under this item for a particular site within a wetland within the previous ten years, except that repairs to the original project may be allowed under the no-loss if the local government unit determines the request to be necessary and reasonable.

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

The attached plan set demonstrates that there is no proposed grading within the delineated wetlands, there is no proposed fill within the delineated wetland areas, and provides an erosion control plan (sheet 15). Wetland areas proposed for restoration will be restored with seed mix MN 34-262/Wet Prairie Mix in Wetland 1 and with seed mix Custom/SSNS Savanna & Woodland Edge Mix in Wetland 4 (sheet 14).

The project is vetted to being in early April 2020, with work in the wetland areas commencing in May 2020 with final restoration and stabilization completed by November 2020 (6 months). Additionally, the "Herbaceous Plan Establishment" outlines a three year maintenance plan and details the plant species proposed for the seed mixes. MCWD as the LGU does not hold financial assurance for public entities, since MCWD is the applicant and a public entity, no financial assurance will be submitted. To the best of the knowledge of the MCWD, a no-loss has not been approved for the wetlands within the project area within the past ten years.

Exhibits: 1. W17-47 Boundary & Type NOD
2. W18-38 Boundary & Type NOD
3. Site Plan
4. Herbaceous Plant Establishment

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Minnehaha Creek Watershed District	**15320 Minnetonka Blvd Minnetonka, MN 55345**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Minnehaha Creek Watershed District-Anna Brown	**Wassermann West**	**10/17/2017 Complete**	**W17-47**

☒ Attach site locator map ☒ Attach approved boundaries

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☐ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **12/11/2017**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

The Minnehaha Creek Watershed District has applied for a wetland boundary & type confirmation for the wetlands located on the subject property PIDs 650230600 and 650230700 in the City of Victoria, Carver County, Minnesota. Legal description: Section 23, Township 116, Range 24. The boundary & type approval was requested October 17, 2017.

A wetland delineation was conducted by Wenck Associates on October 9, 2017. A complete delineation report and WCA application were submitted to MCWD on October 17, 2017. Four wetlands and one waterbody were delineated within the project area. Wetland 1 was identified as a Type 1/2/3/4, fresh (wet) meadow/shallow marsh/deep marsh complex (Public Water Basin 10004800), Wetland 2 was identified as a Type 2 wet meadow wetland, and Wetlands 3 and 4 were identified as a Type 1/2 forested/wet meadow riparian wetlands.

MCWD reviewed the boundary and types in the field on October 31st, 2017. MCWD was in agreement with the boundary and types identified on site.

MCWD approves the wetland boundary and types as documented in the delineation report submitted on October 17, 2017 and delineated in the field on October 9th, 2017. This decision is valid for five years. A future project located on this property may require a permit from the MCWD.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name **Elizabeth Showalter**	Title **Permitting Technician**	
Signature 	Date **12/11/2017**	Phone Number and E-mail **(952) 641-4518** **eshowalter@minnehahacreek.org**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $0 fee (if applicable) to: **Minnehaha Creek Watershed District** **15320 Minnetonka Blvd** **Minnetonka, MN 55345**	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Aaron Finke – afinke@co.carver.us**
☒ BWSR TEP member: **Ben Carlson – ben.carlson@state.mn.us**
☐ LGU TEP member (if different than LGU Contact):
☒ DNR TEP **Becky Horton- becky.horton@state.mn.us**
☒ DNR Regional Office (if different than DNR TEP member): **jennie.skancke@state.mn.us**
☐ WD or WMO (if applicable):
☒ Applicant (notice only) and Landowner (if different): **Anna Brown-abrown@minnehahacreek.org**
☒ Members of the public who requested notice (notice only): **blandhauser@ci.victoria.mn.us**
☒ Corps of Engineers Project Manager (notice only): **Ryan Malterud-Ryan.M.Malterud@usace.army.mil**
☐ BWSR Wetland Bank Coordinator (wetland bank plan applications only)

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☐
☐
☐

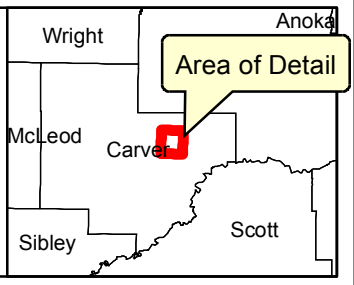
World Topo Map (Source: ESRI)

2,000 1,000 0 2,000 Feet

N

Property Boundary

Section Boundary



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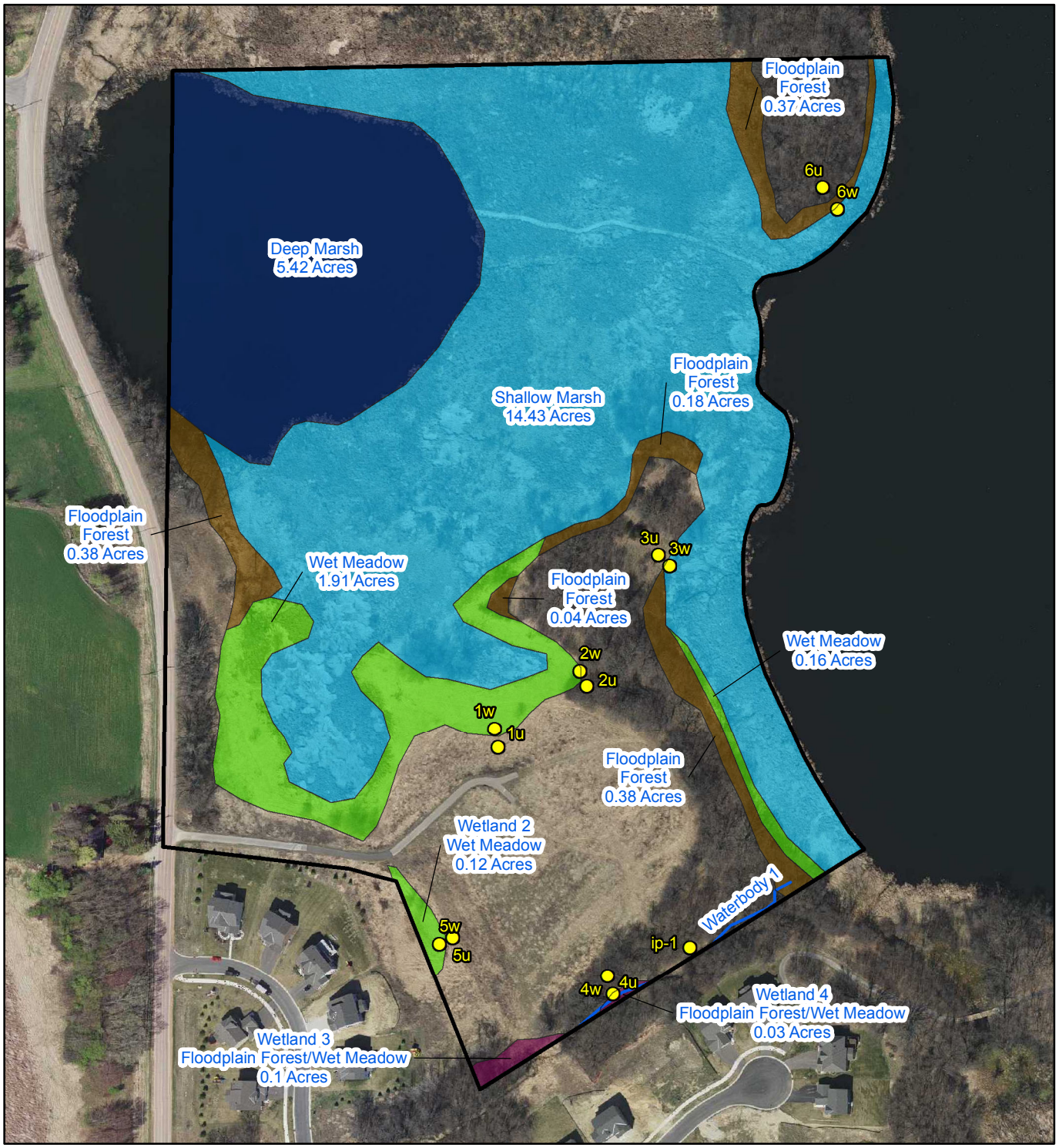
Date: 10/10/2017Time: 1:19:25 PM User: WatME0697

MCWD	WENCK ASSOCIATES Responsive partner. Exceptional outcomes.	OCT 2017
Site Location		Figure 1



MCWD

Delineated Features (Revised November 2017)

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

NOV 2017

Figure 5

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Minnehaha Creek Watershed District	**15320 Minnetonka Blvd** **Minnetonka, MN 55345**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
MCWD	**Wasserman West**	**10/12/18**	**W18-39**

☒ Attach site locator map

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☒ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

Ben Carlson (BWSR) and Aaron Finke (Carver SWCD) attended the field verification and were in agreement with the boundaries.

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: 11/7/18

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

Minnehaha Creek Watershed District has applied for wetland boundary & type confirmation for the wetlands located at PIDs 653210410, 653210370, and 653210420 in the City of Victoria, Carver County, Minnesota. Legal description: Section 23, Township 116, Range 24. The boundary/type approval was requested on October 12, 2018. following wetlands were delineated by Wenck Associates, Inc, on October 5, 2018:

Wetland ID	Circle 39	Cowardin	Eggers and Reed
1	Type 1/3	PFO1A/PEM1C	Floodplain forest/shallow marsh,
2	Type 2	PEMB	Wet meadow
3	Type 3	PEM1C	Shallow marsh
4	Type 1/2	PFOA/PEMB	Forested/wet meadow
5	Type 2	PEM1B	Wet meadow

The boundaries were reviewed in the field on October 25, 2018, and all parties were in agreement with the proposed boundaries MCWD approves the wetland boundaries and types as delineated in the field and documented in the delineation report. This decision is valid for five years. A future project may require a permit from MCWD.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name **Elizabeth Showalter**	Title **Permitting Technician**	
Signature 	Date **11/7/18**	Phone Number and E-mail **(952) 641-4518** **eshowalter@minnehahacreek.org**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $100 fee to: **Minnehaha Creek Watershed District** **15320 Minnetonka Blvd** **Minnetonka, MN 55345**	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Aaron Finke (Carver)-afinke@co.carver.mn.us**
☒ BWSR TEP member: **Ben Carlson-ben.carlson@state.mn.us**
☐ LGU TEP member (if different than LGU Contact):
☒ DNR TEP **Becky Horton**-becky.horton@state.mn.us
☒ DNR Regional Office (if different than DNR TEP member): **Jennie Skancke- (Carver)-jennie.skancke@state.mn.us**
☐ WD or WMO (if applicable):
☒ Applicant (notice only) and Landowner (if different): **Anna Brown-**
☒ Members of the public who requested notice (notice only): **Pat Smith- psmith@ci.victoria.mn.us, Meaghan Watson-mwatson@wenck.com, Cara Geheren-cara.geheren**
☒ Corps of Engineers Project Manager (notice only): **Justin Berndt-Justin.T.Berndt@usace.army.mil**
☐ BWSR Wetland Bank Coordinator (wetland bank plan applications only)

5. MAILING INFORMATION

- For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf
- For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
- Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

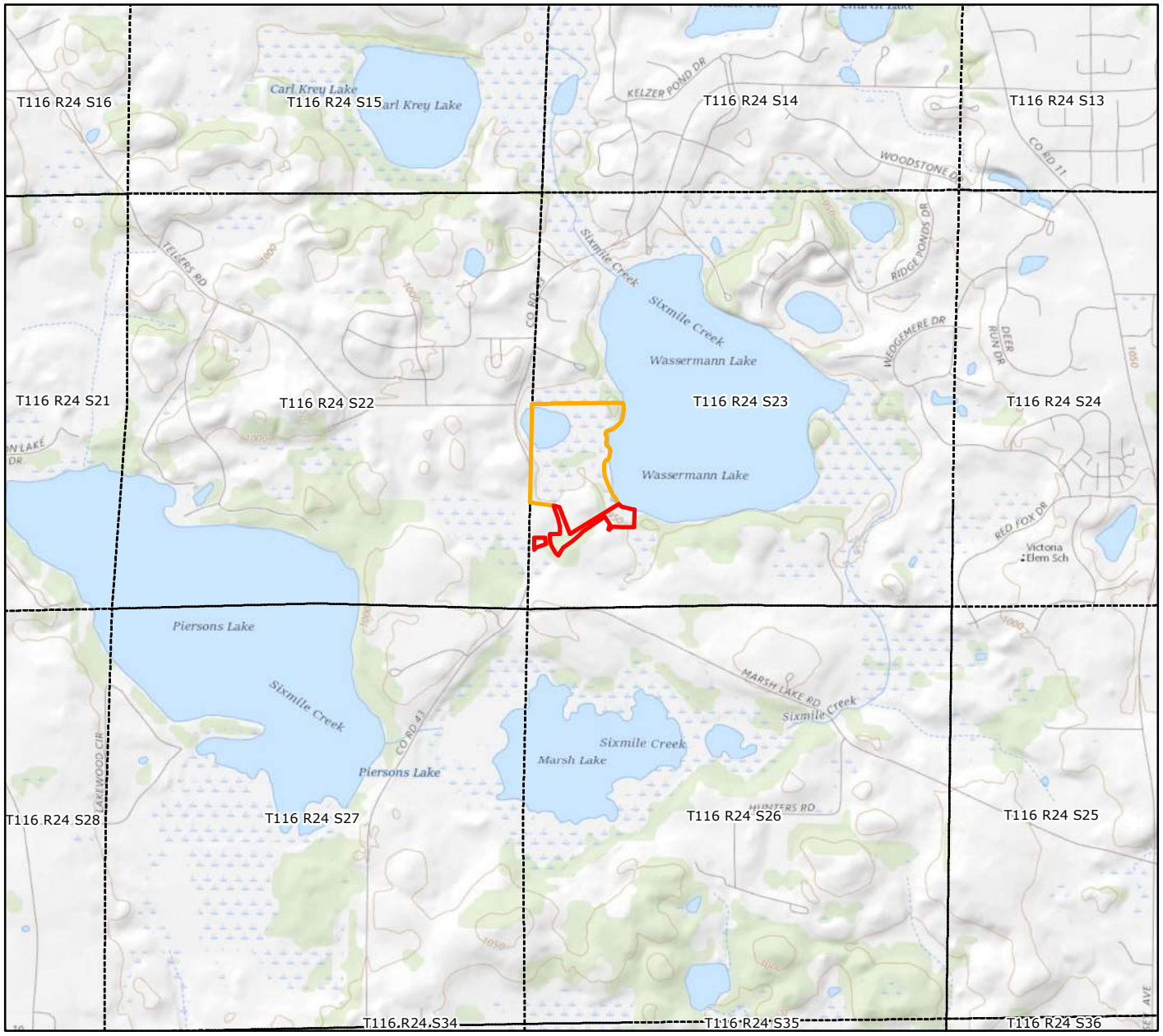
US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

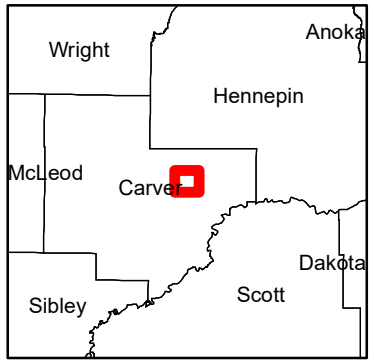
6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☒ **Approved wetland boundaries**



Legend

- 2018 Investigated Area
- 2017 Investigated Areas
- Section Boundary



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MINNEHAHA CREEK WATERSHED DISTRICT

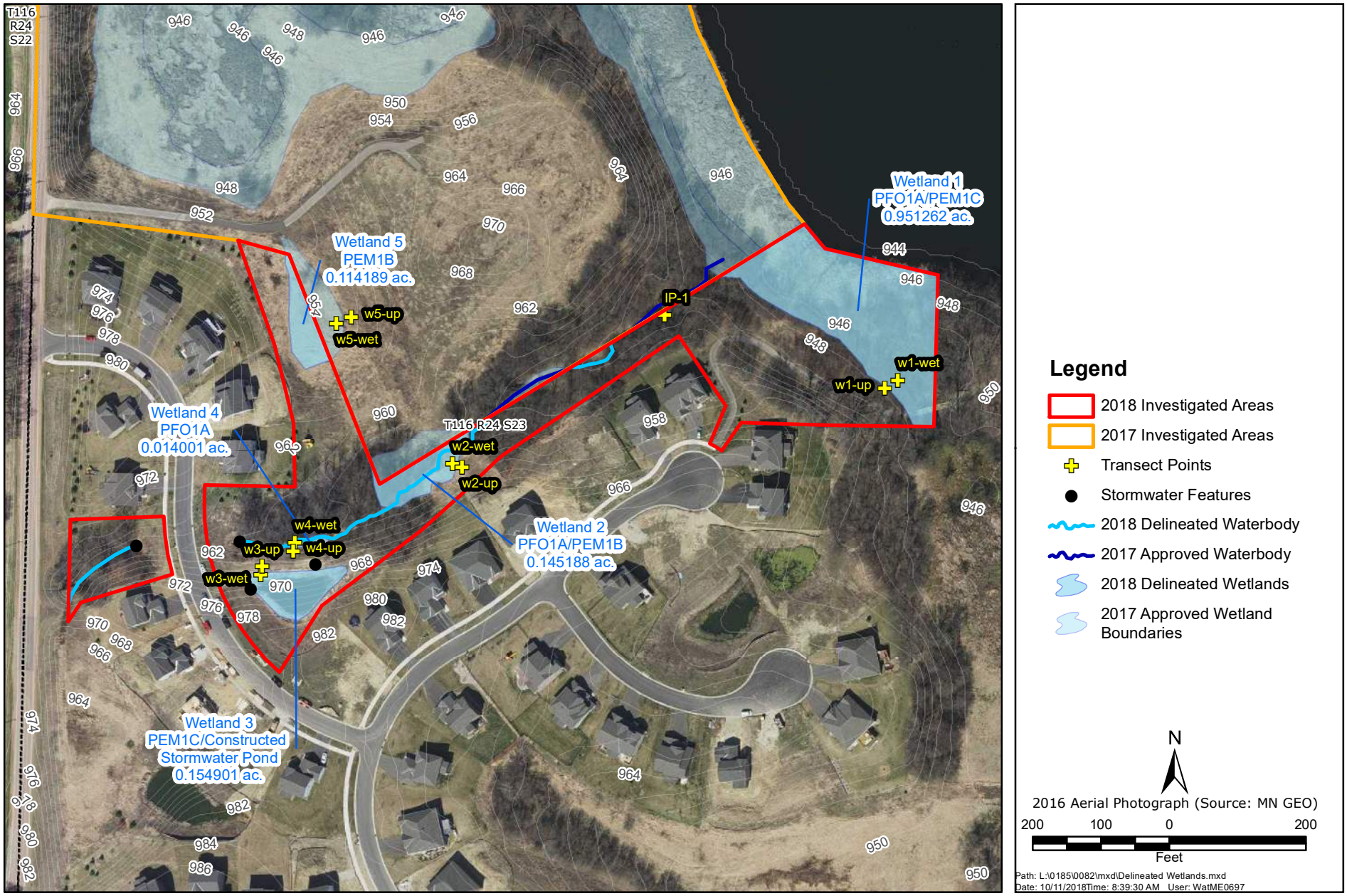
Site Location Map

WENCK

Responsive partner. Exceptional outcomes.

