

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2022-074

**Considered at Board of Managers Meeting:** August 2, 2023

**Application Received complete:** May 26, 2023

**Applicant:** Northern States Power Company

**Consultant:** Loucks, Zach Moen

**Project:** Xcel Service Center – The applicant proposes constructing a new service center consisting of an office building and maintenance facilities. The stormwater management system includes the construction of two wet detention basins and rainfall capture and reuse to provide water quality treatment, rate control, and volume abstraction.

**Location:** 1900 Coulter Blvd, Chanhassen

**Reviewer:** Scott Sobiech, PE, Barr Engineering

### Potential Board Variance Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolution based on the permit report that follows, the presentation of the matter at the August 2, 2023, meeting of the managers and the managers' findings, as well as the factual findings in the permit report that follows:

Resolved that the variance request for Permit 2022-074 from compliance with Rule B, subsection 3.2b is approved, based on the facts and analysis provided by the RPBCWD engineer below and placed in the record at the August 2, 2023 meeting of the managers, and the managers' findings in the record of the August 2 meeting, and subject to the following conditions: 1. [CONDITION(S)],

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the August 2, 2023 meeting of the managers:

Resolved that the application for Permit 2022-074 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2022-074 to the applicant on behalf of RPBCWD.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

**Applicable Rule Conformance Summary**

Rule	Issue	Conforms to RBPCWD Rules?	Comments	
<b>B</b>	<b>Floodplain Management and Drainage Alterations</b>	No	See Rule K Variance discussion for compensatory storage not being provided within the floodplain of the same waterbody.	
<b>C</b>	<b>Erosion Control Plan</b>	See Comment	See rule-specific permit condition C1 related to name of individual responsible for on-site erosion control.	
<b>D</b>	<b>Wetland and Creek Buffer</b>	See Comment	See rule-specific permit condition D1 related to recordation of buffer maintenance declaration.	
<b>G</b>	<b>Waterbody Crossing and Structures</b>	See Comment	See Rule Specific Permit Condition G1-G2 related to design adjustment and recordation of maintenance declaration.	
<b>J</b>	<b>Stormwater Management</b>	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	Yes	See rule-specific permit condition J1 related to recordation of stormwater facilities maintenance declaration.
		Chloride Management	See Comment	See stipulation #4.
		Wetland Protection	NA	
<b>K</b>	<b>Variations and Exceptions</b>	See Comment	Variance from compensatory storage location requirements in subsection 3.2 of the Floodplain Management and Drainage Alteration Rule requested. See Rule Specific Permit Condition K1	
<b>L</b>	<b>Permit Fee</b>	Yes	\$3000 received October 25, 2022. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of July 28 the amount due is \$6,057	
<b>M</b>	<b>Financial Assurance</b>	See Comment	The financial assurance is calculated at \$1,027,986.	

**Project Description**

The proposed work will develop a 22-acre site south of Hwy 5 at 1900 Coulter Blvd Chanhassen, Minnesota. The existing site is undeveloped with most of the area farmed. The applicant proposes constructing a new service center consisting of an office building and maintenance facility. The maintenance facility includes truck garages, material storage areas, wash bays and associated parking, hardscape, stormwater management facilities, and landscape. The stormwater management system includes the construction of two wet detention basins and rainfall capture and reuse systems to provide water quality treatment, rate control, and volume abstraction.

There are two wetlands onsite, one of which ((Wetland 1) will be filled and replaced under a Wetland Conservation Act replacement plan approved by the City of Chanhassen, acting as the local governmental unit administering WCA. A large wetland at the northeast corner of the site (Wetland 2) will be partially filled. Flows leaving Wetland 2 are conveyed to a the NE Tributary to Bluff Creek, a watercourse on the western edge of the site, by a natural channel that also qualifies as a watercourse under the RPBCWD Rules; neither watercourse, however, is a public water. The applicant is proposing a waterbody crossing on the natural channel from Wetland 2 to the NE tributary of Bluff Creek. The water resources within the project site or downgradient of the proposed activities are summarized in the following table. The table also provides a brief explanation of how each resource is implicated in the permit application review process.

**Water resource impacted by proposed project**

Water Resource	Projected resource impacts
NE Tributary of Bluff Creek	A watercourse into which the applicant proposes to install two storm sewer outfalls.
Wetland 1	A Wetland Conservation Act-protected wetland onsite that the city of Chanhassen, the local governmental unit responsible for administering the Wetland Conservation Act, allowed to be filled. Compensatory storage for the floodplain fill will be provided.
Wetland 2	A Wetland Conservation Act-protected wetland onsite and downgradient from proposed land-disturbing activities that is proposed to be partially filled. Compensatory storage for the floodplain fill will be provided.
Watercourse	A waterbody crossing will be constructed on the watercourse connecting Wetland 2 to the NE Tributary of Bluff Creek. Compensatory storage for the floodplain fill will be provided.

The project site information is summarized below:

	Area (acres)
Total Site Area	21.7
Existing Site Impervious Area	0.1
Post Construction Site Impervious	9.651
New Site Impervious Area	9.551
Distributed Impervious Area	0.10 (100% disturbed)
Increase in Site Impervious Area	9.551

	(>100% increase)
Exempt impervious surface (sidewalk)	0.056
Regulated Impervious area	9.595
Total Disturbed Area	17.38

Exhibits:

1. Permit Application received October 25, 2022 (The applicant was informed on November 15, 2022 that the application was incomplete because of missing information related to Rule B analysis, Rule G analysis, and engineers opinion of cost. Materials completing the application were received on May 26, 2023. RPBCWD extended the review timeline by 60 days in accordance with Minn. Stat. sec. 15.99 )
2. Stormwater Management Report dated October 25, 2023 (revised May 26, 2023, June 16, 2023 and July 5, 2023)
3. Engineer’s Opinion of Probable Cost for Stormwater Management features received May 26, 2023 (revised July 5 ,2023)
4. Project Plan Set (29 sheets) dated October 25, 2022 (revised May 26, 2023 and July 7, 2023 (37 sheets))
5. Irrigation Layout dated January 12, 2023
6. Electronic MIDS and HydroCAD models received on October 25, 2023 (revised May 26, 2023, and July 9, 2023)
7. Response to RPBCWD Comments dated May 26, 2023
8. Response to RPBCWD Comments dated July 7, 2023
9. Response to MN Wetland Conservation Act Technical Evaluation Panel Review Comments dated January 12, 2023
10. Field Wetland Delineation Report dated November 22, 2021.
11. Photos of channel erosion of the onsite watercourse received October 25, 2022.
12. Hydraulic conductivity testing received October 25, 2022
13. Draft Chloride Management Plan received October 25, 2022
14. Geotechnical boring logs and sketch of boring locations received October 25, 2022
15. Geotechnical Evaluation Report by Braun Intertec Services dated November 4, 2022
16. Minnesota WCA Notice of Decision for wetland replacement dated February 14, 2023
17. MNRAMs received May 26, 2023
18. Variance Request Memorandum received May 26, 2023
19. Aquatic Macroinvertebrate Memo for Danny Margarit, PhD to document the waterbody wildlife passage dated May 12, 2023
20. Joint Application Form for Activities Affecting Water Resources in Minnesota received June 20, 2023
- 21.

## Rule Specific Permit Conditions

### **Rule B: Floodplain Management and Drainage Alterations**

Because the project involves work or fill placement below the 100-year flood elevation of the watercourse connecting Wetland 2 to the NE Tributary of Bluff Creek, Wetland 1, and Wetland 2, the project must conform to the requirements in the RPBCWD Floodplain Management and Drainage Alterations rule (Rule B, Subsection 2.1).