OCT 2018

Figure 1



MINNEHAHA CREEK WATERSHED DISTRICT	WENCK Responsive partner. Exceptional outcomes.	OCT 2018
Delineated Features		Figure 5

PROPERTY BOUNDARY

POND

PROPERTY BOUNDARY

WETLAND

WETLAND

WASSERMANN LAKE
DNR L-0443

REMOVE ALL REMNANT FENCE COMPONENTS, INCLUDING BUT NOT LIMITED TO METAL POSTS, WOOD POSTS, AND WIRE. FIELD VERIFY EXTENTS (NOT SURVEYED)

REMOVE BITUMINOUS PAVEMENT AND BASE MATERIAL

FULL DEPTH SAW CUT BITUMINOUS PER COUNTY REQUIREMENTS

COUNTY ROAD 43

LAKEVIEW RD

PROPERTY BOUNDARY

WATER ST

0' 40' 80' 160'

eighty

demolition notes

1. FOR ALL UTILITY DEMOLITION, SEE CIVIL.
2. SEE L0.2, L0.3, AND L0.4 FOR ALL TREE AND BRUSH REMOVAL

aune fernandez landscape architects
755 prior avenue n suite 103,
st. paul, mn 55104
651.341.361 or 651.248.6155

Rehder & Associates, Inc.
Civil Engineers, Planners & Land Surveyors

Paulson & Clark Engineering
Structural | Mechanical | Electrical | Security

client

MINNEHAHA CREEK WATERSHED DISTRICT

project

WASSERMANN LAKE PARK
PID 650230600 &
PID 650230700
COUNTY ROAD 43
VICTORIA, MN 55318

PROJECT NUMBER: 190006

certification

I HEREBY CERTIFY that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

SIGNATURE:

TYPED OR PRINTED NAME: CARLOS JAMES FERNANDEZ

DATE: 01/16/2020 REG. NO.: 45414

issue / revision

NO	DATE	ISSUE / REVISION
2	2/04/2020	ADDENDUM 1
1	1/16/2020	BID SET

sheet title

DEMOLITION PLAN

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L0.1

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Rehder & Associates, Inc.
Civil Engineers, Planners & Land Surveyors

Paulson & Clark Engineering
Structural | Mechanical | Electrical | Security

client

MINNEHAHA CREEK WATERSHED DISTRICT

project

WASSERMANN LAKE PARK
PID 650230600 &
PID 650230700
COUNTY ROAD 43
VICTORIA, MN 55318

PROJECT NUMBER: 190006

certification

I HEREBY CERTIFY that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

SIGNATURE:

TYPED OR PRINTED NAME: CARLOS JAMES FERNANDEZ

DATE: 01/16/2020 REG. NO.: 45414

issue / revision

NO	DATE	ISSUE / REVISION
2	2/04/2020	ADDENDUM 1
1	1/16/2020	BID SET

sheet title

SITE PLAN
LOCATOR MAP

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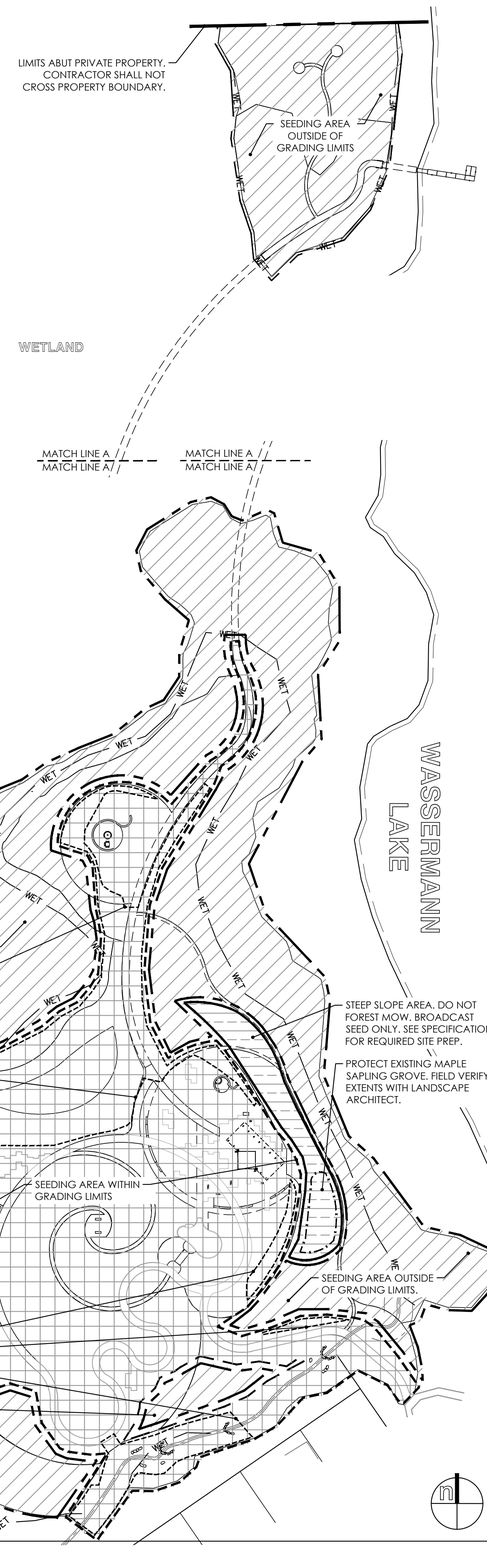
L1.0

site preparation notes

1. SEE SPECIFICATION 329000 "HERBACEOUS PLANT ESTABLISHMENT" FOR ALL REQUIRED ACTIONS IN 1) SEEDING AREAS INSIDE OF GRADING LIMITS, 2) SEEDING AREAS OUTSIDE OF GRADING LIMITS AND 3) STEEP SLOPE AREA.

INVASIVE SPECIES MANAGEMENT

1. FOR HERBACEOUS WEEDS AND INVASIVE SPECIES MANAGEMENT REQUIREMENTS, SEE SPECIFICATION 329000 "HERBACEOUS PLANT ESTABLISHMENT".
2. MANAGE ALL HERBACEOUS WEEDS AND INVASIVE SPECIES FOR THE DURATION OF CONSTRUCTION AND THE (3) YEAR MAINTENANCE PERIOD.
3. KNOWN INVASIVE SPECIES INCLUDE, BUT ARE NOT LIMITED TO: REED CANARY GRASS - *PHALARIS ARUNDINACEA*, BUCKTHORNS - *RHAMNUS SPP.*, BLACK LOCUST - *ROBINIA PSEUDOACACIA*, GARLIC MUSTARD - *ALLIARIA PETIOLATA*, AND EXOTIC BUSH HONEYSUCKLE - *(LONICERA TATARICA, L. MORROWII, L X BEEL, L. MAACHII)*.



1 site/seeding prep plan

scale: 1" = 80'

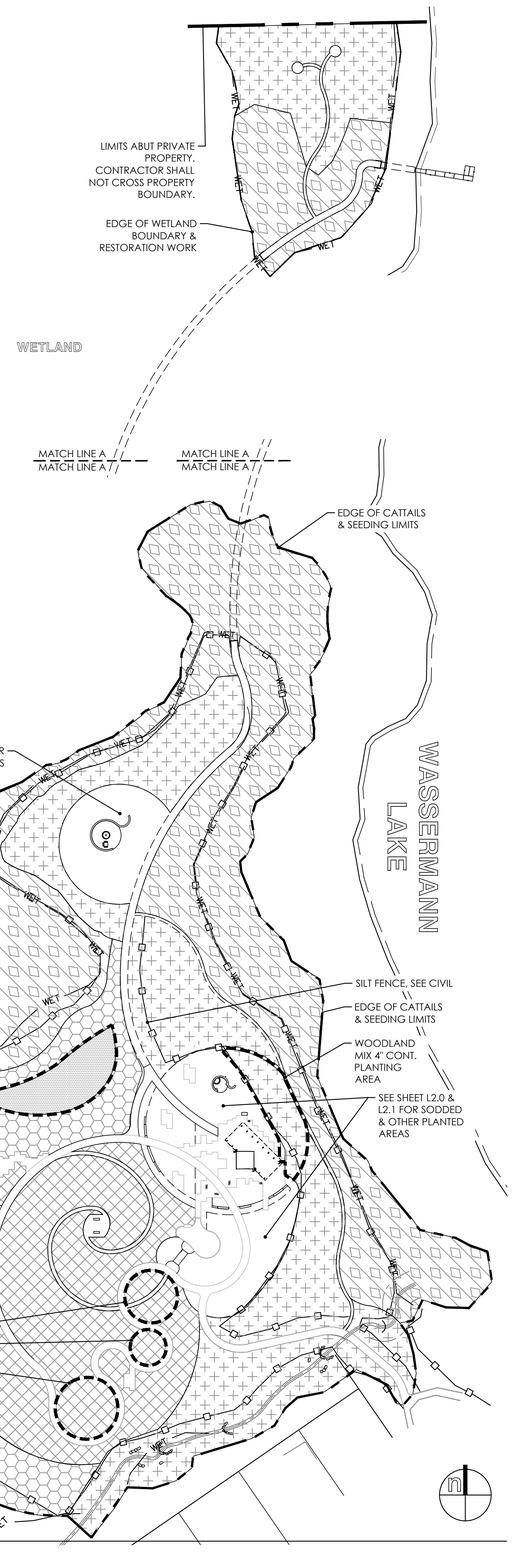
seeding/plug schedule

GROUND COVERS	CODE	SEED MIX, SEE SPEC.	QTY
	SEED A	CUSTOM / SSNS SAVANNA AND WOODLAND EDGE MIX	49,667 sf
	SEED B	MN 33-262 / DRY SWALE/POND	9,139 sf
	SEED C	MN 34-262 / WET PRAIRIE MIX	183,540 sf
	SEED D	MN 35-221 / DRY PRAIRIE MIX	57,904 sf
	SEED E	MN 35-241 / MESIC PRAIRIE MIX	66,681 sf

PLUGS & CONTAINERS	SEED MIX, SEE SPEC	QTY
4" CONT.	WOODLAND MIX	1000 - 4" CONT.
PLUG	PRAIRIE MIX	2000 - PLUGS
PLUG	BIOFILTRATION BASIN MIX	4000 - PLUGS

seeding & live planting notes

1. FOR ALL SEEDING REQUIREMENTS, SEE SPECIFICATION 329000 "HERBACEOUS PLANT ESTABLISHMENT".
2. INSTALL ADDITIONAL WOODLAND MIX 4" CONT., PRAIRIE MIX PLUGS, AND BIOFILTRATION BASIN MIX PLUGS LIVE PLANTINGS INTO SEEDED AREAS PER PLAN L2.3/2. FOR WOODLAND MIX PLANTING AREAS, SEE SPECIFICATION 329300 "PLANTS" FOR REQUIREMENTS, FOR PRAIRIE MIX AND BIOFILTRATION BASIN MIX PLANTING AREAS, SEE SPECIFICATION 329000 "HERBACEOUS PLANT ESTABLISHMENT" FOR PLUG REQUIREMENTS.
1. FOR EROSION CONTROL REQUIREMENTS WITHIN GRADING LIMITS, SEE CIVIL SHEET C1 AND SPECIFICATION 310000 "EARTHWORKS".
2. FOR EROSION CONTROL REQUIREMENTS IN AREAS OUTSIDE GRADING LIMITS, SEE SPECIFICATION 329000 "HERBACEOUS PLANT ESTABLISHMENT".



2 seeding plan

scale: 1" = 80'

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project

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sheet title

SITE/SEEDING PREP & SEEDING PLAN

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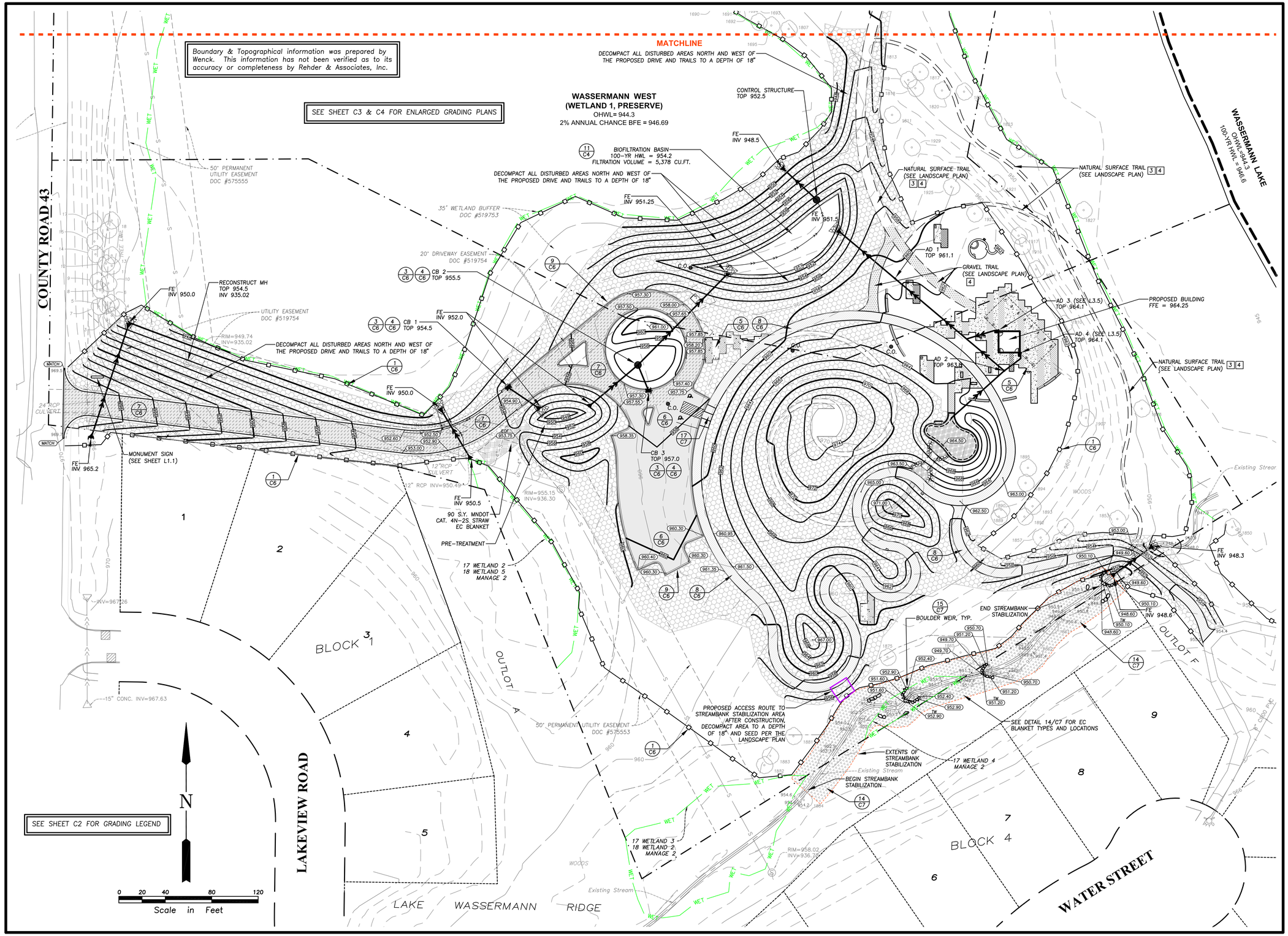
L2.3



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1	1/16/2020	BID SET

sheet title

GRADING, DRAINAGE & EROSION CONTROL PLAN

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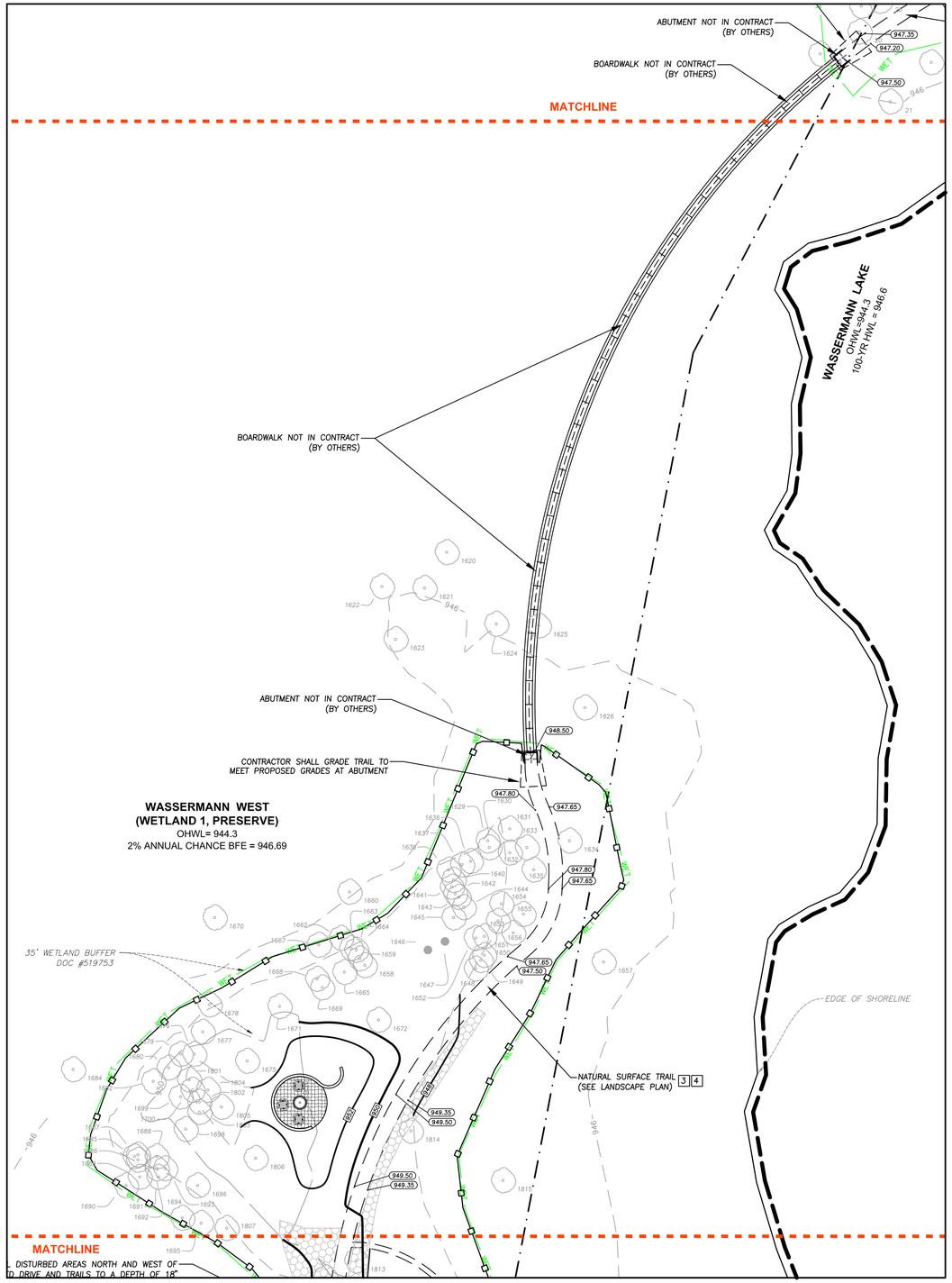
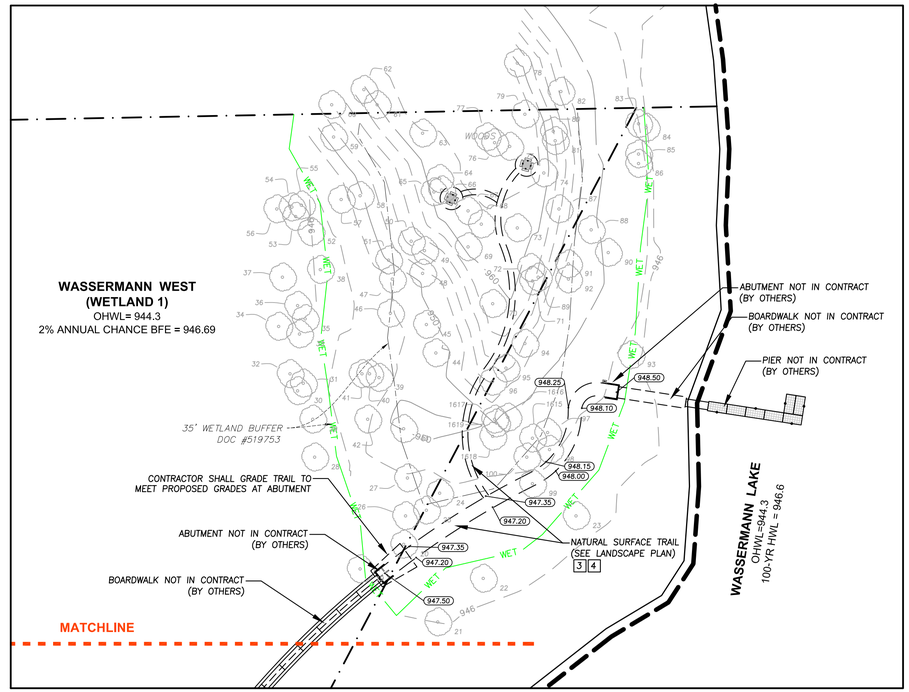
C1





GRADING NOTES

1 – All elevations shown are to final surfaces.

2 – Contractor is responsible for obtaining the MPCA General Storm Water Permit and will be responsible for all compliance with the permit requirements.

3 – 3' wide natural surface trail shall have a 4% maximum cross slope. 8' wide natural surface trail shall have a 2% maximum cross slope.

4 – See Sheet L3.6 for natural surface trail and gravel trail pavement sections.

EROSION CONTROL NOTES

1 – Contractor is responsible for all notifications and inspections required by General Storm Water Permit.

2 – All erosion control measures shown shall be installed prior to grading operations and maintained until all areas disturbed have been restored.

3 – Sweep paved public streets as necessary where construction sediment has been deposited.

4 – Each area disturbed by construction shall be restored per the specifications within 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

5 – Temporary soil stockpiles must have silt fence around them and cannot be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches.

6 – The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a surface water.

7 – All pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

8 – Excess concrete/water from concrete trucks shall be disposed of in portable washout concrete basin or disposed of in a contained area.

9 – Spring/summer temporary turf establishment: seed shall be MNDOT Mixture 21–111 @ 100 lbs/acre and mulch shall be MNDOT Type 1.
Winter temporary turf establishment: seed shall be MNDOT Mixture 21–112 @ 100 lbs/acre and mulch shall be MNDOT Type 1.

10 – The Contractor is responsible for plugging the 12" HDPE outlet pipe at CB 2 with sandbags (approximately 3 sandbags will be needed). These sandbags should be individually tied to ropes that allow them to be lifted out of CB 2 without entering the structure. The ropes should be tied to the top step of the CB. These sandbags should be installed prior to the stabilization of the biofiltration basin. The Watershed District will be responsible for the removing the sandbags from CB 2.

INSPECTION AND MAINTENANCE

– The site must be inspected once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

– All inspections and maintenance conducted must be recorded in writing and records retained with the SWPPP.

– Areas of the site that have undergone final stabilization, may have the inspection of these areas reduced to once per month.

– All silt fence must be repaired, replaced, or supplemented within 24 hours when they become nonfunctional or the sediment reaches 1/3 of the height of the fence.

– Surface waters and conveyance systems must be inspected for evidence of sediment being deposited. Removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints.

– Construction site vehicle exit locations must have sediment removed from off–site paved surfaces within 24 hours of discovery.

LEGEND

- PROPOSED MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED AREA DRAIN
- PROPOSED CURB STOP & BOX
- PROPOSED FLARED END
- PROPOSED CONCRETE
- PROPOSED EXPOSED AGGREATE CONCRETE
- PROPOSED STD. DUTY BITUMINOUS
- PROPOSED HEAVY DUTY BITUMINOUS
- PROPOSED BITUMINOUS TRAIL
- PROPOSED ELEVATION (MATCH)
- PROPOSED CONTOUR (1050)
- EXISTING CONTOUR (980)
- EXISTING ELEVATION (x 995.50)
- PROPOSED EC BLANKET MNDOT CAT. 3N – 2S STRAW
- STREAMBANK STABILIZATION AREA
- SILT FENCE
- INLET PROTECTION DEVICE
- BOUNDARY/ROW/BLOCK LINE
- EASEMENT

N

0 20 40 80 120
Scale in Feet

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project
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GRADING, DRAINAGE & EROSION CONTROL PLAN

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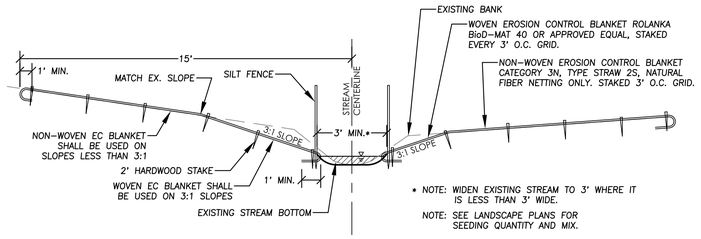
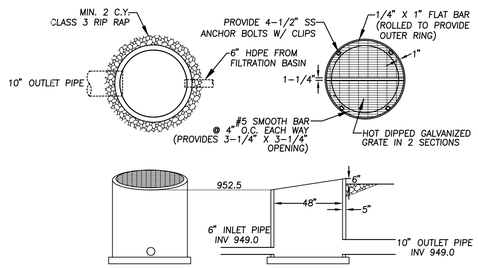
C2



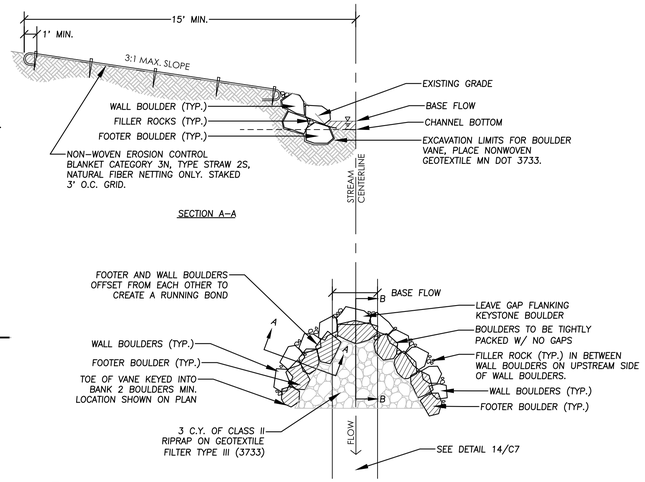
* NOTE: WIDEN EXISTING STREAM TO 3' WHERE IT IS LESS THAN 3' WIDE.

NOTE: SEE LANDSCAPE PLANS FOR SEEDING QUANTITY AND MIX.

14 / C7 STREAMBANK STABILIZATION
NO SCALE



16 / C7 OUTLET STRUCTURE 1
NO SCALE

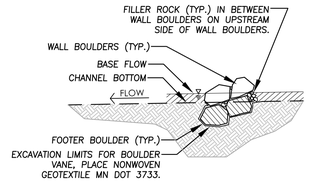


LEGEND

FOOTER AND WALL FIELDSTONE BOULDER 18" TO 24" DIA. MEETING MNDOT 3601.2A.

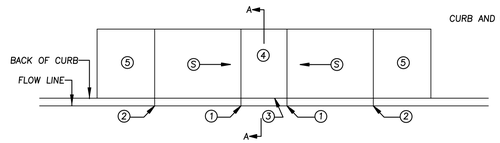
FILLER ROCK 3" TO 6" DIA. RIVER ROCK

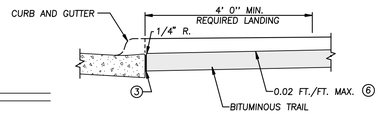
NOTE:
1. FIELD STONE BOULDERS SHALL HAVE NO CUT, BLAST OR SHEAR MARKS.
2. ENOUGH WALL BOULDERS TO BE FLAT TOPPED AND SET TO CREATE A DRY CROSSING/WALKWAY ACROSS THE CREEK.
3. FINAL PLACEMENT OR ROCK VANE AND BOULDERS TO BE FIELD VERIFIED BY ENGINEER.
4. ALL VANES EXTEND UPSTREAM INTO FLOW OF CREEK.



SECTION B-B

15 / C7 BOULDER WEIR, TYP.
NO SCALE





SECTION A-A

① 0" CURB HEIGHT.
② FULL CURB HEIGHT.
③ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
④ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
⑤ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
⑤ INDICATES PEDESTRIAN RAMP – SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%

17 / C7 PEDESTRIAN RAMP
NO SCALE

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DETAILS

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C7

SECTION 32 90 00

HERBACEOUS PLANT ESTABLISHMENT

PART 1 – GENERAL

1.01 DESCRIPTION

A. The Work: Shall consist of site preparation, material furnishing, transporting and installing all seeds, live plants and other materials required for:

1. Seeding and planting of native plant species
2. The establishment and protection of seeded areas designated in the plans
3. Management for all invasive species for three growing seasons (2020, 2021, 2022)
4. Maintenance of all seeded and planted areas for three growing seasons (2020, 2021, 2022)

1.02 SUBMITTALS

A. Contractor shall provide to the Owner's Representative the following submittals within 30 days of notice to proceed on contracted work.

B. Invasive Species Removal Schedule

1. Dates of mobilization to the site, initial crew size, methods employed, and equipment being used.
2. Herbicides(s) product name and rate of application.

C. Site Prep and Planting Schedule Submittal

1. Prior to the time of any seeding and/or planting Contractor shall supply the Owner's Representative with the proposed planting schedule and methods for each operation.

D. Seeding and Planting Supplies

1. Prior to the time of any seeding and/or planting the Contractor shall supply the Owner's Representative with the names and addresses of all seed and live plant suppliers showing quantities related to supplier for all seeds and live plants. Plant species, including scientific names, seed blends, percentages, weights, ratios, and verification of neonicotinoid free production shall be submitted and guaranteed in writing.

E. Proposed Equipment Specifications and Literature for Contractor's choice of seeding equipment.

F. Installation Supervisor resume showing minimum work experience as per Section 1.06.

G. 3-Year Maintenance Plan Schedule

1. Prior to Final Acceptance of seeded and planted areas, the Contractor shall supply the Owner with the proposed maintenance schedule and methods for each operation.
2. Other obligated documents identified in Section 011100 "SUMMARY OF

WORK" for special conditions related to the requirements of the Vegetation and Natural Resource Maintenance and Warranty Work.

1.03 RELATED SECTIONS

A. Section 02 41 01 Tree Protection

B. Section 31 00 00 Earthwork

C. Section 31 25 00 Erosion and Sedimentation Control

D. Section 32 92 00 Sod Lawns

E. Section 32 93 00 Plants

1.04 REFERENCES

A. AOSA - Association of Official Seed Analysis: Rules for Testing Seeds, Journal of Seed Technology, 1991 Edition.

B. ICBN - International Code of Botanical Nomenclature.

C. ICNCP - International Code of Nomenclature of Cultivated Plants.

D. FSA - Federal Seed Act.

E. ANSI - American National Standards Institute: American Standard for Nursery Stock, ANSI Z60.1

F. MN/DOT - Standard Specifications for Construction, 2014 Edition

1.05 DEFINITIONS

A. PLS: Pure Live Seed

1.06 QUALIFICATIONS

A. Contractor shall perform all work under the direct control of an Installation Supervisor conforming to the minimum qualifications. The Contractor performing the work described in this section shall have successful experience with a minimum of ten projects of comparable size and scope. All proposers and subcontractors shall have successful experience with a minimum of five invasive species removal projects which include Buckthorns – *Rhamnus and Frangula spp.*, Black locust – *Robinia pseudoacacia* and Reed Canary Grass – Phalaris arundinacea removals.

B. Supervision: The Installation Supervisor shall directly supervise the work force. Contractor shall not change Installation Supervisors without the written approval of Landscape architect.

C. If Contractor, in opinion of Landscape Architect or Owner, fails to provide an Installation Supervisor conforming to the minimum qualifications the Contractor shall be considered in breach of the Agreement.

D. Installation Supervisor:

1. This person shall be present full-time during all installation and maintenance procedures.
2. This person must hold at least a Bachelor's degree in Natural Resources Management or related discipline.
3. This person must have a minimum of five years of experience in landscape installation and maintenance supervision, with experience or training in landscape management, entomology, pest control, soils, fertilizers and plant identification.