Because the project proposes new structures, the project must conform with low floor elevation requirements set forth by Rule B, Subsection 3.1. The following table summarizes the low floor analysis for the proposed lowest structure adjacent to the respective floodplain of interest. The lowest proposed structure elevations meet the freeboard requirement in Rule B, Subsection 3.1 by providing at least two feet of freeboard

Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
North Pond	952.5	945.82	6.68
South Pond	952.5	944.57	7.93

Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the floodplain of the same waterbody (Rule B, Subsection 3.2). Compensatory storage must be provided :

- within +/- 1 foot of the elevation of the fill in the floodplain of the watercourse (Rule B, Subsection 3.2a)
- at or below the same elevation for fill in the floodplain of a water basin (Rule B, Subsection 3.2b).

The following table summarizes the proposed fill and compensatory storage for each waterbody impacted by the project. The supporting materials demonstrate, and the RPBCWD Engineer concurs, that the proposed project will result in a net increase in floodplain storage for site. Because the LGU for WCA approved the elimination of Wetland 1 to facilitate the construction of the southern wet detention basin, the compensatory storage for filling in the wetland 1 floodplain will not be provided within the floodplain of the same waterbody. As a result, the applicant has requested a variance from this requirement of Rule B, Subsection 3.2b. See the Rule K discussion for additional information on the variance request.

Water Resource	100-Year Elevation or Elevation Range (feet)	Proposed Fill (CY)	Proposed Compensatory Storage (CY)
Wetland 1	954.21	3	3,177 <sup>1</sup>

Water Resource	100-Year Elevation or Elevation Range (feet)	Proposed Fill (CY)	Proposed Compensatory Storage (CY)
Wetland 2	949.34	96	101
Watercourse	940.0 - 940.4	6	26
	939.0 - 940.0	21	77
	938.0 - 939.0	10	67
	937.0 - 938.0	5	65
	936.0 - 937.0	6	62
	935.0 - 936.0	7	56
	934.0 - 935.0	8	49
	933.0 - 934.0	10	39
	932.0 - 933.0	20	29
	931.12 - 932.0	10	10
	Watercourse Total		103

<sup>1</sup> this compensatory storage is in the same spatial area of the wetland 1 floodplain but the LGU allowed the wetland to be replaced with a wet detention basin.

The engineer concurs with the applicant provided runoff modeling results that demonstrate the proposed project will decrease the flow rates leaving the site relative to existing conditions (see the rate control analysis in Rule J below). Because the proposed flow rates leaving the site will be lower than existing flow rates the project is not reasonably likely to adversely impact off-site flood risk or channel stability. The applicant also provided pre- and post-project water quality modeling to demonstrate no adverse impact to water quality. The modeling results show the total suspended solids and total phosphorus load leaving the site after the project will be less than the existing load leaving the site. This also supports the engineer's determination that the project meets the requirements of Rule B, subsection 3.3. Because the closest building is 110 feet away from the watercourse and the impervious drive lane is connected to a waterbody crossing regulated under Rule G, the proposed project conforms to the Creekside restriction requirements set forth by Rule B, Subsection 3.4 . See Rule C analysis of the applicants submitted erosion control plan to demonstrate conformance with Rule B, Subsection 3.5. A note on the plans indicates that activities must be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.6.

The proposed project conforms to the floodplain management and drainage alteration requirements of Rule B.

**Rule C: Erosion and Sediment Control**

Because the project will alter 17.38 acres of land-surface area the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

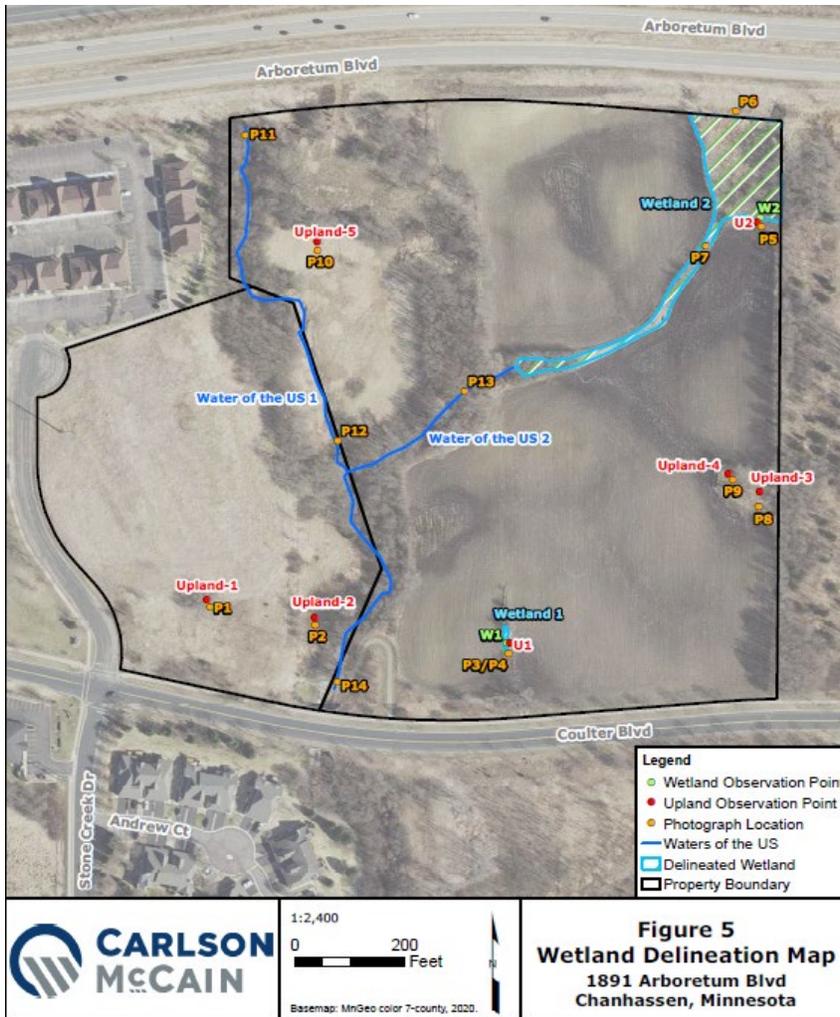
The erosion control plan prepared by Loucks includes installation of silt fence, inlet protection for storm sewer catch basins, daily inspection, placement of a minimum of 6 inches of topsoil, decompaction of areas compacted during construction, and retention of native topsoil onsite. To conform to the RPBCWD Rule C requirements the following revisions are needed:

- C1. The Applicant must provide the name and contact information of the individual responsible for erosion control at the site. RPBCWD must be notified if the responsible individual changes during the permit term.

**Rule D: Wetland and Creek Buffers**

Because the proposed work triggers a permit under RPBCWD Rule B, Rule G, and Rule J and two wetlands (wetland 1 and 2) protected by the state Wetland Conservation Act are disturbed from the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffers. Because the NE Tributary to Bluff Creek and the watercourse connecting Wetland 2 to the NE Tributary of Bluff Creek are not public waters, rule D does not impose buffer requires for these resources.

The City of Chanhassen is the LGU administering WCA requirements and in that capacity approved elimination of Wetland 1 as part of the proposed construction activities, leaving no wetland to buffer. Because the applicant proposes to disturb a portion of Wetland 2, Subsection 3.1b requires wetland buffer be provided around the remaining wetland on the parcel.



**Figure 5**  
**Wetland Delineation Map**  
 1891 Arboretum Blvd  
 Chanhassen, Minnesota

A MnRAM analysis indicates that Wetland 2 is a medium value wetland . Rule D, Subsection 3.1.a.iii requires a wetland buffer with an average of 40 feet from the delineated edge of the wetland, minimum 20 feet. The proposed buffer for Wetland 2 intersects a steep slope, as defined in the rule. Per Rule D, subsection 3.2.c, the buffer must encompass all or part of a slope averaging 18% or greater. Because the Wetland 2 buffer area extends to the top of slopes that average steeper than 18% the project conforms to Rule B, subsection 3.2.c. The required buffer width to conform to Rule B, subsection 3.2.c was measured to be 44 feet which is greater than the required buffer width to conform to Rule D, subsection 3.2.b.iii; both requirements are met.