4. This person must hold a current commercial herbicide and pesticide applicators license.

E. Labor Force: Shall be thoroughly familiar with and trained in the work to be accomplished and perform in a competent, efficient manner acceptable to the Landscape architect.

1.07 JOB CONDITIONS

A. Notification of Unsatisfactory Conditions

1. Contractor shall examine and evaluate soils, and water levels, observe conditions under which work is to be performed, and notify Owner's Representative of unsatisfactory conditions. Contractor shall not proceed with the work until unsatisfactory conditions have been resolved.
2. Contractor shall notify Gopher State One-Call for all utilities locates prior to work initiation.

B. Unexpected Materials

1. If conditions detrimental to installation or plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, Contractor shall notify Owner's Representative.

1.08 MAINTENANCE PERIOD

A. Contractor shall warrant that all seeded or plugged grasses, sedges, and forbs will meet the Condition and Coverage Standards defined below for a three-year period after final acceptance of the plantings.

B. Contractor shall manage herbaceous weeds and invasive species as defined below for the 3-Year Maintenance Period after final acceptance of the plantings.

C. See Section 011100 "SUMMARY OF WORK" for special conditions related to the requirements of the Vegetation and Natural Resource Maintenance and Warranty Work.

PART 2 –MATERIALS

2.01 LIVE PLANTS (PLUGS & 4" CONTAINERS)

A. Live Plant (Plugs) Requirements:

1. Contractor shall provide container grown plants for all plug areas.
2. Plants stored on site shall be given proper horticultural care until installation. Proper horticultural care entails: watering, shading, providing proper drainage, preventing pest infestation and disease, providing adequate sunlight to ensure average healthy growth per that season of growth, and protecting from weather and mechanical damage. Plants shall be free from insects, diseases and weeds; and must show appearances of normal health and vigor.
3. Plants shall be true to their name as specified. Their origin shall be known to be local within a 200 mile radius of the project location. Substitution for plant origin beyond a 200 mile radius shall be submitted in writing to the Owner's Representative for approval.
4. All live plants and seed, including bare roots, live stakes, and all container grown

plants including shrubs and trees, shall be produced in nurseries that do not use neonicotinoids in the storing or production of the plants or the storing or production of the seed producing plants.

5. All plant material, including collected stock, shall comply with the State and Federal laws with respect to inspection for plant diseases and insect and weed infestations. All precautions that are customary in good trade practice shall be taken to insure the arrival of plants in good condition. Plants shall be packed in such a manner as to insure adequate protection against damage while in transit. The plant shall be carefully protected to insure that the plants are delivered in a good condition.
6. When shipment is made by enclosed vehicle, the vehicle shall be adequately ventilated and cooled to prevent "over-heating" in transit shall not exceed 78 degrees Fahrenheit. All plants shall be packed or covered in such a manner as to insure adequate protection against damage while in transport, storage, and during planting operations.
7. Species to be planted shall be those specified. Any substitution or change shall be approved in writing by the Owner's Representative.
8. Plants may be inspected and approved at the place of growth, for compliance, with specification requirements for quality, size and variety. All plants to have white root tissue developed to bottom and edges of pots at time of delivery. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work. Inspection of plants by the Owner's Representative before digging shall be at the option and expense of the Contractor.
9. All plants shall be free of unacceptable weed species, pests, root or crown rot, mold and debris. All plants shall have been in current pot a minimum of six (6) weeks.
10. Plants shall be free of the project location's state identified noxious weed seeds.
11. Plants shall be free of woody circling roots.

B. Live Plant (Container) Requirements:

1. See Specification 329300 "Plants" for requirements.

C. Live Plant Mixtures:

1. **4" Container Woodland Mix**

Mix and disperse all species at equal rates within mix boundary per Drawings.

Common Name	*Latin Name*
• Cinnamon Fern	*Osmunda cinnamomea*
• Ostrich Fern	*Matteuccia struthiopteris*
• Wild Ginger	*Asarum canadense*
• Pagoda Dogwood	*Cornus alternifolia*
• Zigzag Goldenrod	*Solidago flexicaulis*
• Dutchman Breeches	*Dicentra cucullaria*
• Hepatica sp.	*Hepatica sp.*
• Bloodroot	*Sanguinaria canadensis*
• Trillium sp.	*Trillium sp.*
• Pennsylvania Sedge	*Carex pensylvanica*

2. **Prairie Plug Mix**

Mix and disperse all species at equal rates within mix boundary per Drawings.

Common Name	*Latin Name*
• Anise Hyssop	*Agastache foeniculum*
• Lead Plant	*Amorpha canescens*
• Butterfly Milkweed	*Asclepias tuberosa*
• Button Blazingstar	*Liatris aspera*
• Gray Goldenrod	*Solidago nemoralis*
• Large-flowered Beardtongue	*Penstemon grandiflorus*
• Prairie Dropseed	*Sporobolus heterolepis*

3. **Biofiltration Basin Plug Mix**

Mix and disperse all species at equal rates within mix boundary per Drawings.

Common Name	*Latin Name*
• Swamp Milkweed	*Asclepias incarnata*
• Prairie Blazingstar	*Liatris pycnostachya*
• Canada Anemone	*Anemone canadensis*
• Iron Weed	*Vernonia fasciculata*
• Giant Hyssop	*Agastache foeniculum*
• Blue Vervain	*Verbena hastata*
• Mountain Mint	*Pycnanthemum virginianum*
• Culver's Root	*Veronicastrum virginicum*

2.02 SEED MIXTURES

A. Seed Requirements

1. Seeds shall be blended by the vendor and the mixture and ratio shall be guaranteed in writing to be as specified by percentage or weight in the Seed and Plant Lists. Seed testing indicating an 80% or higher viability must be supplied to Owner's Representative. This is a submittal required of the Contractor prior to final payout.
2. All legumes shall be inoculated with the proper rhizobia and at the appropriate time prior to planting.
3. All seed shall be packed and covered in such a manner as to insure adequate protection against damage and maintain dormancy while in transit, storage or during planting operations.
4. All seed shall be true to their name as specified. Their origin shall be known to be local within a 200 mile radius of the project location. Plant origins beyond a 200 mile radius shall be approved in writing by the Owner's Representative.
5. Seeds shall be free of the project location's state identified noxious weed seeds.

B. Seed Mixtures:

1. **SEED A: Custom SSNS Savanna and Woodland Edge Mix**:

Description: custom mix for wooded and stream areas

Seeding Rate: 10 lb/acre (52 seeds/sq. ft)

Common Name	*Latin Name*	*% of Mix*	*Seeds/ft²*	*Total*
Grasses				
• Big Bluestem	*Andropogon gerardii*	8	2.9	0.80 PLS lb
• Sideoats Grama	*Bouteloua curtipendula*	14	3.1	1.40 PLS lb
• Ear-leaved Brome	*Bromus latiglumis*	4	1.1	0.40 PLS lb
• Silky Wild Rye	*Elymus villosus*	12	2.4	1.20 PLS lb
• Virginia Wild Rye	*Elymus viginicus*	16	2.5	1.60 PLS lb
• Bottlebrush Grass	*Hystrix patula*	8	2.2	0.80 PLS lb
• Little Bluestem	*Schizachyrium scoparium*	6	3.3	0.60 PLS lb
• Indiangrass	*Sorphastrum nutans*	10	4.4	1.00 PLS lb
Sedges & Rushes				
• Plains Oval Sedge	*Carex brevior*	0.6	0.6	0.06 PLS lb
• Field Oval Sedge	*Carex molesta*	0.4	0.4	0.04 PLS lb
• Spreading Oval Sedge	*Carex normalis*	0.4	0.4	0.04 PLS lb
• Long-beaked Sedge	*Carex sprengelii*	0.6	0.2	0.06 PLS lb
Forbs				
• Anise Hyssop	*Agastache foeniculum*	0.4	1.3	0.04 PLS lb
• Columbine	*Aquilegia canadensis*	0.4	0.6	0.04 PLS lb
• Common Milkweed	*Asclepias syriaca*	1.6	0.2	0.16 PLS lb
• Smooth Blue Aster	*Aster laevis*	0.8	1.6	0.08 PLS lb
• Calico Aster	*Aster lateriflorus*	0.2	1.8	0.02 PLS lb
• Prairie Coreopsis	*Coreopsis palmata*	0.4	0.1	0.04 PLS lb
• Tall Coreopsis	*Coreopsis tripteris*	0.8	0.4	0.08 PLS lb
• Purple Prairie Clover	*Dalea purpurea*	3.2	2.1	0.32 PLS lb
• Sweet Joe Pye Weed	*Eupatorium purpureum*	0.8	1.2	0.08 PLS lb
• Cream Gentian	*Gentiana flavida*	0.4	2.1	0.04 PLS lb
• Maximillian's Sunflower	*Helianthus maximiliani*	1.6	0.8	0.16 PLS lb
• Ox-eye Sunflower	*Heliopsis helianthoides*	1.6	0.4	0.16 PLS lb
• False Boneset	*Kuhnia eupatorioides*	0.4	0.5	0.04 PLS lb
• Wild Bergamot	*Monarda fistulosa*	0.6	1.5	0.06 PLS lb
• Common Evening Primrose	*Oinothera biennis*	0.4	1.3	0.04 PLS lb
• Sweet Cicely	*Osmorhiza claytoni*	0.6	0.1	0.06 PLS lb
• Solomon's Seal	*Polygonatum canaliculatum*	0.4	0.0	0.04 PLS lb
• Prairie Wild Rose	*Rosa arkansana*	0.6	0.1	0.06 PLS lb
• Black-eyed Susan	*Rudbeckia hirta*	0.8	2.7	0.08 PLS lb
• Brown-eyed Susan	*Rudbeckia triloba*	0.8	1.0	0.08 PLS lb
• Late Figwort	*Scrophularia marilandica*	0.2	1.2	0.02 PLS lb
• Stiff Goldenrod	*Solidago rigida*	0.4	0.6	0.04 PLS lb
• Early Meadow Rue	*Thalictrum dioicum*	0.4	0.1	0.04 PLS lb
• Ohio Spiderwort	*Tradescantia ohiensis*	0.4	0.1	0.04 PLS lb
• Culver's Root	*Veronicastrum virginicum*	0.2	5.9	0.02 PLS lb
• Golden Alexanders	*Zizia aurea*	1.6	0.6	0.16 PLS lb

2. **SEED B: Dry Prairie Mix (MN 35-221):**

Description: state seed mix for dry prairie area

Seeding Rate: 36.5 lb/acre (98.7 seeds/sq. ft)

Common Name	*Latin Name*	*% of Mix*	*Seeds/ft2*	*Total*
Grasses				
• Big Bluestem	*Andropogon gerardii*	1.92	2.6	0.70 PLS lb
• Sideoats Grama	*Bouteloua curtipendula*	8.22	6.6	3.00 PLS lb
• Blue Grama	*Bouteloua gracilis*	1.37	7.3	0.50 PLS lb
• Prairie Brome	*Bromos kalmia*	2.00	2.1	0.73 PLS lb
• Canada Wild Rye	*Elymus canadensis*	2.74	1.9	1.00 PLS lb
• June Grass	*Koeleria cristata*	0.68	18.4	0.25 PLS lb
• Little Bluestem	*Schizachyrium scoparium*	8.22	16.5	3.00 PLS lb
• Indiangrass	*Sorghastrum nutans*	1.92	3.1	0.70 PLS lb
• Prairie Dropseed	*Sporobolus heterolepis*	0.33	0.7	0.12 PLS lb
Forbs				
• Anise Hyssop	*Agastache foeniculum*	0.16	2.0	0.06 PLS lb
• Lead Plant	*Amorpha canescens*	0.25	0.5	0.09 PLS lb
• Butterfly Milkweed	*Asclepias tuberosa*	0.16	0.1	0.06 PLS lb
• Heath Aster	*Aster ericoides*	0.11	2.9	0.04 PLS lb
• Smooth Blue Aster	*Aster laevis*	0.16	1.2	0.06 PLS lb
• Canada Milk Vetch	*Astragalus canadensis*	0.16	0.4	0.06 PLS lb
• Prairie Coreopsis	*Coreopsis palmata*	0.16	0.2	0.06 PLS lb
• White Prairie Clover	*Dalea candidum*	0.16	0.4	0.06 PLS lb
• Purple Prairie Clover	*Dalea purpurea*	0.52	1.3	0.19 PLS lb
• Showy Tick Trefoil	*Desmodium canadense*	0.16	0.1	0.06 PLS lb
• Showy Sunflower	*Helianthus laetiflorus*	0.16	0.1	0.06 PLS lb
• Button Blazingstar	*Liatris aspera*	0.11	0.2	0.04 PLS lb
• Wild Bergamot	*Mondarda fistulosa*	0.16	1.5	0.06 PLS lb
• Large-flowered Beardtongue	*Penstemon grandifloras*	0.16	0.3	0.06 PLS lb
• Black-eyed Susan	*Rudbeckia hirta*	0.85	10.5	0.31 PLS lb
• Gray Goldenrod	*Solidago nemoralis*	0.11	4.4	0.04 PLS lb
• Stiff Goldenrod	*Solidago rigida*	0.16	0.9	0.06 PLS lb
• Hoary Vervain	*Verbena stricta*	0.36	1.3	0.13 PLS lb
Cover Crop				
• Oats/Winter Wheat	*Avena sativa/Triticum aestivum*	68.49	11.0	25.0 PLS lb

3. **SEED C: Mesic Prairie Mix (MN 35-241):**

Description: state seed mix for mesic prairie area

Seeding Rate: 36.5 lb/acre (70.4 seeds/sq. ft)

Common Name	*Latin Name*	*% of Mix*	*Seeds/ft²*	*Total*
Grasses				
• Slender Wheatgrass	*Agropyron trachycaulum*	2.74	2.5	1.00 PLS lb
• Big Bluestem	*Andropogon gerardii*	5.48	7.3	2.00 PLS lb
• Sideoats Grama	*Bouteloua curtipendula*	4.38	3.5	1.60 PLS lb
• Prairie Brome	*Bromus kalmia*	1.37	1.5	0.50 PLS lb
• Canada Wild Rye	*Elymus canadensis*	3.21	2.2	1.17 PLS lb
• Switchgrass	*Panicum virgatum*	0.16	0.3	0.06 PLS lb
• Little Bluestem	*Schizachyrium scoparium*	4.38	8.8	1.60 PLS lb
• Indiangrass	*Sorghastrum nutans*	5.48	8.8	2.00 PLS lb
• Prairie Dropseed	*Sporobolus heterolepis*	0.19	0.4	0.07 PLS lb
Forbs				
• Anise Hyssop	*Agastache foeniculum*	0.16	2.0	0.06 PLS lb
• Lead Plant	*Amorpha canescens*	0.16	0.4	0.06 PLS lb
• Common Milkweed	*Asclepias syriaca*	0.11	0.1	0.04 PLS lb
• Butterfly Milkweed	*Asclepias tuberosa*	0.11	0.1	0.04 PLS lb
• Heath Aster	*Aster ericoides*	0.08	2.2	0.03 PLS lb
• Smooth Blue Aster	*Aster laevis*	0.16	1.2	0.06 PLS lb
• Canada Milk Vetch	*Astragalus canadensis*	0.16	0.4	0.06 PLS lb
• White Prairie Clover	*Dalea candidum*	0.16	0.4	0.06 PLS lb
• Purple Prairie Clover	*Dalea purpurea*	0.52	1.3	0.19 PLS lb
• Showy Tick Trefoil	*Desmodium canadense*	0.16	0.1	0.06 PLS lb
• Showy Sunflower	*Helianthus laetiflorus*	0.16	0.1	0.06 PLS lb
• Ox-eye Sunflower	*Heliopsis helianthoides*	0.36	0.3	0.13 PLS lb
• Button Blazingstar	*Liatris aspera*	0.08	0.2	0.03 PLS lb
• Prairie Blazingstar	*Liatris pycnostachya*	0.08	0.1	0.03 PLS lb
• Wild Bergamot	*Monarda fistulosa*	0.16	1.5	0.06 PLS lb
• Black-eyed Susan	*Rudbeckia hirta*	0.85	10.5	0.31 PLS lb
• Stuff Goldenrod	*Solidago rigida*	0.16	0.9	0.06 PLS lb
• Blue Vervain	*Verbena hastata*	0.11	1.4	0.04 PLS lb
• Hoary Vervain	*Verbena stricta*	0.16	0.6	0.06 PLS lb
• Golden Alexanders	*Zizia aurea*	0.16	0.2	0.06 PLS lb
Cover Crop				
• Oats/Winter Wheat	*Avena sativa/Triticum aestivum*	68.49	11.0	25.0 PLS lb

4. **SEED D: Wet Prairie Mix (MN 34-262):**

Description: state seed mix for wet prairie area

Seeding Rate: 14.5 lb/acre (128.4 seeds/sq. ft)