Wetland ID	RPBCWD Wetland Value	Required Minimum Width (ft)	Required Average Width (ft)	Required Area (sq ft)	Provided Area (sq ft)	Provided Minimum Width (ft)	Provided Average Width (ft)
Wetland 2	Medium	20	40	20,685	29,390	34	56.8

The plan requires revegetating disturbed areas within the proposed buffer with Board of Water and Soil Resources native vegetation seed mix for wetlands to conform with Rule D, Subsection 3.2. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule D, Subsection 3.5.

To conform to the RPBCWD Rule D the following revisions are needed:

- D1. Buffer areas and maintenance requirements must be documented in a declaration recorded after review and approval by RPBCWD in accordance with Rule D, Subsection 3.4. Permit applicant must provide a maintenance declaration. A draft declaration must be provided for District review prior to recording.

**Rule G: Waterbody Crossings and Structures**

Because the applicant proposes to place a storm sewer conveyance waterbody crossing in the bed and bank of the watercourse connecting Wetland 2 to the NE Tributary of Bluff Creek and install two outfalls discharging into the NE Tributary to Bluff Creek, the project must conform to RPBCWD’s Waterbody Crossings and Structures Rule (Rule G). (Rule F: Stormwater and Streambank Stabilization is not triggered because the riprap being installed in bank of the watercourses is to prevent erosion more so than stabilize the bank.)

**Waterbody crossing analysis**

This work represents a specific need to repair an eroding channel (see below photos) with an engineered conveyance system to control rates, convey runoff from Wetland 2 through the developed site while by proving a design separating employee and Xcel truck traffic to promote employee safety (Rule G, Subsection 3.1b).



The proposed crossing was modeled in HydroCAD by the applicant. The analysis shows that the proposed 100-year frequency flood elevation upstream of the crossing (955.6 msl) will match the existing elevation 955.6 msl, thus confirming the project retains adequate hydraulic capacity and will not increase the flood

stage of the existing water body conforming to Rule G, Subsection 3.2a. This watercourse is not used for navigation, thus Rule G, subsection 3.2b, does not impose a requirement on the project. The project is not reasonably likely to adversely affect water quality or cause increased scour or erosion because the Class IV riprap materials are sized and designed appropriately to withstand the erosion potential at the outfall to the watercourse consistent with the criteria in Rule G, Subsection 3.2c.

Because this proposed crossing is underground it will provide protection from predations. Because the proposed shallow slope of the pipe (1.25% for a majority of the length and then leveling off to 0.5% for the final 75 lineal feet), the design is intended reduce flow velocity relative to existing conditions allowing wildlife to continue to be able to use crossing, thus preserving wildlife passage consistent with Rule G, Subsection 3.2d.

The applicant considered five alternative layouts on the site to minimize impacts to the water resources on the site as part of WCA’s avoidance an minimization requirements. The following table provides a summary of the alternatives considered. Because the preferred alternative achieves the specific needs of the facility and maintains employee safety by separating employee and Xcel truck traffic, the engineer concurs that the preferred alternative represents the minimal impact to the water resources consistent with Rule G, Subsection 3.2e.

		Preferred Plan	Alternate 1	Alternate 2	Alternate 3	Alternate 4
Calculations	Disturbed Area (AC)	17.200	14.625	16.305	16.885	17.300
	Impervious Coverage (AC)	9.415	7.700	9.050	9.430	9.415
	Wetland Impacted (AC/%)	0.166 (22%)	0.023 (3%)	0.108 (14%)	0.144 (19%)	0.160 (21%)
	Stream Impacted (LF/%)	205 (13%)	0 (0%)	0 (0%)	205 (13%)	255 (16%)
Quantitative Criteria	Wall Face Required (SF)	6,365	21,580	17,575	6,365	5,965
	Parking Stalls (EA)	120	90	120	120	120
	Yard Area (AC)	3.582	3.582	3.582	3.582	3.582
	Building Footprint Size					
	<i>Main: Office/Crew/Warehouse (AC)</i>	22,710	22,710	22,710	22,710	22,710
	<i>Vehicle Storage (# Bays)</i>	32	24	32	32	32
	<i>Fleet Maintenance (SF)</i>	17,685	11,825	17,685	17,685	17,685
Qualitative Criteria	Separates employee traffic from truck traffic for employee safety	Yes	No	No	No	No
	Driveway to parking lot slope	3.5%	13.1%	7.4%	5.1%	3.9%
	Meets Xcel Standard of 2 access points in case of emergency	Yes	No	No	Yes	Yes
	Avoids west creek buffer area disturbance due to retaining walls	Yes	No	No	Yes	No
	Provides screening of fleet and yard activities	Yes	No	No	Yes	Yes

As discussed in the Rule B narrative above, the project complied with the District floodplain rule, as required by subsection 3.5c, except that a variance from the compensatory-storage siting criterion.

Based on the crossing construction stabilization methods, the crossing is not reasonably likely to cause adverse effects to water quality and the physical or biological character of the waterbody because the proposed flared end section aligns with the watercourse, at the thalweg of the channel, will install riprap adequately sized withstand the anticipated flow velocities leaving the pipe, thus conforming to Rule G, Subsection 3.5d.

Because the watercourse is not shown on the MNDNR protected waters maps Rule G, Subsection 3.7a is not applicable. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule G, Subsection 3.7c.

Construction drawings submitted confirm that riprap is sized appropriately in relation to the erosion potential. Riprap is sized at 24 inches in diameter ( $D_{100}$ ) which is appropriately sized to withstand the designed discharge velocity 9 feet per second, thus conforming to Rule F, Subsection 3.3b (i). Drawings confirm the proposed crossing will follow the existing alignment of the watercourse (Rule F, Subsection 3.3b (ii) and 3.3b (iv)). The standard riprap detail included with the drawings indicate that a granular transitional layer and a geotextile fabric will be placed, thus conforming to Rule F, Subsection 3.3b (iii). The riprap design reflects energy dissipation and stabilization necessary to minimize erosion at the watercourse and is not placed for cosmetic purposes per Rule F, Subsection 3.3b (vi).

### **Outfall Analysis**

This work represents a specific need to discharge treated stormwater to the natural watercourse through the site (Rule G, Subsection 3.1b)

The project plans incorporate a wet detention pond upstream of each outfall and a small stilling basin at the outfalls prior to the discharge entering NE Tributary to Bluff Creek. In addition, site runoff is conveyed to the proposed wet detention basins for entrapment of floatables, sedimentation, runoff retention, reduction of peak runoff rates to less than existing condition and water quality treatment before the discharging to the watercourse, thus the design is in conformance with Rule G, Subsection 3.3.

Placement of the proposed outfall structures at the normal water level represents the minimal impact solution because the alternative of constructing outfalls that discharge flow on the existing slopes above the watercourse would cause soil erosion potential and could destabilized the creek bank, both of which would promote sediment discharge into the watercourse from upgradient sources. The proposed outfall design minimizes the discharge velocity by including riprap and limits the site disturbance adjacent to the tributary, both of which minimize erosion potential and thus meet criteria in Rule G, Subsection 3.5a. The project proposes to match existing elevations along the creek at the outfall to minimize encroachment and change along the creek. Thus, the design is in conformance with Rule G, Subsection 3.5b.

As discussed in the Rule B narrative above, the proposed project will comply with the District floodplain rule, as required by subsection 3.5c, except that a variance from the compensatory-storage siting criterion.