Common Name	*Latin Name*	*% of Mix*	*Seeds/ft²*	*Total*
Grasses				
• Big Bluestem	*Andropogon gerardii*	6.9	3.7	1.00 PLS lb
• Fringed Brome	*Bromus ciliates*	10.34	5.5	1.50 PLS lb
• Blue Joint Grass	*Calamagrostis canadensis*	0.28	4.1	0.04 PLS lb
• Virginia Wild Rye	*Elymus virginicus*	12.07	2.7	1.75 PLS lb
• American Manna Grass	*Glyceria grandis*	1.03	3.9	0.15 PLS lb
• Fowl Manna Grass	*Glyceria striata*	0.76	6.5	0.11 PLS lb
• Switchgrass	*Panicum virgatum*	5.17	3.9	0.75 PLS lb
• Fowl Bluegrass	Poa palustris	1.38	9.6	0.20 PLS lb
• Indiangrass	*Sorghastrum nutans*	3.45	2.2	0.50 PLS lb
• Prairie Cord Grass	*Spartina pectinata*	3.45	1.2	0.50 PLS lb
Sedges & Rushes				
• Broad-leaved Woolly Sedge	*Carex pellita*	0.34	0.5	0.05 PLS lb
• Tussock Sedge	*Carex stricta*	0.14	0.4	0.02 PLS lb
• Brown Fox Sedge	*Carex vulpinoidea*	0.69	3.7	0.10 PLS lb
• Green Bulrush	*Scirpus atrovirens*	0.69	16.9	0.10 PLS lb
• Woolgrass	*Scirpus cyperinus*	0.21	18.7	0.03 PLS lb
Forbs				
• Canada Anemone	*Anemone canadensis*	0.21	0.1	0.03 PLS lb
• Swamp Milkweed	*Asclepias incarnata*	0.55	0.1	0.08 PLS lb
• Swamp Aster	*Aster puniceus*	0.55	2.4	0.08 PLS lb
• Flat-topped Aster	*Aster umbellatus*	0.34	1.2	0.05 PLS lb
• Showy Tick Trefoil	*Desmodium canadense*	3.45	1.0	0.50 PLS lb
• Joe Pye Weed	*Eupatorium maculatum*	0.28	1.4	0.04 PLS lb
• Boneset	*Eupatorium perfoliatum*	0.21	1.8	0.03 PLS lb
• Sneezeweed	*Helenium autumnale*	0.34	2.4	0.05 PLS lb
• Sawtooth Sunflower	*Helianthus grosseserratus*	0.34	0.3	0.05 PLS lb
• Prairie Blazingstar	*Liatris pycnostachya*	0.14	0.1	0.02 PLS lb
• Great Blue Lobelia	*Lobelia siphilitica*	0.07	1.8	0.01 PLS lb
• Monkey Flower	*Mimulus ringens*	0.07	8.4	0.01 PLS lb
• Mountain Mint	*Pycnanthemum virginianum*	0.55	6.5	0.08 PLS lb
• Grass-leaved Goldenrod	*Solidago graminifolia*	0.14	2.6	0.02 PLS lb
• Blue Vervain	*Verbena hastata*	1.03	5.1	0.15 PLS lb
• Common Ironweed	*Vernonia fasciculata*	0.21	0.3	0.03 PLS lb
• Culver's Root	*Veronicastrum virginicum*	0.14	5.9	0.02 PLS lb
• Golden Alexanders	*Zizia aurea*	1.72	1.0	0.25 PLS lb
Cover Crop				
• Oats/Winter Wheat	*Avena sativa/Triticum aestivum*	42.76	2.7	6.20 PLS lb

5. **SEED E: Dry Swale/Pond Mix (MN 33-262):**

Description: state seed mix for biofiltration basin areas

Seeding Rate: 44 lb/acre (163.2 seeds/sq. ft)

Common Name	*Latin Name*	*% of Mix*	*Seeds/ft²*	*Total*
Grasses				
• Slender Wheatgrass	*Agropyron trachycaulum*	9.09	10.1	4.00 PLS lb
• Big Bluestem	*Andropogon gerardii*	3.41	5.5	1.50 PLS lb
• American Sloughgrass	*Beckmannia syzigachne*	3.41	27.5	1.50 PLS lb
• Fringed Brome	*Bromus ciliates*	3.41	5.5	1.50 PLS lb
• Canada Wild Rye	*Elymus canadensis*	9.09	7.6	4.00 PLS lb
• Virginia Wild Rye	*Elymus virginicus*	5.68	3.9	2.50 PLS lb
• Switchgrass	*Panicum virgatum*	0.91	2.1	0.40 PLS lb
• Fowl Bluegrass	*Poa palustris*	3.64	76.4	1.60 PLS lb
• Indiangrass	*Sorghastrum nutans*	3.41	6.6	1.50 PLS lb
Forbs				
• Swamp Milkweed	*Asclepias incarnata*	0.14	0.1	0.06 PLS lb
• Purple Prairie Clover	*Dalea purpurea*	0.20	0.6	0.09 PLS lb
• Showy Tick Trefoil	*Desmodium canadense*	0.20	0.2	0.09 PLS lb
• Ox-eye Sunflower	*Heliopsis helianthoides*	0.20	0.2	0.09 PLS lb
• Black-eyed Susan	*Rudbeckia hirta*	0.16	2.4	0.07 PLS lb
• Blue Vervain	*Verbena hastata*	0.23	3.4	0.10 PLS lb
Cover Crop				
• Oats/Winter Wheat	*Avena sativa/Triticum aestivum*	56.82	11.0	25.0 PLS lb

2.02 SEED AND PLUG SUBSTITUTIONS

A. Species to be planted shall be those specified on the plans. Any substitution or change shall be approved prior to use in writing by the Landscape architect.
B. If proof is submitted that any seed or plant specified is not obtainable, due to conditions beyond the control of the Contractor and for reasons other than cost changes since submittal of Proposal prices, a proposal will be considered for use of the nearest equivalent variety with corresponding adjustment of Contract price.
C. Substantiate such proof in writing no later than 30 days after award of Contract.
D. The above provisions shall not relieve Contractor of the responsibility for obtaining specified seed in advance if special growing conditions or other arrangements must be made in order to supply specific materials.

2.03 MAINTENANCE PERIOD REPLACEMENT SEEDS AND PLANT

A. Match existing genus, species, and size.
B. Meet requirements of these specifications.
C. Meet requirements of ANSI Z60.1, ICBN and ICNCP

2.04 HERBICIDES

A. For general foliar treatments
    1. Glyphosate
    2. Apply per manufacturer's specifications
B. For general foliar treatments within 20' of water bodies
    1. Glyphosate approved for aquatic use
    2. Apply per manufacturer's specifications
C. For spot treatment of Black Locust leaves, stems or cut stumps
    1. A mixture of:
        - Garlon 4 Ultra or approved generic Triclopyr equivalent
        - Milestone or approved generic Aminopyralid equivalent
        - Aquamix Oil Plus or approved generic penetrating oil w/ emulsifier equivalent
    2. Apply per manufacturer's specifications
D. Admixtures
    1. Surfactant
    2. Aquamix Oil Plus or approved generic penetrating oil w/ emulsifier equivalent
    3. Other products approved by the Landscape Architect
    4. Mix and apply per manufacturer's specifications

PART 3 – EXECUTION

3.01 SEEDING AND PLANTING SCHEDULE

A. At least three weeks prior to beginning work in each area, Contractor shall submit a seeding plan for approval by the Owner's Representative. This plan shall include proposed methods of site preparation, seeding, species, quantities, and types of propagules, proposed surface preparation and equipment.

3.02 MANAGEMENT FOR HERBACEOUS WEEDS AND INVASIVE SPECIES

A. The Contractor shall manage for herbaceous weeds and invasive species for all areas within the Seeding Limits as shown on L2.3/2 of the plans.

B. The Contractor shall begin management for herbaceous weeds and invasive species as soon as the growing season begins in 2020.

C. **The Contractor shall coordinate all invasive species management activities to be performed prior to any grading/earthwork work to ensure no target species are covered by site grading operations prior treatment.**

D. **The project site contains Black locust – *Robinia pseudoacacia,* Prickly Ash – *Zanthoxylum americanum,* and Buckthorns – *Rhamnus and Frangula spp.* which require specific control standards described in Section 4.03 CONDITIONS AND COVERAGE STANDARDS.**

E. The Contractor shall coordinate timing and methods for eradication of all herbaceous weeds and invasive species throughout the 2020, 2021, and 2022 growing seasons. The Contractor shall thoroughly inspect the site once per month during the growing season (April – October) during the 3-Year Maintenance Period and perform eradication of all invasive species, including re-sprouts of woody invasives removed previously as well as all herbaceous invasive plants as listed below in weed control plan.

F. The Contractor shall provide to the Landscape Architect a detailed management inspection report, including amount of staff people on site, type and quantity of herbicide used, type of equipment used if any, and a general description of the work performed, including areas in which invasive plants were controlled and if further action should be taken.

G. No noxious weed shall be allowed to go to seed at any point during the contract period.

H. Weed and Invasive Species Management:

1. The following species are considered unacceptable and shall be herbicided or manually removed:

   Garlic Mustard – *Alliaria petiolata*, Buckthorns – *Rhamnus and Frangula spp*., Honeysuckles – *Exotic Lonicera spp*., Motherwort – *Leonurus cardiaca*, Narrowleaf Bittercress – *Cardimine impatiens*, Purple Loosetrife – *Lythrum salicaria*, Cattails - *Typha spp*., Reed Canary Grass – *Phalaris arundinacea*, Giant reed grass – *Phalaris arundinacea*, Smooth Brome – *Bromus inermis*, Butter and eggs – *Linaria vulgaris*, Common tansy – *Tanacetum vulgare*, Hoary alyssum – *Berteroa incana*, Yellow iris – *Iris pseudacorus*, Crown Vetch - *Coronilla varia*, Bird's Foot Trefoil – *Lotus corniculatus*, Yellow Sweet Clover – *Melilotus officinalis*, White Sweet Clover – *Melilotus alba*, Canada Thistle – *Cirsium arvense*, Musk thistle – *Carduus nutans*, Bull thistle – *Cirsium vulgare*, Wild parsnip – *Pastinaca sativa*, Amur silver grass – *Miscanthus sacchariflorus*, Curly

Dock – *Rumex crispus*, Giant Ragweed – *Ambrosia trifida*, Common Ragweed – *Ambrosia artemisiifolia*, Foxtail – *Setaria spp.*, Leafy Spurge – *Euphorbia esula*, Japanese Knotweed – *Polygonum cuspidatum*, Asian Mulberry – *Morus alba*, Black locust – *Robinia pseudoacacia*, Amur maple – *Acer ginnala*, Russian Olive – *Elaeagnus angustifolia*, Siberian peashrub – *Caragana arborescens*, Japanese barberry – *Berberis thunbergii*, Siberian elm – *Ulmus pumila*, Prickly Ash – *Zanthoxylum americanum.*

I. Contractor shall submit a weed control plan formatted in a table form listing the weeds, different herbicides used for each weed, and each weed's growing seasons. The weed control plan shall be organized by weed growth in ascending order by date.

3.03 SEEDING AND PLANTING AREAS PREPARATIONS

A. **Areas Outside of Grading Limits**:

1. Perform all work in the following schedule:

Timing	*Activity*
Beginning of 2020 growing season	1. Begin invasive species management program
2 weeks before seeding	2. Herbicide Application 1: broadcast spray all planting areas
5-7 days after Herbicide Application 1	3. Mow or Burn: depending on site conditions
As Needed	4. Herbicide Application 2: broadcast spray all planting areas
> 2 weeks after last spray application	5. Conduct field review with Landscape Architect to approve seedbed preparation.
	6. Additional seedbed preparation as instructed
	7. Begin seeding only after final approval

B. **Area within the Grading Limits**:

1. The project area shall be fine graded before the seeding work begins (to be done by the general contractor or excavator).
2. Perform all work in the following schedule:

Timing	*Activity*
Beginning of 2020 growing season	1. Begin invasive species management program
Pre-preparation	2. Conduct field review with Landscape Architect to assess final grading and seedbed preparation requirements
2 weeks before seeding	3. Herbicide Application 1: broadcast spray all planting areas with actively growing vegetation
5-7 days after Herbicide Application 1	4. Remove all vegetation material: mow or burn as needed
As Needed	5. Herbicide Application 2: broadcast spray all planting areas with actively growing vegetation
> 2 weeks after last spray application	6. Disk or till the soil to a depth of 4 inches
	7. Harrow or rake the soil to create a firm, smooth seedbed
	8. Pick all rocks that exceed 4 inches in diameter
	9. Conduct field review with Landscape Architect to approve seedbed preparation.
	10. Additional seedbed preparation as instructed
	11. Begin seeding only after final approval

C. **Steep Slope Area**:

1. Field verify extents with Landscape Architect.
2. Using a Backpack sprayer, apply Glyphosate or generic equivalent herbicide as per manufacturer's directions. Allow a minimum of 14 days before disturbing the vegetation with other procedures.
3. Do not spray existing Maple sapling grove. Field verify extents with Landscape Architect.
4. Do not mow.
5. Remove all dead and down material and all existing fence posts and barbed wire.
6. Install seed with the Broadcast Method only.
7. Hand rake seed into soil.

3.04 MOWING AND BURNING:

A. Depending on site conditions and slope mow or burn all seeding areas.

B. Mowing shall target vegetation less than 4" dbh.

C. Mowing deck shall be positioned between 3-5" from the ground.

D. Contractor to remove and dispose of all mowed material prior to seeding.

3.05 FOLIAR SPRAYING

A. Site preparation for seeding area at least 14 days prior to seeding of any areas shall be a foliar spray of glyphosate, to be added in areas with large numbers of broadleaf species present. Contractor must inspect site with Owner's Representative to determine spray mixture prior to any spraying. Obtain approval by Owner's Representative before seeding. Owner's Representative will approve seeding after site has been herbicided and weeds are dead.

B. Application rates for spot spraying with backpack sprayers:

1. 3-quart 6% concentrate "Round Up" or generic equivalent (Use glyphosate approved for aquatic use only within 20' of water bodies).
2. Surfactant shall be used in all spray applications

3.06 SEEDING DATES

A. Seeding shall be preferentially conducted as a late fall dormant seeding (after October 15, but before the soil starts to freeze)

3.07 SEEDING

A. Seeding shall occur as shown on the Plans.

B. Owner's Representative shall be notified 24 hours prior to beginning the seeding operations.

C. Immediately prior to seeding operations, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. The drill shall be calibrated at ½ the appropriate seeding rate and each area shall be drilled twice at opposite directions to help insure an even distribution. Seed shall be sown at approximately 1/8" to ¼" deep and no deeper than ½" deep.

D. Seeding will take place using a “No-Till” drill with 3 compartments, except on slopes deemed too steep for “No-Till” drill method, areas where trees need to be protected, or areas deemed too wet (all as determined by Owner’s Representative). Drill shall be checked at the end of each seeding pass to ensure even distribution of seed through each pass.

E. Cover crop shall be sown separately from forbs and grasses unless drill meters out forbs and grasses separately from cover crop.

F. If a broadcast method of seeding is used, the following requirements shall be followed:

1. The broadcast method will use broadcast seeding equipped with an agitator that effectively prevents seed from bridging or plugging. Seed shall be broadcast twice over each area to help insure even distribution. The seeded area shall be hand- raked or dragged with an implement to the extent necessary to cover a majority of the seed with 1/8” to ¼” of soil.

G. Within 12 hours, if conditions permit or as soon thereafter as practical, all “No-Till” drill seeded areas shall be rolled at right angles to the line of run-off with an approval type roller or cultipacker to compact the seedbed to place the seed in contact with the soil.

H. No fertilizer shall be applied to any seeded areas for any reason.

I. No machinery shall run across seeded area after seeding operations have been completed. Observance of machinery or evidence of machinery on seeded areas after seeding operations have been completed will require corrective actions as determined by the Landscape Architect. Corrective actions may include but are not limited to:

1. Removal of erosion control material
2. Regrading
3. Decompaction
4. Reseeding
5. Installation of erosion control material

3.08 WATER FOR SEEDING

A. For contract price purposes, water will be made available by the Contractor.

B. All seeded and planted areas are to receive a total of 1” of water by precipitation or watering or irrigation weekly.

C. Do not take water from the lake.

D. The project includes the installation of Yard Hydrants, which may be used for the purposes of irrigation.

E. Watering is considered incidental to seeding and planting maintenance, establishment, and 3-Year Maintenance Period.

3.09 EROSION CONTROL

A. Continue erosion control methods and maintain previously installed materials.

B. See Civil Sheet C1 and Specification “310000 Earthworks” for erosion control blanket requirements

C. In areas without erosion control blanket, install straw mulch protection over all seeded areas. Verify conditions on the site are suitable to receive work prior to commencing.

D. Straw Mulch

1. Application Rates: Mulch shall be installed at a rate of 46 lbs. per 1,000 s.f. in areas seed with native seed.
2. Crimp in straw mulch.
3. Final crimping pass shall occur across the slope.

E. Repair all soil erosion during a period of three months after receipt of final acceptance. Repair all erosion rills greater than one inch. Repair all eroded areas within 48 hours of receipt of notification from Owner or Engineer.

F. All erosion control repairs and/or measures shall be considered incidental to the seed installation, unless noted otherwise.

3.10 CLEAN-UP AND PROTECTION

A. During work, Contractor shall store materials and equipment where directed, keeping pavements clean and work areas and adjoining areas in an orderly condition. Unused materials and plant material pots and packaging should be disposed of promptly.