Because the design proposes riprap sized appropriately to withstand the anticipated discharge velocity (9-10 feet per second), incorporates a stilling basin to dissipate energy, and reduces pollutant load from the site to less than existing conditions, the proposed outfall structure is not reasonably likely to cause adverse effects to water quality and the physical or biological character of the waterbody. However, the discharge to the north portion of the NE Tributary of Bluff Creek is larger under proposed conditions than existing conditions for the 10-, 100- and snowmelt events. Because the increased discharges to the watercourse could impact on the stability of the existing watercourse, design revisions are needed to comply with Rule G, Subsection 3.5d.

Because the watercourse is not shown on the MNDNR protected waters maps Rule G, Subsection 3.7a is not applicable. A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible conforming to Rule G, Subsection 3.7c.

Construction drawings submitted confirm that riprap is sized appropriately in relation to the erosion potential. Based on the MnDOT drainage manual the class III riprap is sized at 18 inches in diameter which is appropriately sized to withstand the designed discharge velocity of 9-10 feet per second, thus conforming to Rule F, Subsection 3.3b (i). Drawings confirm the proposed crossing will follow the existing alignment of the watercourse (Rule F, Subsection 3.3b (ii) and 3.3b (iv)). The standard riprap detail included with the drawings indicate that a granular transitional layer and a geotextile fabric will be placed, thus conforming to Rule F, Subsection 3.3b (iii). The riprap design reflects energy dissipation and stabilization necessary to minimize erosion at the watercourse and is not placed for cosmetic purposes per Rule F, Subsection 3.3b (vi).

To conform to the RPBCWD Rule G the following revisions are needed:

- G1. Reduce the discharges from the north wet basin to the NE Tributary of Bluff Creek or adjust the discharge locations so that proposed flows in the tributary do not exceed existing conditions. Alternatively, provide computations demonstrating that the additional flow in the watercourse reach will not exacerbate existing erosion problems, thus conforming to Rule G, Subsection 3.5d.
- G2. Permit applicant must provide a draft maintenance declaration for the waterbody crossing and outfalls, in accordance with Rule G, Section 5, and record after approval of RPBCWD administrator.

#### **Rule J: Stormwater Management**

Because the development project will alter 17.38 acres of land-surface areathe project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1).

The project includes installation of storm sewer to route runoff to two wet detention basins and two rainfall capture and reuse systems to provide water quality treatment, rate control, and volume abstraction.

**Rate Control**

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in the table below. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Coulter	2.5	0.8	4.6	1.3	9.4	2.5	0.2	0.1
Total Creek	76.9	66.8	124.2	110.0	226.9	199.7	12.4	12.3

**Volume Abstraction**

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the impervious surface of the parcel. An abstraction volume of 38,312 cubic feet is required from the 417,958 square feet of regulated impervious area. Thirty-four soil borings completed by Braun Intertec show that soils in the project area are typically sandy lean clay, clayey sand, or silty sand. Braun also completed three permeability tests on the existing soils and determined the infiltration rates of the existing soils to be 0.001 inches per hour beneath the proposed stormwater management features. Because of the low in-situ infiltration measurements the site is considered restricted. Groundwater was discovered at two of the 34 borings at elevation 948.5 feet and 930.5 feet.

For restricted sites, subsection 3.3 of Rule J requires rate control in accordance with subsection 3.1.a and that abstraction and water-quality protection be provided in accordance with the following sequence: (a) Abstraction of 0.55 inches of runoff from site impervious surface determined in accordance with paragraphs 2.3, 3.1 or 3.2, as applicable, and treatment of all runoff to the standard in paragraph 3.1c; or (b) Abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or (c) Off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c. Based on the measured permeability testing results, the applicant is proposing two rainwater harvest and reuse system to provide onsite abstraction. One system will be used for irrigation of green space and the second system will be used for a truck wash station. Because the combined abstraction volume provided in the reuse systems equates to 0.39 inches from all regulated

impervious area for a restricted site, which represents the maximum extent practicable, the project conforms with Rule J, subsection 3.3b.

The designed abstraction performance for the project site is summarized in the table below.

	Abstraction Depth (inches)	Abstraction Volume (cubic feet)
Required	1.1	38,312
Provided	0.39	13,546

Because the proposed stormwater reuse systems require consistent use at a specified rate to meet District requirements, performance monitoring for the site will be required to ensure that the project provides the proposed volume abstraction.

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant provide for at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. The Applicant is proposing to use two wet detention ponds and a rainwater harvesting system to irrigate green space and wash trucks to achieve the required TP and TSS removals.

Rule J, Subsection 3.5, allows the proposed project to receive credit for the wetland buffers required by Rule D towards compliance with the stormwater management criteria. The engineer concurs with the applicant’s assertion that the buffer areas and other areas restored with native vegetation are considered a self-mitigating stormwater feature (i.e., result in natural runoff conditions similar to a native landscape), thus the buffer areas and naturalized area were removed from the MIDS water quality modeling for the proposed project.

The MIDS modeling results of runoff from impervious areas of the site summarized in tables below show the annual TSS and TP removal requirement is achieved and that there is no net increase in TSS and TP leaving the site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

**Annual TSS and TP removal summary**

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	3,496	3,146 (90%)	3,149 (90.1%)
Total Phosphorus (TP)	19.2	11.5 (60%)	13.7 (71.4%)

**Summary of net change in TSS and TP leaving the site**

Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)	Change (lbs/yr)
Total Suspended Solids (TSS)	1,263	347	-916
Total Phosphorus (TP)	6.95	5.58	-1.37

Because compliance with the RPBCWD water-quality requirements is dependent on the wetland buffers and natural areas restoration, the maintenance requirements of the buffer and naturalized areas must be documented in a declaration recorded after review and approval by RPBCWD.

***Low floor Elevation***

All new buildings must be constructed such that the lowest floor is at least two feet above the 100-year high water elevation or one foot above the emergency overflow of a stormwater-management facility according to Rule J, Subsection 3.6a. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with this requirement according to Rule J, Subsection 3.6b. The low floor elevation of the proposed building and the adjacent stormwater management feature or waterbody are summarized below.

Stormwater Facility	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard (feet)
North Pond	952.5	945.82	6.68
South Pond	952.5	944.57	7.93

Because the provided separation is greater than the minimum required, the elevation and location of the proposed stormwater facilities meet the existing habitable structure requirements in Rule J, Subsection 3.6.

***Maintenance***

Subsection 3.7 of Rule J requires the submission of a maintenance declaration. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed.

- J1. .Permit applicant must provide a maintenance and inspection declaration as required by Rule J, Subsection 3.7. A maintenance declaration template is available on the permits page of the RPBCWD website (<http://www.rpbcwd.org/permits/>). The declaration must also include a stormwater reuse monitoring and reporting plan that includes protection of the greenspace to be irrigated and metering of the volume of reuse. A draft declaration must be provided for District approval prior to recordation and documentation of recordation must be provided to RPBCWD as a condition of issuance of the permit

### **Chloride Management**

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. To close out the permit and release the \$5,000 in financial assurance held for the purpose, Permit applicant must provide a chloride management plan that designates the individual authorized to implement the chloride management plan.

### **Wetland Protection**

Because runoff from this site is directly tributary to an on-site medium value wetland, the project must comply with the wetland protection criteria in Rule J, Subsection 3.10

The following table summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J. The information summarized in the following table also summarizes the applicant’s analysis for wetland protection and the potential impacts on the wetlands. The hydrologic models demonstrate that the duration of inundation has not been increased from existing conditions. The submitted materials demonstrate, and the RPBCWD engineer concurs, that project is in conformance with Rule J, Subsection 3.10a for the medium value wetland at the site.