B. Contractor shall protect landscape work and materials from damage due to landscape operations, operations by other trades and trespassers. Contractor shall maintain protection during installation and maintenance periods, and shall treat, repair or replace damaged landscape work as directed by Owner's Representative.

3.11 INSPECTION AND ACCEPTANCE

A. Owner's Representative reserves the right to inspect seeds and plant materials, either at place of growth or at site before planting, for compliance with requirements for name, variety, size, quantity, quality and mix proportion.

B. Upon request, Contractor shall supply written affidavit certifying composition of Contractor supplied seed mixtures and integrity of plant materials with respect to species, variety, source and germination.

C. Final Acceptance:
   1. Acceptance of Installation:
      a. When the seeding or planting is completed, the Owner's Representative will, upon request, make a final inspection to determine acceptability.
   2. Acceptance of Warranted Work (end of contract):
      a. Three years after the seed and plant installation is completed, the Owner's Representative will, upon request, make a final inspection to determine acceptability.

D. Performance Standards: Contractor shall be responsible for the satisfactory growth of plants, all areas seeded, and all herbaceous weeds and invasive species management requirements under the Contract until final acceptance of the work at the end of the contract period.

E. Non-Compliance: Where inspected seeding work does not comply with the requirements, Contractor shall replace rejected work until inspected again by the Owner's Representative and found to be acceptable. Rejected plants and materials shall be removed promptly from the project site. Contractor shall re-sow at half the original seeding rate and replant unhealthy plants in failed areas of live plantings within 2 weeks of Owner's Representative's notification.

3.12 FINAL CLEAN-UP

A. Upon completion of the work and before preliminary acceptance and final installation payment will be made, the Contractor shall clean and remove from the work site surplus and discarded materials, temporary structures, and debris of every kind.

B. The Contractor shall leave the work site in a neat and orderly condition equal or better than that which originally existed.

C. Surplus materials removed from the work site shall be disposed of at locations approved by the Owner's Representative.

PART 4 – 3-YEAR MAINTENANCE PERIOD

4.01 DESCRIPTION:

A. At the request and direction of the Minnehaha Creek Watershed District or the Owner, perform the maintenance work described below during the 3-Year Maintenance Period commencing with Final Acceptance of the work as defined above.

B. The requirements of the 3-Year Maintenance Period apply to:

1. All seeded and planted areas
2. Management of all herbaceous weeds and invasive species within the Seeding Limits shown on L2.3/2 in the plans.

C. For contract price purposes, 3-Year Maintenance Schedule:

1. Prior to Final Acceptance of seeded and planted areas, the Contractor shall supply the Owner with the proposed maintenance schedule and methods for each operation. Work which may be included during the 3-Year Maintenance Period includes:
    a. Inspection and reporting
    b. Prescribed burning
    c. Mowing
    d. Herbicide application
    e. Manual weed removal
    f. Replanting and reseeding
    g. Repair, maintenance, and replacement of erosion control materials
2. Additional work may be requested as needed in response to the Inspection and Reporting described below. Items which may be requested by the Owner, and for which the Contractor must be prepared to complete, are labeled as variable below.
3. All work included in the Maintenance Schedule and all work requested in response to the Inspection and Reporting is considered incidental to seeding and planting maintenance, establishment, and the 3-Year Maintenance Period.

4.02 GENERAL:

A. Protection of Existing Conditions: Use every reasonable precaution to prevent damage to existing conditions such as structures, utilities, plant materials and walks on or adjacent to the site of the work.

B. Barriers: Provide barricades, fences or other barriers as necessary to protect existing conditions from damage during maintenance operations.

C. Hazardous Operations: Do not store materials or equipment, do not allow burning, or operate or park equipment under the branches of existing trees and shrubs.

D. Notification: Give written notification of damaged plants and structures.

E. Exceptions: Contractor shall not be held responsible for failures due to vandalism or causes beyond their control.

4.03 CONDITIONS AND COVERAGE STANDARDS:

A. Growth and coverage of seeding and invasive species management shall meet the following standards:

1. STAGE 1 - 3 months after Final Acceptance of Plant Establishment:
   - All planted areas show foliage of normal density, size, and color. One hundred percent of herbaceous plugs shall be alive. This three-month period shall not include the dormant period of November 1 through May 1. For example, if the final acceptance occurs on October 15, the warranty shall extend until June 15th.
   - All Buckthorns – *Rhamnus and Frangula spp.* must be a minimum of 80% controlled.
   - All Black locust – *Robinia pseudoacacia* must be a minimum of 80% controlled.
   - All Prickly Ash - *Zanthoxylum americanum* must be a minimum of 80% controlled.
2. STAGE 2 - End of 1st full growing season (2021):
   - Seedlings of at least three native grass or sedge species and five native forb species shall be widely dispersed through seeded areas. No areas of bare soil larger than nine square feet shall exist.
   - All Buckthorns – *Rhamnus and Frangula spp.* must be a minimum of 90% controlled.
   - All Black locust – *Robinia pseudoacacia* must be a minimum of 90% controlled.
   - All Prickly Ash - *Zanthoxylum americanum* must be a minimum of 90% controlled.
3. STAGE 3 - End of 2nd full growing season (2022):
   - Seedlings of at least five native grass or sedge species and eight native forb species shall be widely dispersed through the seeded areas. No areas of bare soil larger than four square feet shall exist.
   - All Buckthorns – *Rhamnus and Frangula spp.* must be a minimum of 95% controlled.
   - All Black locust – *Robinia pseudoacacia* must be a minimum of 95% controlled.
   - All Prickly Ash - *Zanthoxylum americanum* must be a minimum of 95%

controlled.

4. STAGE 4 - End of 3rd full growing season (2023):
    - Seedlings of at least five native grass or sedge species and eight native forb species shall be widely dispersed through the seeded areas. No areas of bare soil larger than two square feet shall exist.
    - All Buckthorns – *Rhamnus and Frangula spp.* must be a minimum of 100% controlled.
    - All Black locust – *Robinia pseudoacacia* must be a minimum of 100% controlled.
    - All Prickly Ash - *Zanthoxylum americanum* must be a minimum of 100% controlled.

4.04 INSPECTION AND REPORTING DURING 3-YEAR MAINTENANCE PERIOD:

A. Conditions and Coverage

1. Upon completion of the seeding and plant establishment work, request a review by the Minnehaha Creek Watershed District to determine whether the work conforms to the requirements of the specifications.
2. Request a review by the Minnehaha Creek Watershed District at the end of Stages 1, 2, 3, and 4 to confirm plant and seed establishment success.
3. Following the reviews, the Minnehaha Creek Watershed District will submit to Contractor written notification of acceptance or of corrective action required.
4. Final acceptance will be issued by the Minnehaha Creek Watershed District after all corrective action has occurred.

B. Herbaceous weeds and invasive species:

1. Once a month (May through October) during the 3-Year Maintenance Period inspect for invasive weed encroachment, dead plants and erosion problems.
2. Prepare and submit to the Minnehaha Creek Watershed District an email report after each inspection describing the results of the inspection and recommendations for the next maintenance visit.

4.05 CORRECTIVE WORK DURING 3-YEAR MAINTENANCE PERIOD:

A. Reseed, replant, and otherwise correct work which does not meet the Condition and Coverage standards at the end of the Maintenance period, without cost to the Owner.

B. Perform corrective work in conformance with the requirements of this Specification.

C. Herbicide or Manual Treatment (Variable):

1. Upon discovery of invasive species during scheduled inspections, or by Owner or the Minnehaha Creek Watershed District, conduct herbicide and/or manual treatments for weed control.
2. Herbicide and/or manual treatments may be required monthly during the growing season (May -Oct.), or not at all, depending upon site conditions.

D. Prescribed Burning (Variable):

1. At the request and direction of the Minnehaha Creek Watershed District or

Owner, perform prescribed burning at the site.

2. When a request for burning is received, prepare and submit the burning plan with 14 days.
3. All permits shall be obtained by the Contractor.

E. Mowing: (Variable)

1. At the request and direction of the Minnehaha Creek Watershed District or Owner, conduct mowing operations at the site.

4.06 METHOD FOR DETERMINING ACCEPTANCE:

A. Time Meander Search: Acceptance of the work will be determined using a time meander search. The Owner's Representative shall conduct a time meander search for each target plant community classification.

B. The search shall be conducted during the first full growing season after seeding and/or planting (not to exceed 12 months).

C. The search will randomly sample 20% of each area for each class that was seeded and/or planted. If the sample area has minimum 80% ground cover of acceptable species (see above unacceptable species), including germination of desirable seed bank flora, and minimum 50% ground cover of species that were planted or seeded, the seeding work will receive acceptance of guaranteed work. If at least 95% of the live plantings are healthy as determined by the Owner's Representative, the live plantings will receive acceptance of guaranteed work.

4.07 CLEAN UP

A. Daily: Keep Work areas clean, neat and orderly.

B. Final: Clean up and remove deleterious materials and debris from the entire work area prior to Final Review.

END OF SECTION

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act
Notice of Application

Local Government Unit: Minnehaha Creek Watershed District **County:** Carver County
Applicant Name: Minnehaha Creek Watershed District **Applicant Representative:** Anna Brown, MCWD
Project Name: Wassermann Lake Park Wetland Vegetation Restoration **LGU Project No. (if any):** W20-05
Date Complete Application Received by LGU: April 1st, 2020
Date this Notice was Sent by LGU: April 1st, 2020
Date that Comments on this Application Must Be Received By LGU[1]: April 6th, 2020 (by noon)

[1] *minimum 15 business day comment period for Boundary & Type, Sequencing, Replacement Plan and Bank Plan Applications*

WCA Decision Type - check all that apply

☐ Wetland Boundary/Type ☐ Sequencing ☐ Replacement Plan ☐ Bank Plan (not credit purchase)
☒ No-Loss (8420.0415) ☐ Exemption (8420.0420)
Part: ☒ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☒ H Subpart: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 8 ☐ 9

Replacement Plan Impacts (replacement plan decisions only)

Total WCA Impact Area Proposed:

Application Materials

☒ Attached ☐ Other[1] (specify):

[1] Link to ftp or other accessible file sharing sites is acceptable.

Comments on this application should be sent to:

LGU Contact Person: Heidi Quinn, MCWD Permitting Technician
E-Mail Address: hquinn@minnehahacreek.org
Address and Phone Number: 15320 Minnetonka Blvd, Minnetonka, MN 55345 952-641-4504
Decision-Maker for this Application: ☐ Staff ☒ Governing Board/Council ☐ Other (specify):

Notice Distribution (include name)

Required on all notices:

☒ SWCD TEP Member: Aaron Finke-afinke@co.carver.mn.us ☒ BWSR TEP Member: Ben Carlson-ben.carlson@state.mn.us
☐ LGU TEP Member (if different than LGU contact):
☒ DNR Representative: Leslie Parris – leslie.parris@state.mn.us; Jason Spiegel - Jason.spiegel@state.mn.us
☒ Watershed District or Watershed Mgmt. Org.: Grace Barlow- gbarlow@minnehahacreek.org
☒ Applicant (notice only): Anna Brown – abrown@minnehahacreek.org ☐ Agent/Consultant (notice only):

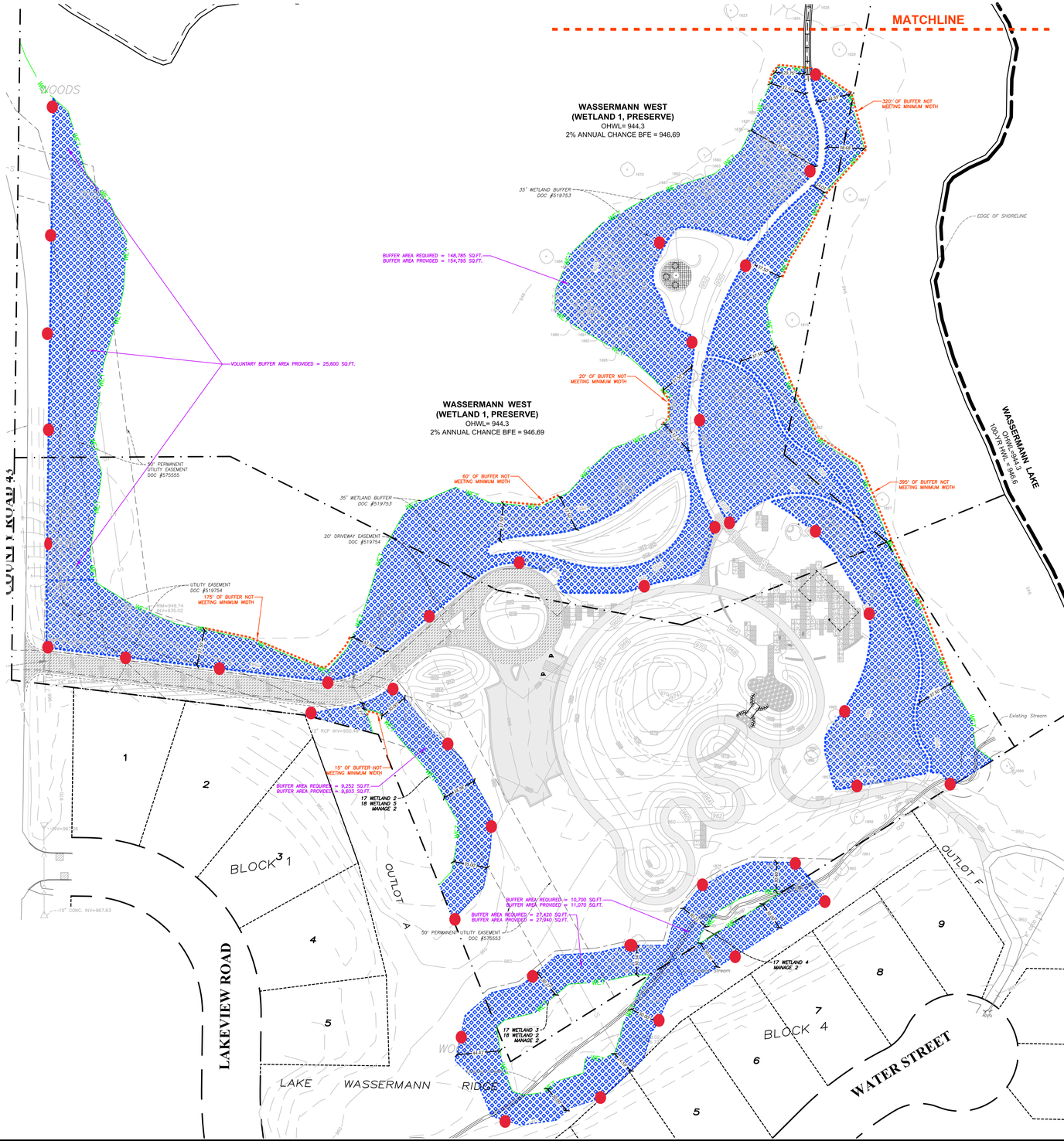
Optional or As Applicable:

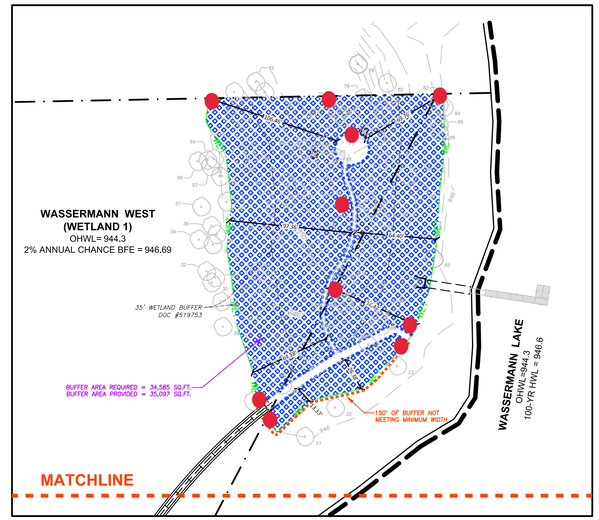
☒ Corps of Engineers: usace_requests_mn@usace.army.mil
☐ BWSR Wetland Mitigation Coordinator (required for bank plan applications only):
☒ Members of the Public (notice only): City Staff ☐ Other:

Signature:	Date:
	4/1/2020

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.

Attachment 4





LEGEND

PROPOSED WETLAND BUFFER AREA

N

0 30 60 120 180

Scale in Feet

aune fernandez landscape architects
755 prior avenue : suite 103
st. paul : MN : 55104
651.248.6155 or 651.341.3611

Rehder & Associates, Inc.
Civil Engineers, Planners & Land Surveyors

Paulson & Clark Engineering
Structural | Mechanical | Electrical | Security

client

MINNEHAHA CREEK WATERSHED DISTRICT

project

WASSERMANN LAKE PARK

PID 650230600
PID 650230700
COUNTY ROAD 43
VICTORIA, MN 55318

AFLA NO: 190006

certification

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

PRELIMINARY NOT FOR CONSTRUCTION

SIGNATURE: _____

TYPED OR PRINTED NAME: _____

DATE: _____ REG. NO.: _____

issue / revision

NO	DATE	ISSUE / REVISION
	3/19/2020	REVISE BUFFER AREAS
1	10/30/2019	60% COST SUBMITTAL

sheet title

WETLAND BUFFER EXHIBIT

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS.

FILE:
DRAWN BY:NPA
CHECKED BY: BGF
PROJ. NO: 190006
DRAWING NO: C8

EASEMENT
On the Property of City of Victoria (PID 650230600 and PID 650230700)
Carver County, Minnesota

Legal description of burdened property:
Attachment A

This Easement is entered into between the City of Victoria, a statutory city and political subdivision of the State of Minnesota ("Grantor"), and the Minnehaha Creek Watershed District, a public body with powers set forth at Minnesota Statutes Chapters 103B and 103D ("Grantee").

A. Grantor owns in fee simple certain real property located in Carver County, Minnesota, consisting of two contiguous tax parcels together comprising about 33.5 acres, as legally described in Attachment A hereto (the "Burdened Property").

B. The Burdened Property is riparian to Wassermann Lake and contains about 20.5 acres of wetland. The wetland area contains part of a basin that receives runoff from a catchment to the west before it discharges to Wassermann Lake.

C. By an executed agreement between Grantor and Grantee, titled "Second Cooperative Agreement, City of Victoria and Minnehaha Creek Watershed District, Land Conveyance and Park Development, Wassermann Lake Property (July 25, 2019) ("Agreement"), Grantor has committed to convey this Easement so that Grantee can restore, manage and preserve the wetland area and basin for water quality and habitat improvement purposes. By the Agreement, Grantee acquired the Burdened Property in fee, and in turn has conveyed the Burdened Property to Grantor for development and use as public park land, while requiring grant of this Easement.

D. By the Agreement, and an operations plan developed thereunder, Grantor and Grantee are cooperating to construct and maintain recreational improvements and natural resource enhancements on the Burdened Property. Under the operations plan, Grantee is to perform and maintain certain water quality and habitat

improvement work in areas other than the wetland area and basin referenced in the preceding recital.

NOW THEREFORE, for the payment of one dollar and other good and valuable consideration, and the mutual terms set forth herein, the receipt and sufficiency of which hereby are acknowledged, Grantor conveys to Grantee and Grantee accepts the Easement on the Burdened Property, subject to terms specifically set forth herein.

EASEMENT AREA

1. Easement Area Description. The Easement Area is as legally described and delineated on the site plan at Attachment B hereto.

2. Grantee's Rights Within the Easement Area. Grantor conveys to Grantee the right to engage in the following activities within the Easement Area. The rights conveyed to Grantee hereunder may be exercised by authorized representatives, agents, contractors and subcontractors of Grantee.

a. Land Alteration. Grantee may modify lands by excavation, dredging, grading, fill and shaping. Grantee owns all right, title and interest in any spoils, soil and vegetative material removed, but will deposit the material in an upland location on the Burdened Property at Grantor's request on reasonable terms arranged with Grantor.

b. Flowage and Flow Management. Grantee may direct and redirect surface water flows; flood or drain lands, wholly or partly; and otherwise manage surface flows within and through the Easement Area. This does not include the right to increase flood elevation on, or drain or redirect surface flows on or across, any lands outside of the Easement Area, including the remainder of the Burdened Property.

c. Rock, Bioengineered Elements and Associated Structures. Grantee may install, maintain and remove rock, bioengineered elements and fabricated structures within the Easement Area to stabilize the bed and banks of wetlands and surface waters and manage flows.

d. Vegetation and Nutrient Management. Grantee may remove surface vegetation, brush and trees within the Easement Area. Grantee may plant vegetation within the Easement Area for stabilization, water quality, habitat and aesthetic purposes, and may manage the vegetation through means including but not limited to replanting and reseeding, mowing, weeding, use of approved herbicides and controlled burns. Grantee may apply aluminum

sulfate and similar nutrient management treatments in accordance with professional practice.

e. Exclusion Structures. Consistent with paragraph 4.h, below, Grantee may install, maintain and remove fencing or other appurtenances to protect habitat or ecological features.

f. Design, Construction and Associated Rights. For the purposes authorized in this section 2, Grantee may use the Easement Area for site inspection, investigation and testing; equipment staging and use and materials stockpiling during construction; and placing and maintaining erosion control and similar construction-phase site measures. Grantee may enter the Easement Area to inspect, maintain, modify and reconstruct improvements.

Before constructing or installing new improvements, Grantee will communicate its intent to Grantor and, at Grantor's request, consult in good faith regarding the improvements.

3. Access and Staging for Work in Easement Area. Grantee may cross the Burdened Property on foot, by motorized vehicle or with equipment to reach the Easement Area. During active work within the Easement Area, Grantee may stage equipment and stockpile materials outside of the Easement Area subject to reasonable terms and conditions of Grantor. Grantor may designate a route across the Burdened Property provided it is reasonably convenient to Grantee. Grantee will repair any damage to the Burdened Property caused by its access and staging.

4. Grantor's Limitations within Easement Area. Grantor's rights within the Easement Area are subject to the conditions listed in this section 4. For the purposes of this section 4, "Grantor" includes all those acting under authority, direction or permission of Grantor.

a. Prohibited Uses. Grantor will not perform an act that would materially impair or interfere with Grantee's ability to exercise its rights under this Easement.

b. Construction. Grantor will not construct or install a permanent or temporary structure, surface or improvement of any kind.

c. Utilities. Grantor will not install a new utility system or expand an existing utility system including, without limitation, water, sewer, power, fuel, communications and data lines and related facilities, without the prior written approval of and in accordance with terms specified by Grantee.

d. Surface Alteration. Grantor will not alter surface soils including, without limitation, filling, excavating or removing soil, sand, gravel, rocks or other material.

e. Placement of Waste, Fill or Other Material. Grantor will not dump, dispose of or otherwise place refuse, brush or other waste material.

f. Trees, Shrubs and Other Vegetation. Grantor will not remove, destroy, cut, mow or otherwise alter vegetation, or apply fertilizers, herbicides or pesticides, except as reasonably required to prevent or control infestations, noxious weeds, disease, fire, personal injury or property damage, or to improve the hydrological function and value of water resources, and in each case with written Grantee approval.

g. Motorized Vehicles. Grantor will not operate a motorized vehicle or motorized equipment except for the purpose of activity otherwise authorized under this section 4.

h. Trails, Boardwalks and Signage. Notwithstanding any other provision of this section 4, Grantor may install, maintain and remove trails, boardwalks, signage and related appurtenances for public recreation and education. Any such work will be in accordance with terms and specifications approved by Grantee in writing, approval not to be unreasonably withheld.

NATURAL AREAS

5. Natural Areas Description. The Natural Areas are as delineated on the site plan at Attachment C hereto.

6. Grantee's Rights Within the Natural Areas. Grantor conveys to Grantee the right to engage in the following activities within the Natural Areas. The rights conveyed to Grantee hereunder may be exercised by authorized representatives, agents, contractors and subcontractors of Grantee.

a. Vegetation Management. Grantee may remove, install and manage surface vegetation, brush and trees, by means including but not limited to planting and seeding, mowing, weeding, use of approved herbicides and controlled burns.

b. Soil Movement. For the purposes of paragraph 6.a, and for soil stability and function, habitat and related natural resource purposes, Grantee may modify the underlying lands by excavation, grading, fill, shaping and soil amendment, and may lawfully dispose of excess material within the

Easement Area or, with Grantor's written approval, otherwise on the Burdened Property.

c. Signage, Fencing and Appurtenances. Grantee may install, maintain and remove signage, fencing and other appurtenances to protect habitat or ecological features.

7. Access and Staging for Work in Natural Areas. Grantee may cross the Burdened Property on foot, by motorized vehicle or with motorized equipment, and may stage on the Burdened Property vehicles, equipment and materials used for the work. Before operating motorized vehicles or equipment on unpaved area outside of the Natural Areas, and before parking a vehicle overnight, or staging work, outside of the Natural Areas, Grantee will notify Grantor and conform to reasonable terms and conditions stipulated by Grantor. Grantee will repair any damage to the Burdened Property outside of the Natural Areas caused by its activity under this Easement.

8. Grantor's Limitations Within Natural Areas. Grantor will not disturb or do work in the Natural Areas except with approval of, and subject to reasonable terms and conditions stipulated by, Grantee. The operations plan referenced in Recital D, above, is one form of Grantee approval within the meaning of this section 8.

GENERAL TERMS

9. Regulatory Authorities Not Affected. This Easement does not replace or diminish the regulatory authority of any federal, state or local public body, including Grantee, as it may apply to the Burdened Property or any activity on it.

10. Grantor's Rights as Fee Owner. Grantor reserves all rights and privileges associated with ownership of the Burdened Property, subject to the constraints set forth in sections 4 and 8, above. Grantor reserves the right to sell, transfer, lease or encumber all or part of the Burdened Property subject to this Easement. Grantor will inform all others who exercise any right on the Burdened Property, by or through Grantor, of this Easement and the constraints that it imposes.

11. Taxes and Insurance. Grantor will be responsible for and will pay any taxes and assessments levied against the Burdened Property. Each of the parties remains solely responsible to maintain liability and other insurance for its own use of the Burdened Property.

12. Burdened Property Management. Grantee will be responsible for inspection and maintenance of the condition of all improvements it has constructed or installed under this Easement. Grantee holds Grantor harmless, and will defend and

indemnify Grantor, from and against any and all suits, actions, causes of action, proceedings, claims, costs and damages arising out of Grantor's design, construction, operation or maintenance of such improvements, except to the extent resulting from an action or inaction of Grantor for which Grantor independently would be subject to liability. As the fee owner of the Burdened Property and municipal land manager, Grantor will be responsible for day-to-day inspection and maintenance of the Burdened Property, including that portion burdened by this Easement. This responsibility includes, but is not limited to, sanitation; inspection for and addressing obvious hazards resulting from events such as severe weather; inappropriate or unlawful use; and law enforcement. This Easement creates no right in any third party and waives no immunity, defense or liability limit that either party enjoys under law with respect to any third party or the other party including specifically, but not limited to, Minnesota Statutes Chapter 466.

13. Waiver. A decision by a party not to exercise its rights of enforcement in the event of a breach of a term of this Easement is not a waiver of such term, any subsequent breach of the same or any other term, or any of the party's rights under this Easement. The delay or failure to discover a breach or to exercise a right of enforcement as to such breach does not impair or waive a party's rights of enforcement, all of which shall be cumulative and not exclusive.

14. Acts Beyond Party's Control. A party will not exercise its right of enforcement against the other party for injury or alteration to the Burdened Property resulting from: (a) a cause beyond the reasonable control of that party, including without limitation fire, flood, a precipitation event with a statistical recurrence interval of 100 years or more, storm, and earth movement resulting from natural forces or the act of a third party; or (b) any prudent action taken by the party under emergency conditions to prevent, abate or mitigate significant injury or alteration resulting from such a cause.

15. Notices. Any notice or other communication that a party must give to the other will be in writing and delivered to the following address, or other address as the party designates by written notice to the other:

Administrator
Minnehaha Creek Watershed District
15320 Minnehaha Boulevard
Minnetonka, MN 55345
Re: Wassermann Lake Park

City Manager
City of Victoria
P.O. Box 36
Victoria, MN 55386

16. Miscellaneous. The parties may amend this Easement only by a duly executed writing. This Easement and all terms herein bind and benefit the parties and their respective personal representatives, heirs, successors, assigns and all others who exercise any right by or through them and run in perpetuity with the Burdened Property. Grantee bears the cost of duly recording or registering this Easement at the Carver County Office of Property Records.

17. Recitations and Attachments Incorporated. All recitations, and Attachments A, B and C, are a part of this Easement.

18. Termination of Grantee Rights in Natural Areas. Notwithstanding section 16, above, sections 5 through 8 of this Easement, and the rights and obligations thereunder, may be terminated after a term of thirty (30) years by written notice by either party to the other. Termination will be effective six months after delivery of notice. On termination, all improvements within the Natural Areas will be considered a part of the Burdened Property and appurtenant to Grantor's fee interest.

IN WITNESS WHEREOF, intending to be legally bound, the parties hereto execute and deliver this Easement.

MINNEHAHA CREEK WATERSHED DISTRICT

By: _____
Its: President

STATE OF MINNESOTA
COUNTY OF HENNEPIN

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by Sherry Davis White as President of the Minnehaha Creek Watershed District.

_____
Notary Public

CITY of VICTORIA

By: _____
Its: Mayor

By: _____
Its: City Clerk

STATE OF MINNESOTA
COUNTY OF CARVER

The foregoing instrument was acknowledged before me this _____ day of _____, 2020, by Tom Funk and Cindy Patnode as the Mayor and City Clerk, respectively, of the City of Victoria, Minnesota.

_____
Notary Public

Prepared by Smith Partners PLLP
400 Second Avenue South, Suite 1200
Minneapolis, MN 55401
612-344-1400

ATTACHMENT A

LEGAL DESCRIPTION: BURDENED PROPERTY

ATTACHMENT B

SITE PLAN and LEGAL DESCRIPTION: EASEMENT AREA

ATTACHMENT C

SITE PLAN and DELINEATION: NATURAL AREAS

Attachment A: Burdened Property Legal Description

Parcel A: 650230600

All that part of Government Lot 8, Section 23, Township 116, Range 24, according to the government survey therefor and situate in Carver County, Minnesota which lies northerly of the following described line:

> Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 Minutes 31 seconds East, and assumed bearing along the west line of the Southwest Quarter and Government Lot 8 said Section 23, a distance of 1576.88 feet to the point of beginning of the line to be described; Thence North 89 degrees 41 minutes 16 seconds East a distance of 220.95 feet; Thence South 63 degrees 24 minutes 30 seconds East a distance of 306.34 feet; thence South 79 degrees 24 minutes 38 seconds East, a distance of 192.18 feet; thence North 68 degrees 00 minutes 47 seconds East, a distance of 358 feet more or less to the shoreline of Wassermann Lake and said line there terminating

Parcel B: 650230700

All that part of the Southwest Quarter of the Southwest Quarter and Government Lot 8, Section 23, Township 116, Range 24 according to the government survey thereof and situate in Carver County, Minnesota which lies southerly of the following described line:

> Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 Minutes 31 seconds East, and assumed bearing along the west line of the Southwest Quarter and Government Lot 8 said Section 23, a distance of 1576.88 feet to the point of beginning of the line to be described; Thence North 89 degrees 41 minutes 16 seconds East a distance of 220.95 feet; Thence South 63 degrees 24 minutes 30 seconds East a distance of 306.34 feet; thence South 79 degrees 24 minutes 38 seconds East, a distance of 192.18 feet; thence North 68 degrees 00 minutes 47 seconds East, a distance of 358 feet more or less to the shoreline of Wassermann Lake and said line there terminating

All which lies northerly of the following described line:

> Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 minutes 31 seconds East, an assumed bearing along the west line of the Southwest Quarter and Government Lot 8 said Section 23, a distance of 1349.00 feet to the point of beginning of the line to be described; thence South 83 degrees 10 minutes 47 seconds East, a distance of 302.49 feet; thence South 75 degrees 14 minutes 21 seconds East, a distance of 77.81 feet; thence South 22 degrees 00 minutes 00 seconds East, a distance of 361.40 feet; thence North 58 degrees 00 minutes 05 seconds East, a distance of 737 feet more or less to the shoreline of Wassermann Lake and said line there terminating.

PROPERTY DESCRIPTION

Parcel A:

All that part of Government Lot 8, Section 23, Township 116, Range 24, which lies northerly of the following described line:

Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 minutes 31 seconds East, an assumed bearing along the west line of the Southwest Quarter and Government Lot 8, said Section 23, a distance of 1576.88 feet to the point of beginning of the line to be described; thence North 89 degrees 41 minutes 16 seconds East, a distance of 220.95 feet; thence South 63 degrees 24 minutes 30 seconds East, a distance of 306.34 feet; thence South 79 degrees 24 minutes 38 seconds East, a distance of 192.18 feet; thence North 68 degrees 00 minutes 47 seconds East, a distance of 358 feet more or less to the shoreline of Wassermann Lake and said line there terminating.

Parcel B:

All that part of the Southwest Quarter of the Southwest Quarter and Government Lot 8, Section 23, Township 116, Range 24, which lies southerly of the following described line:

Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 minutes 31 seconds East, an assumed bearing along the west line of the Southwest Quarter and Government Lot 8, said Section 23, a distance of 1576.88 feet to the point of beginning of the line to be described; thence North 89 degrees 41 minutes 16 seconds East, a distance of 220.95 feet; thence South 63 degrees 24 minutes 30 seconds East, a distance of 306.34 feet; thence South 79 degrees 24 minutes 38 seconds East, a distance of 192.18 feet; thence North 68 degrees 00 minutes 47 seconds East, a distance of 358 feet more or less to the shoreline of Wassermann Lake and said line there terminating.

And which lies northerly of the following described line:

Commencing at the southwest corner of said Section 23; thence North 00 degrees 44 minutes 31 seconds East, an assumed bearing along the west line of the Southwest Quarter and Government Lot 8, said Section 23, a distance of 1349.00 feet to the point of beginning of the line to be described; thence South 83 degrees 10 minutes 47 seconds East, a distance of 302.49 feet; thence South 75 degrees 14 minutes 21 seconds East, a distance of 77.81 feet; thence South 22 degrees 00 minutes 00 seconds East, a distance of 361.40 feet; thence North 58 degrees 00 minutes 05 seconds East, a distance of 737.00 feet more or less to the shoreline of Wassermann Lake and said line there terminating.