Wetland	RPBCWD Wetland Value	Change in Bounce for, 10-Year Event (feet)	1-year change in Inundation Period (days)	2-year change in Inundation Period (days)	10-year change in Inundation Period (days)	Runout Control Elevation <sup>1</sup>
Rule J, Table J1 Criteria	Medium	Existing +/- 1.0 feet	Existing+2 days	Existing+2 days	Existing +14 days	0 to 1.0 ft above existing runout
On-site Wetland	Medium	-0.02	0	0	0	No change

Rule J, Subsection 3.10b requires that treatment of runoff to medium value wetlands archive 90 percent total suspended solids removal and 60 percent total phosphorus removal. MIDS modeling results show the proposed stormwater management facilities provides 94% TSS and 78% TP removals from runoff conveyed to Wetland 2, thus the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

### **Rule K: Variances and Exceptions**

Rule B subsection 3.2 requires compensatory flood storage within the floodplain of the same waterbody. The Applicant requested a variance from this provision of RPBCWD’s Rule B – Floodplain Management and Drainage Alterations.

The attached variance request letter submitted on behalf of the applicant cites several facts related to the development in support of the request. Rule K requires the Board of Managers to find that because of unique conditions inherent to the subject property the application of rule provisions will impose a practical difficulty on the Applicant. Assessment of practical difficulty is conducted against the following criteria:

1. how substantial the variation is from the rule provision;
2. the effect of the variance on government services;
3. whether the variance will substantially change the character of or cause material adverse effect to

water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties;

4. whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules;
5. how the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance; and
6. in light of all of the above factors, whether allowing the variance will serve the interests of justice.

The local governmental unit (LGU) administering the WCA, City of Chanhassen, approved the elimination of Wetland 1. Rule B subsection 3.2 requires compensatory flood storage within the floodplain of the same waterbody. The Applicant requested variances from this provision of RPBCWD's Rule B – Floodplain Management and Drainage Alterations. The applicant asserts that the need for the variance results from the unique condition of the LGU's having approved complete elimination of the wetland. Following is the RPBCWD engineer's assessment of information received relevant to the applicant's request for a variance from the requirement that the applicant provide compensatory flood storage within the floodplain of the same waterbody:

- Related to variance criterion 1 – The project will involve 3 cubic yards of fill and 3,177 cubic yards of compensatory storage below the 100-year flood elevation (954.21 feet) but outside of the wetland floodplain, thus providing a net increase of 3,174 cubic yards of floodplain storage. This flood storage is also used for stormwater management on the site.
- With regard to variance criteria 2 and 3 – Because the proposed project will reduce the site discharge and pollutant loading leaving the site relative to existing conditions, as discussed in the Rule B, subsection 3.3 analysis, the proposed project is not reasonably likely to cause off-site adverse impacts. Because the project involves a net increase of storage below the 100-year flood elevation of the wetland being filled, the proposed alterations are not likely to adversely affect offsite governmental services, water resources, flood levels, or neighboring properties. The proposed variance only impacts the applicant's property.
- Technical measures incorporated into the project plan to alleviate the practical difficulty (variance criterion 4) include creation of compensatory flood storage volume in the two wet detention basins to comply with RPBCWD regulatory requirements, but not within the same floodplain. Routing the developed site runoff to the proposed stormwater management facilities will allow the runoff to be stored in the facilities resulting in reduced site discharge as summarized in the rate control analysis of Rule J above. Because the Wetland 1 will no longer exist the compensatory storage cannot be provided within the floodplain of the same wetland.
- With regard to variance criterion 5, the applicant has created the circumstances leading to the variances, though it did so with the approval of another relevant regulatory body, the LGU administering WCA.

Because the project increase storage below the 100-year flood elevation of the Wetland 1 which the LGU is allowing to be filled, the engineer finds there is an adequate technical basis for the managers to rely on to grant the requested variance.

**Rule L: Permit Fee Deposit:**

The RPBCWD permit fee schedule adopted in February 2020 requires permit applicants to deposit \$3,000 to be held in escrow and applied to cover the \$10 permit-processing fee and reimburse RPBCWD for permit review and inspection-related costs and when a permit application is approved, the deposit must be replenished to the applicable deposit amount by the applicant before the permit will be issued to cover actual costs incurred to monitor compliance with permit conditions and the RPBCWD Rules. A permit fee deposit of \$3,000 was received on October 25, 2022. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. Subsequently, if the costs of review, administration, inspections and closeout-related or other regulatory activities exceed the fee deposit amount, the applicant will be required to replenish the deposit to the original amount or such lesser amount as the RPBCWD administrator deems sufficient within 30 days of receiving notice that such deposit is due. The administrator will close out the relevant application or permit and revoke prior approvals, if any, if the permit-fee deposit is not timely replenished.

- L1. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of July 28, 2023 the amount due is \$6,057.

**Rule M: Financial Assurance:**

	Unit	Unit Cost	# of Units	Total
<b>Rule C: Erosion Control</b>				
Silt Fence	LF	\$2.50	4,700	\$11,750
Inlet Protection	EA	\$100	34	\$3,400
Rock Entrance	EA	\$250	2	\$500
Restoration	Ac	\$2,500	17.38	\$43,450
<b>Rule D: Wetland and Creek Buffers</b>				
	LS	\$5,000	1	\$5,000
<b>Rule J: Chloride Management</b>				
	LS	\$5,000	1	\$5,000
<b>Rule J: Stormwater Management</b>				
Two wet detentions basins and two reuse systems: 125% of engineer’s opinion of cost (\$692,346)	EA	125% OPC	1	\$865,433
Contingency (10%)		10%		\$93,453
<b>Total Financial Assurance</b>				<b>\$1,027,986</b>

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way

relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.

3. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
4. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
5. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
6. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
7. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

### **Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rule B.
3. The proposed project will conform to Rules C, G, and J if the Rule Specific Permit Conditions listed above are met.

### **Recommendation:**

Approval of the permit contingent upon:

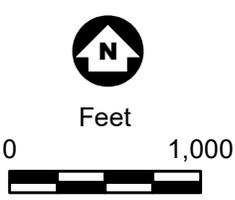
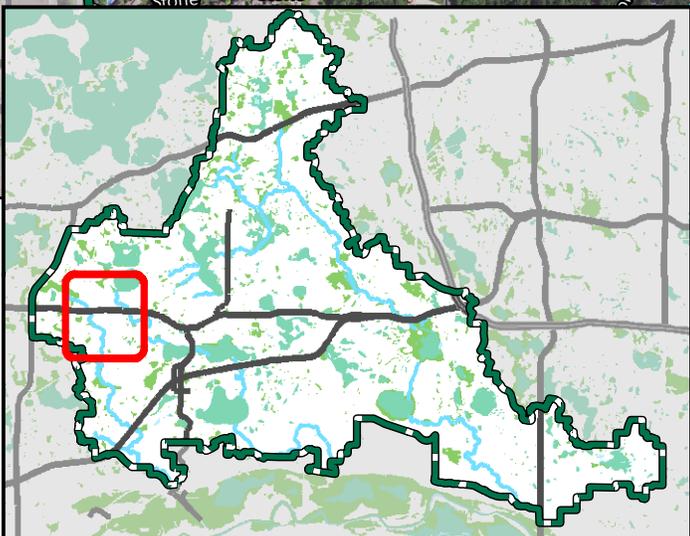
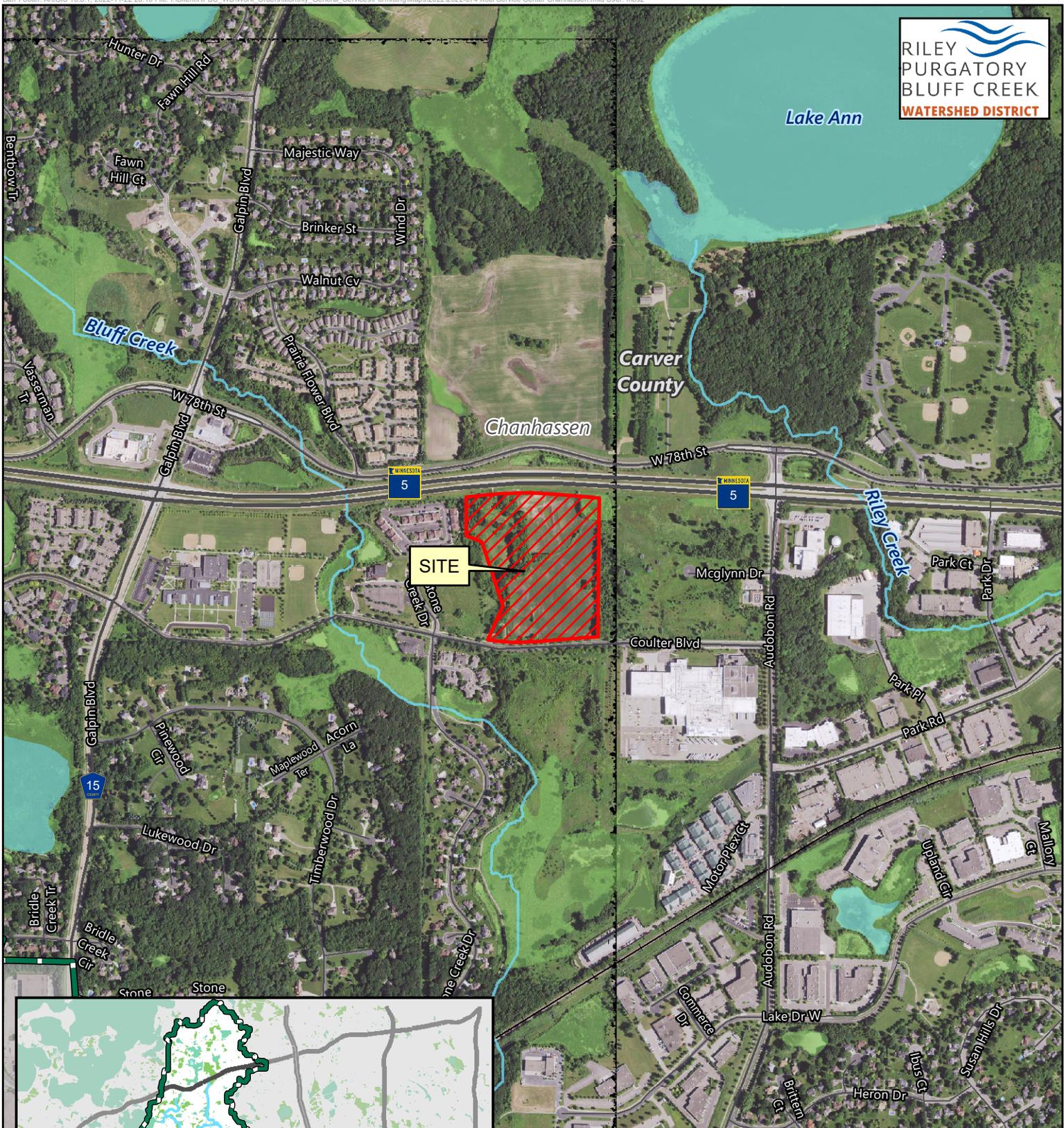
1. Financial Assurance in the amount of \$1,027,986 .
1. Applicant providing the name and contact information of the individual responsible for erosion and sediment control at the site.
2. Reduce the discharges from the northern wet basin to the NE Tributary of Bluff Creek or adjust the discharge locations so that proposed flows in the tributary do not exceed existing conditions. Alternatively, please provide computations demonstrating that the additional flow in the watercourse reach will not exacerbate existing erosion problems, thus conforming to Rule G, Subsection 3.5d.

3. Receipt in recordation a maintenance declaration for maintenance of the wetland buffer and naturalized areas remaining predominantly native vegetation and associated maintenance requirements, all stormwater management facilities, maintenance of the waterbody crossing and outfalls to the NE Tributary of Bluff Creek. The declaration must also include a stormwater reuse monitoring and reporting plan that includes protection of the greenspace to be irrigated and metering of the volume of reuse, as well as maintenance specifics provided by the manufacturer(s) or installer(s) for the proprietary systems. Drafts of all documents to be recorded must be approved by the District prior to recordation.
4. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of July 28, 2023 the amount due is \$6,057.
2. .

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Continued compliance with General Requirements.
2. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization, all stormwater management facilities conform to design specifications and function as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
  - a. the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b. the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c. the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
3. Providing the following additional close-out materials:
  - a. Documentation that constructed infiltration facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD
  - b. Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria
4. The work on the Xcel Service Center development under the terms of permit 2022-074, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans (e.g., in terms of total impervious area) will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.
5. To close out the permit and release the \$5,000 in financial assurance held for the purpose of the chloride management, the permit applicant must provide a chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site.

6. Replenish the permit fee deposit to the original amount or such lesser amount as the RPBCWD administrator deems sufficient within 45 days of receiving notice that such deposit is due in order to cover continued actual costs incurred to monitor compliance with permit conditions and the RPBCWD Rules.



Permit Location Map  
XCEL SERVICE-CENTER,  
CHANHASSEN  
**Permit 2022-074**  
Riley Purgatory Bluff Creek  
Watershed District

# Xcel Chanhassen Service Center - RPBCWD Variance Request

## Variance Request

Xcel is requesting a variance from Riley Purgatory Bluff Creek Watershed District Rule B Subsection 3.2 which requires compensatory flood storage within the floodplain of the same waterbody. The variance as requested is for the elimination of Wetland 1 on the south side of the site which has been approved by the LGU (City of Chanhassen). Wetland replacement will be in the form of purchasing wetland bank credits. As Wetland 1 will be eliminated, compensatory storage will not be provided within the floodplain of the existing wetland. The proposed project meets the findings required for approval as follows:

### **Practical Difficulties**

#### **1.1 How substantial the variation is from the rule provision:**

Variation from Rule B, Subsection 3.2 is insignificant. Wetland 1 will be completely eliminated as approved by the LGU. The table below summarizes compensatory storage calculations for the wetland floodplain fill. The required compensatory storage for the eliminated southwest wetland equates to 3 cubic-yards. While this volume is not provided within the same floodplain, it is included in total compensatory storage for the entire site. As shown in the table, compensatory storage exceeding the required volume by 2 cubic-yards has been provided for all wetland fill in the northeast wetland. The proposed development within the footprint of the filled wetland will consist of a wet stormwater pond at a lower elevation (refer to Figure H4-1 and H4-2 in Hydrology Report). Refer to the "Compensatory Storage" section of the Hydrology Report for detailed analysis.

	<b>Volume</b>
Net Fill of NE Wetland Swale North Portion (below 949.34')	64 CY
Net Fill of NE Wetland Swale South Portion (below 944.61')	32 CY
Net Fill of SW Wetland (below 954.21')	3 CY
Net Cut of NE Wetland Main Body	101 CY
<b>Total Fill (below 955.38')</b>	<b>-2 CY</b>

#### **1.2 The effect of the variance on government services:**

Variance will have no effect on government services.

#### **1.3 Whether the variance will substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties:**

The variance will not substantially change the character of or cause material adverse effect to water resources, flood levels, drainage or the general welfare in the District, or be a substantial detriment to neighboring properties. Computations have been submitted to show compliance with stormwater management requirements for water quality, rate control, and volume control under Rule J (refer to Hydrology Report). By complying with the criteria above, it can be determined that the project also meets the requirements of Rule B, Subsection 3.3 which states that the alteration is not reasonably likely to have an adverse offsite impact, adversely affect flood risk, basin or channel stability, groundwater hydrology, stream base flow, water quality or aquatic or riparian habitat.