(Abstract Property, all in Hennepin County, Minnesota)

Parcel C:

OUTLOT A and OUTLOT F, LAKE WASSERMANN RIDGE, Carver County, Minnesota, according to the recorded plat thereof.

WENCK ASSOCIATES
1800 Pioneer Creek Ctr.
Maple Plain, MN 55359
763-479-5128
Responsive partner. Exceptional outcomes.

CLIENT NAME
MINNEHAHA CREEK
WATERSHED DISTRICT

PROJECT TITLE
EXHBIT

DWN BY	CHK'D	APP'D	DWG DATE
GJB	CNA	XXX	FEB 17, 2020

SCALE N.A.

PROJECT NO. 0185-0123

SHEET NO. 1 OF 3

M:\0185\0123\4_SURVEY\Wassermann SURVEY\CAD\0185-0123 exhibit.dwg

EASEMENT AREA DESCRIPTION:

That part of Government Lot 8, Section 23, Township 116, Range 24, Hennepin County, Minnesota described as follows:

Beginning at the northwest corner of said Government Lot 8, thence North 88 degrees 54 minutes 15 seconds East along the north line of said Government Lot 8, a distance of 934.58 feet; thence South 16 degrees 49 minutes 12 seconds East 239.68 feet; thence South 89 degrees 15 minutes 31 seconds East 51.08 feet; thence North 15 degrees 22 minutes 33 seconds East 242.30 feet to the north line of said Government Lot 8; thence North 88 degrees 54 minutes 15 seconds East, along said north line, 39 feet, more or less, to the shoreline of Lake Wassermann; thence southerly along said shoreline to a line hereinafter referred to as 'Line A';

'Line A' is described as follows:

Beginning at the northwest corner of said Government Lot 8; thence South 00 degrees 44 minutes 22 seconds West along west line of said Government Lot 8, 624.61 feet; thence southerly 308.65 feet along a curve concave the the west, not tangent with the last described line, said curve has a radius of 789.83 feet, a central angle of 22 degrees 23 minutes 25 seconds, chord bearing South 11 degrees 41 minutes 25 seconds East and a chord length of 306.69 feet: thence South 00 degrees 43 minutes 23 seconds West 318.22 feet; thence South 89 degrees 15 minutes 31 seconds East for 268.24 feet; thence North 24 degrees 46 minutes 36 seconds East 183.72 feet; thence South 89 degrees 15 minutes 31 seconds East 134.75 feet; thence North 54 degrees 26 minutes 48 seconds East 198.87 feet; thence North 56 degrees 03 minutes 57 seconds West 175.25 feet; thence North 50 degrees 42 minutes 57 seconds East 266.24 feet; thence North 00 degrees 44 minutes 29 seconds East 36.63 feet; thence South 89 degrees 15 minutes 31 seconds East 92.08 feet; thence South 00 degrees 44 minutes 29 seconds West 34.23 feet; thence South 89 degrees 15 minutes 31 seconds East 148 feet, more or less, to the shoreline of Lake Wassermann and said 'Line A' there terminating;

thence southwesterly, westerly and northerly along said 'Line A' to the point of beginning.

AND,

That part of the Southwest Quarter of the Southwest Quarter and Government Lot 8, Section 23, Township 116, Range 24, and also that part of OUTLOT A and OUTLOT F, LAKE WASSERMANN RIDGE, Carver County, Minnesota, according to the recorded plat thereof.

Beginning at the most northerly corner of Block 4, LAKE WASSERMANN RIDGE; thence South 55 degrees 22 minutes 34 seconds West, along the southerly line of said Outlot A, 318.00 feet; thence continuing along said southerly line South 45 degrees 15 minutes 43 seconds West 78.22 feet; thence continuing along said southerly line South 47 degrees 33 minutes 04 seconds West 77.72 feet; thence continuing along said southerly line South 52 degrees 19 minutes 36 seconds West 122.43 feet; thence North 89 degrees 15 minutes 31 seconds West to the westerly line of said Outlot A; thence northerly, along westerly line of said Outlot A, 110.92 feet along a curve concave the the east, not tangent with the last described line, said curve has a radius of 320.00 feet, a central angle of 19 degrees 51 minutes 39 seconds, chord bearing North 09 degrees 35 minutes 50 seconds West and chord length of 110.37 feet; thence South 89 degrees 15 minutes 31 seconds East 146.51 feet; thence North 55 degrees 22 minutes 34 seconds East 838 feet, more or less, to the shoreline of Lake Wassermann; thence southeasterly along said shoreline to a line bearing North 55 degrees 22 minutes 34 seconds East from the point of beginning; thence South 55 degrees 22 minutes 34 seconds West, along said line, 249 feet, more or less, to the point of beginning.

WENCK ASSOCIATES
1800 Pioneer Creek Ctr.
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Responsive partner. Exceptional outcomes.

CLIENT NAME
MINNEHAHA CREEK WATERSHED DISTRICT

PROJECT TITLE
EXHBIT

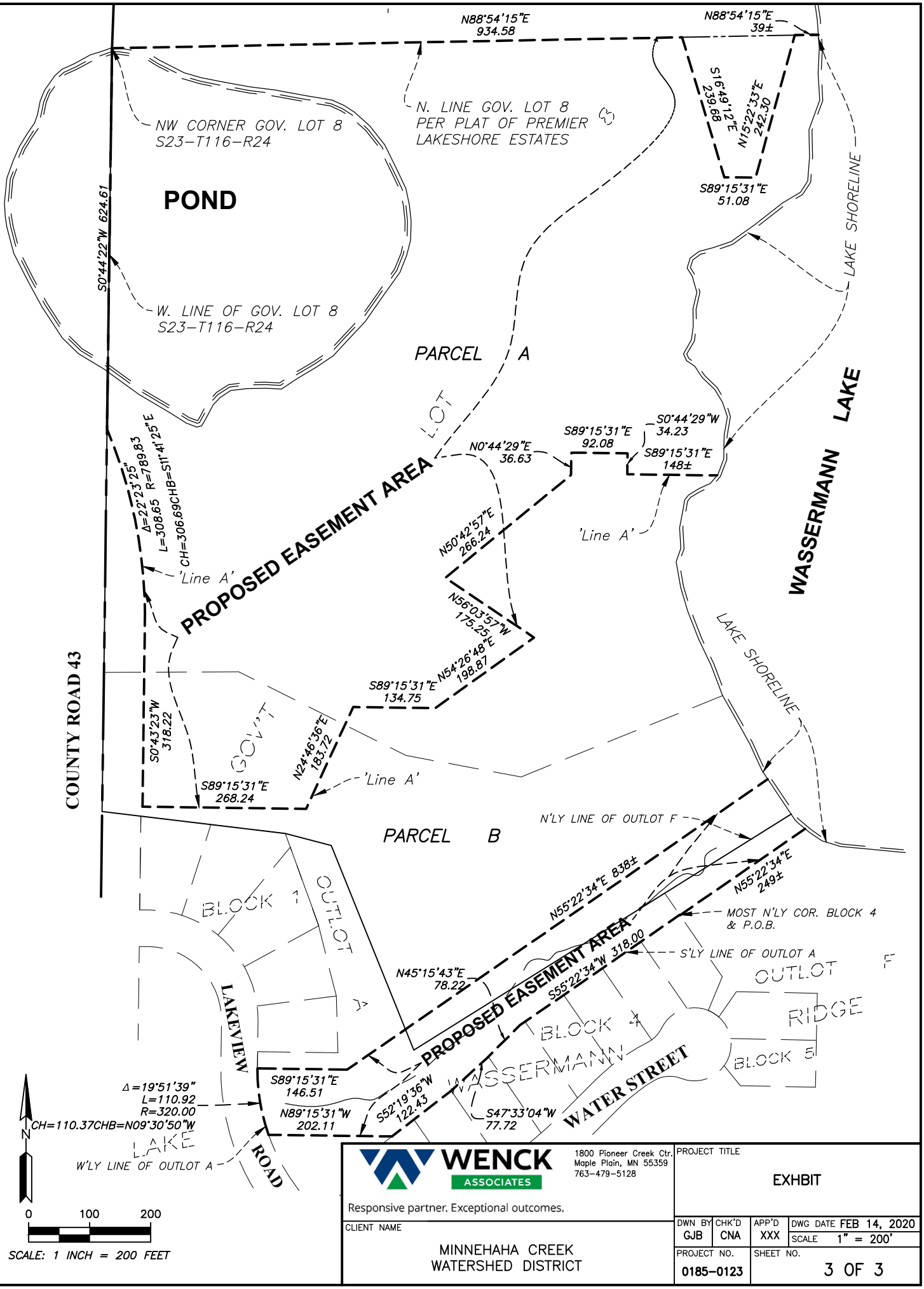
DWN BY	CHK'D	APP'D	DWG DATE
GJB	CNA	XXX	FEB 17, 2020

SCALE N.A.

PROJECT NO. 0185-0123

SHEET NO. 2 OF 3

M:\0185\0123\4_SURVEY\Wassermann SURVEY\CAD\0185-0123 exhibit.dwg



WENCK ASSOCIATES
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CLIENT NAME
MINNEHAHA CREEK
WATERSHED DISTRICT

PROJECT TITLE
EXHBIT

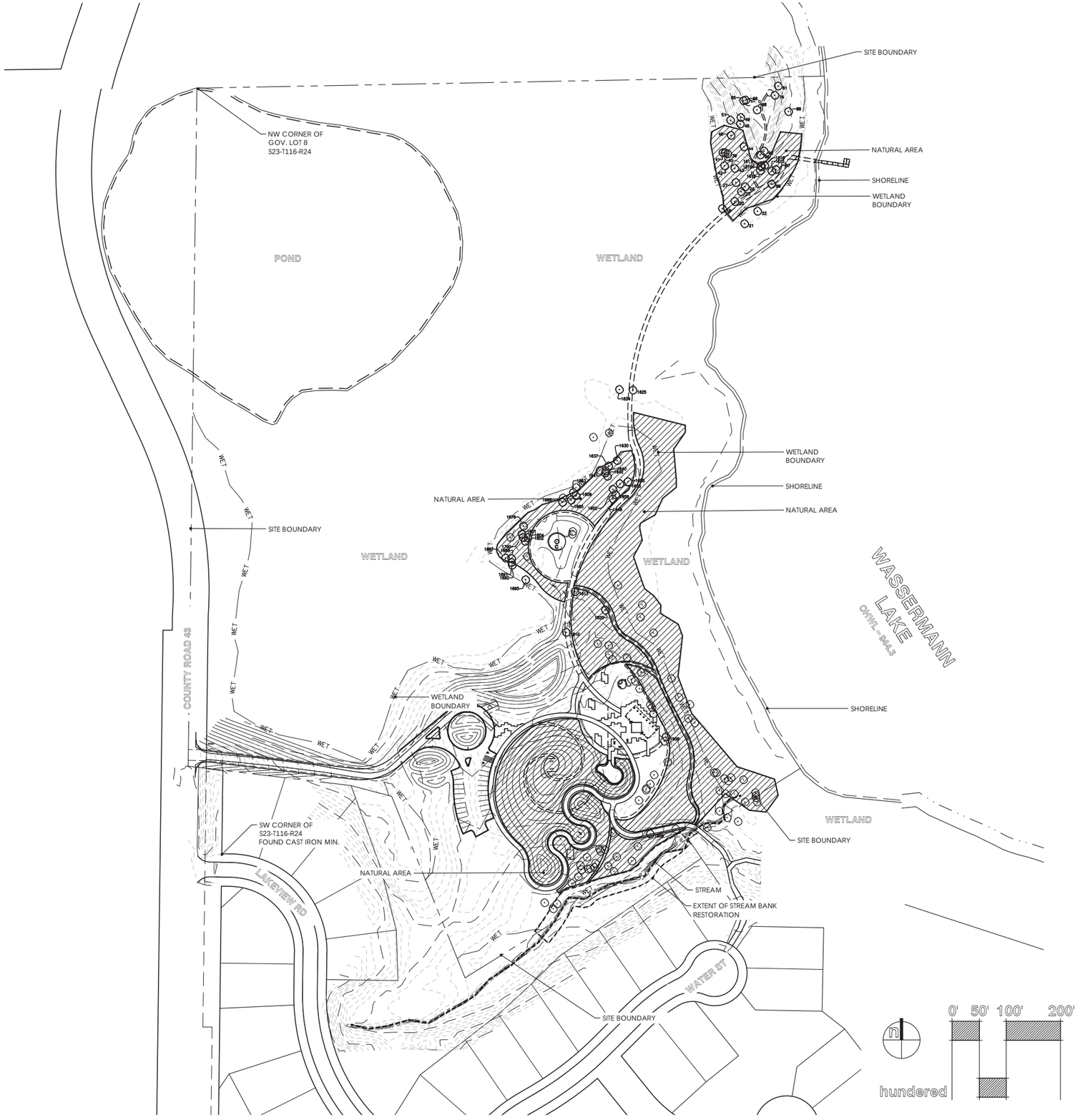
DWN BY	CHK'D	APP'D	DWG DATE
GJB	CNA	XXX	FEB 14, 2020

SCALE 1" = 200'

PROJECT NO. 0185-0123

SHEET NO. 3 OF 3

M:\0185\0123\4_SURVEY\Wassermann SURVEY\CAD\0185-0123 exhibit.dwg



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Rehder & Associates, Inc.
Civil Engineers, Planners & Land Surveyors

Paulson & Clark Engineering
Structural | Mechanical | Electrical | Security

client

MINNEHAHA CREEK WATERSHED DISTRICT

project

WASSERMANN LAKE PARK

PID 650230600 &
PID 650230700
COUNTY ROAD 43
VICTORIA, MN 55318

PROJECT NUMBER: 190006

certification

I HEREBY CERTIFY that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

SIGNATURE: _____

TYPED OR PRINTED NAME: _____

DATE: _____ REG. NO.: _____

issue / revision

NO DATE ISSUE / REVISION

sheet title

SITE PLAN
EASEMENT FIGURE

THIS SQUARE APPEARS 1/2" x 1/2" ON FULL SIZE SHEETS.

DRAWN BY:
CHECKED BY:

L1.0

Attachment 6

Attachment E: Stormwater Management Narrative

The site currently has a remnant driveway that constitutes .17 acres of impervious surface, all of which is linear. The proposed impervious surface breaks down as follows:

- 0.17 ac exiting linear
- 0.32 ac proposed linear (entry drive)
- 0.38 ac proposed trail (see updated figure for increase in paved trail from submittal 1)
- 0.53 ac proposed for all other impervious (shelter & parking lot)

Because the increase is proposed linear surface is less than 10,000 sf, at 0.15 acres or 6,534 sf, the increase in linear impervious area qualifies for the linear stormwater exemption.

The proposed trail will be 8’ wide and includes pervious buffer in excess of 4’ on the downgradient side. The buffer is provided for in the seeding plan, which specifies a variety of seeding types adjacent to the trail areas including a custom woodland edge mix and a variety of prairie mixes to fix the soil conditions. Where the trail installation requires grading outside of the trail limits, the soil will be decompacted to 18”, as specified on the grading plan.

Wassermann Lake Preserve Permit Application - Supplemental Information

Waterbody Crossing and Structures

Stream Crossing Rationale

The project proposed a trail crossing in the south-eastern corner of the property to connect the park to the existing trail network through the neighborhood to the south, the Wassermann Ridge development. This connection is a critical component of the overall public benefit of the project by providing non-motorized access to the site, and contributes towards the City's vision of an interconnected network of parks, trails, and open space. This provides an alternative access to the main entry way off of Highway 43, which is not currently equipped to accommodate bike and pedestrian traffic. Therefore, the stream crossing promotes public safety and welfare by providing an access route safe for alternative modes of transportation.

Alternatives Analysis

Do Nothing

The do nothing alternative was considered, but eliminated because it does not fulfill the project goal of providing a safe access route for bike and pedestrian traffic and connecting the Wassermann Ridge development directly to this recreational opportunity. There is no alternative that provides for pedestrian access without crossing the stream channel.

Alternative Culvert Sizing

The design team considered alternative culvert sizing – either a small culvert to minimize the area of disturbance or a larger culvert to provide for more conveyance. However, it was determined through modeling, per the hydro cad report labeled "HydroCAD Report_Proposed Culvert", that the proposed 30" culvert provides the optimal sizing to accommodate 100 year flows under the trail crossing.

Supporting Information

- **HydroCAD Report_Proposed Culvert**
- **Wassermann Lake Preserve Plan Set:** attn. C5

Shoreline and Streambank Stabilization

Supporting Information

- **HydroCAD Report_Proposed Streambank:** HydroCAD model of 100 year HWL through the proposed ditch section (attn. Plan Set sheet C7). The ditch section has a 3' wide bottom with 3:1 side slopes and a longitudinal slope of 1.41%. The proposed section produced an average flow depth of 1.34' and a *max. velocity of 5.14 fps and a shear stress of 1.2 lbs/sf*. The BioD-Mat 40 fabric can handle up to 8 fps and a shear stress of 3 lbs/sf (see attached cut sheet – **BioD-Mat_ss-1**)
- **Wassermann Ridge Grading Set**: Wassermann Ridge grading set provides clarification that the proposed grading and lot configuration plan for the Wassermann ridge subdivision does not contain any lots below 95.5 and no homes contain low openings below 955.6. The lowest lot