# **Xcel Chanhassen Service Center - RPBCWD Variance Request**

## **1.4 Whether the practical difficulty can be alleviated by a technically and economically feasible method other than a variance. Economic hardship alone may not serve as grounds for issuing a variance if any reasonable use of the property exists under the terms of the District rules:**

A thorough Technical Evaluation Panel Review was conducted as part of the wetland fill and mitigation approval. This process included a review of avoidance options which were deemed to be not feasible with the existing site conditions. Since avoidance was deemed to not be practical, the LGU (City of Chanhassen) approved the fill and mitigation of Wetland 1 which will be replaced at a 2 to 1 ratio through the purchase of wetland bank credits. As the wetland will be eliminated, it is technically not possible to provide compensatory storage within the floodplain of the same waterbody.

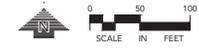
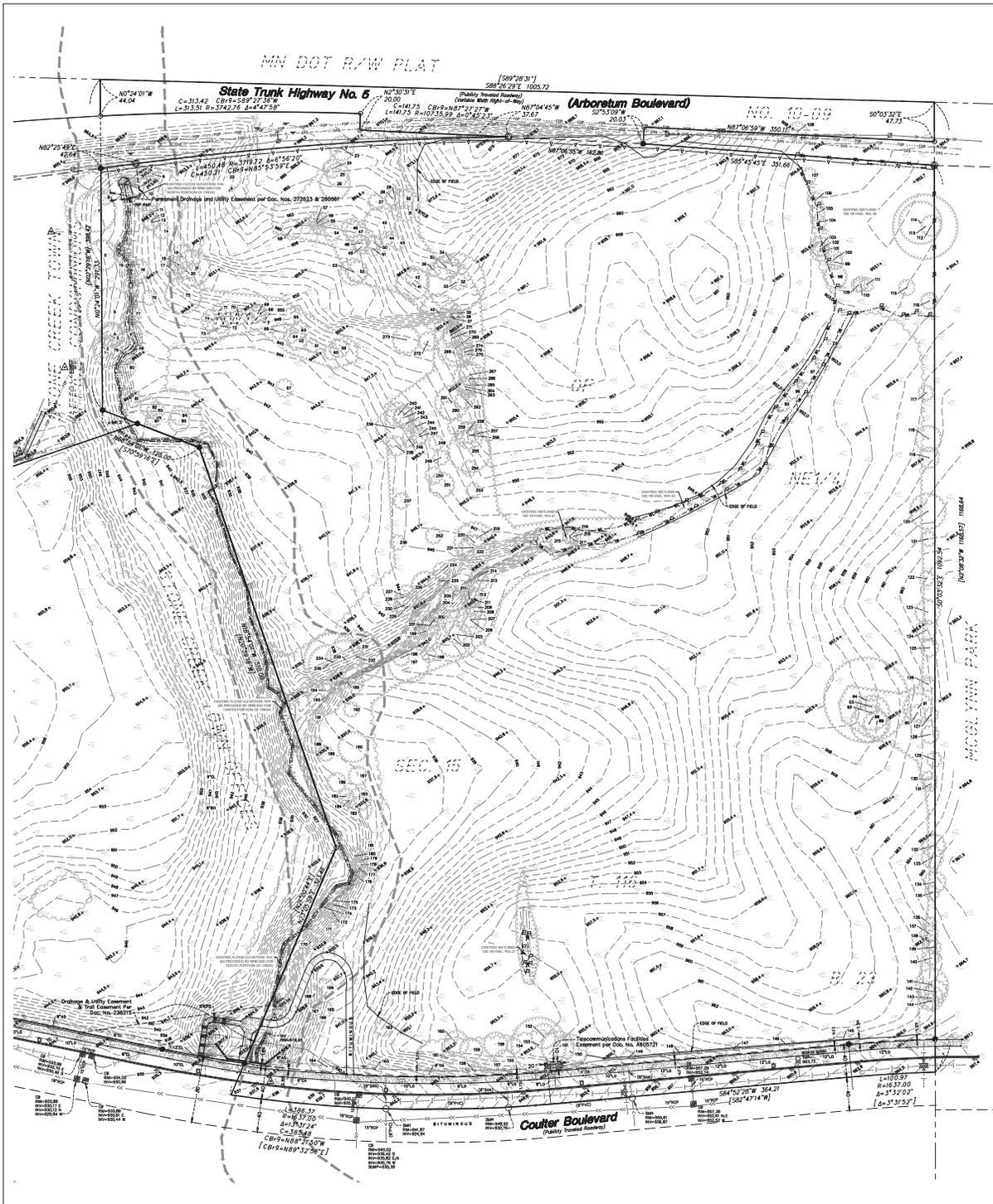
## **1.5 How the practical difficulty occurred, including whether the landowner, the landowner's agent or representative, or a contractor, created the need for the variance:**

The proposed elimination of Wetland 1 was reviewed thoroughly by the technical evaluation panel during the processing of the Minnesota Joint Application. The LGU (City of Chanhassen) ultimately approved the wetland impacts. In summary, it was determined that the impact to Wetland 1 was necessary to meet Xcel Energy's needs for site functionality and safety. Refer to the "Project Purpose, Need, and Requirements" section of the Minnesota Joint Application as prepared by Carlson-McCain for a detailed alternative analysis for wetland sequencing.

## **1.6 In light of all the above factors, whether allowing the variance will serve the interests of justice:**

Allowing the variance will serve the interests of justice as the elimination of Wetland 1 has been approved by the LGU (City of Chanhassen). The wetland will be mitigated at a ratio of 2 to 1 as part of wetland banking credits which will create additional wetland habitat. Compensatory storage for the elimination is provided, in excess of the required amount, adjacent to the existing wetland on the northeast side of the site so there will be no effect on downstream water bodies. A surface pond is proposed where Wetland 1 is being eliminated which will provide water quality and rate control for stormwater runoff.



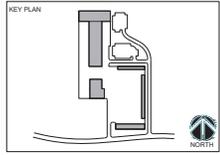


NOTE:  
EXISTING CONDITIONS INFORMATION  
SHOWN IS FROM AN ALTA/NPS LAND  
TITLE SURVEY PREPARED BY LOUCKS,  
DATED 03/24/2022.

- LEGEND**
- FOUND 1/2 INCH BORN MONUMENT UNLESS SHOWN OTHERWISE
  - SET 1/2 INCH X 1/4 INCH BORN MONUMENT MARKED "S. 4888"
  - ⊙ FOUND ALUMINUM DISC
  - ⊙ CATCH BASIN
  - STORM MANHOLE
  - SANITARY MANHOLE
  - HYDRANT
  - ⊕ GATE VALVE
  - CURB STOP
  - ⊕ CABLE TV FEEDBACK
  - ⊕ ELECTRIC METER
  - ⊕ ELECTRIC OUTLET
  - ⊕ ELECTRIC TRANSFORMER
  - ⊕ FLARED END SECTION
  - ⊕ GUY WIRE
  - ⊕ HAND POLE
  - ⊕ LIGHT POLE
  - ⊕ MAILBOX
  - ⊕ POWER POLE
  - ⊕ SIGN
  - ⊕ TELEPHONE FEEDBACK
  - ⊕ UTILITY FLAG
  - ⊕ WETLAND FLAG
  - ⊕ SCHEDULE 8 ITEM
  - STORM SEWER
  - SANITARY SEWER
  - MAPPED SANITARY SEWER
  - MAPPED WATERMAIN
  - UNDERGROUND ELECTRIC
  - UNDERGROUND FIBER OPTIC
  - UNDERGROUND GAS
  - OVERHEAD UTILITY
  - WATER LINE
  - CONCRETE CURB
  - RETAINING WALL
  - CONCRETE
  - ELECTRIC OUTLET
  - ELECTRIC TRANSFORMER
  - FLARED END SECTION
  - GUY WIRE
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  - LIGHT POLE
  - MAILBOX
  - POWER POLE
  - SIGN
  - TELEPHONE FEEDBACK
  - UTILITY FLAG
  - WETLAND FLAG
  - SCHEDULE 8 ITEM
  - SPOT ELEVATION
  - WETLAND AS DEMARCATED BY CALS/MCGILWAIN ON OCTOBER 18, 2021
  - TREE LINE
  - DECIDUOUS TREE
  - ASPEN
  - BASSWOOD
  - BIRCH
  - CATALPA
  - COTTONWOOD
  - Elm
  - HACKBERRY
  - LOCUST
  - OAK
  - TREE (GENERAL)



I hereby certify that this drawing was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer in the State of Minnesota.  
Title: Professional Engineer  
No. 10-09  
Date: 03/24/2022  
Professional Number: 56888



REVISION	DATE	DESCRIPTION	BY
10/26/2022		WATERSEEP SUBMITTAL	
11/16/2022		TEP SUBMITTAL	
11/16/2022		SCHEMATIC DESIGN PACKAGE	
1/26/2023		SE PACKAGE ADDENDUM	
01/12/2023		CITY SUBMISSION	
02/20/2023		CITY WATERSEEP SUBMISSION	
06/29/2023		DESIGN DEVELOPMENT PACKAGE	
07/07/2023		WATERSEEP SUBMISSION	

CLIENT  
1891 Arboretum Boulevard  
Chanhassen, MN 55317  
**Xcel Energy  
Service Center  
Chanhassen**

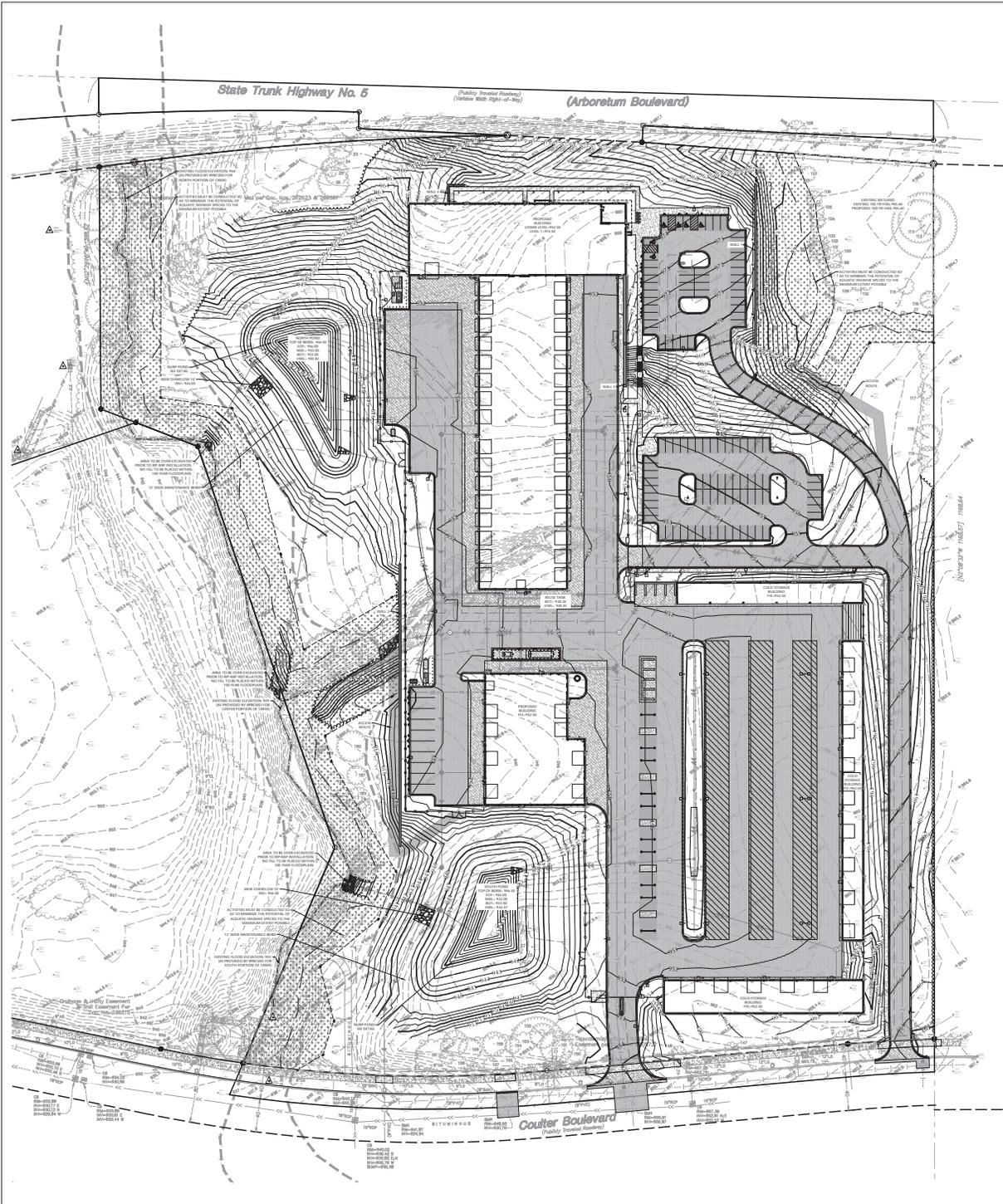
DRAWING TITLE  
**EXISTING  
CONDITIONS  
OVERALL**

DRAWING NUMBER  
**C1.0**

**CALL BEFORE YOU DIG!**  
Gopher State One Call  
TWN CITY APCA 481-454-0002  
TOLL FREE 1-800-552-1468

**WARNING:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COORDINATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT Gopher State One Call AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES, OR OTHER BARRIERS STRUCTURES. BEFORE DIGGING, THE CONTRACTOR SHALL REPAIR OR REPLACE THE BARRIERS WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



NOTE:  
EXISTING CONDITIONS INFORMATION  
SHOWN IS FROM AN ALTA/NPS LAND  
TITLE SURVEY PREPARED BY LOUCKS,  
DATED 03/24/2022.

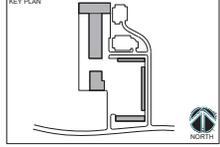
LEGEND	EXISTING	PROPOSED
CATCH BASIN	○	○
STORM MANHOLE	○	○
FLARED END SECTION	○	○
SANITARY MANHOLE	○	○
HYDRANT	○	○
GATE VALVE	○	○
POST INDICATOR VALVE	○	○
WATER MANHOLE / WELL	○	○
LIGHT POLE	○	○
POWER POLE	○	○
ELECTRIC METER	○	○
GAS METER	○	○
TELEPHONE PEDESTAL	○	○
SIGN	○	○
BENCHMARK	○	○
SOIL BORING	○	○
PARKING STALL COUNT	○	○
ACCESSIBLE PARKING STALL	○	○
STORM SEWER	—	—
DRAIN TILE	—	—
SANITARY SEWER	—	—
FORSEMAN	—	—
WATERMAIN	—	—
SANITARY SEWER SERVICE	—	—
WATER SERVICE	—	—
UNDERGROUND ELECTRIC	—	—
UNDERGROUND FIBER OPTIC	—	—
UNDERGROUND GAS	—	—
UNDERGROUND TELEPHONE	—	—
OVERHEAD UTILITY	—	—
FENCE	—	—
CHAIN LINK FENCE	—	—
CONCRETE CURB	—	—
RETAINING WALL	—	—
CONCRETE	—	—
NO PARKING	—	—
BUILDING	—	—
CONTOUR	—	—
SPOT ELEVATION	—	—
DIRECTION OF FLOW	—	—
TREE LINE	—	—
PARKING STRACK LINE	—	—
BUILDING STRACK LINE	—	—

- GRADING NOTES**
- SPOT ELEVATIONS REPRESENT FINISHED SURFACE GRADES, GUTTER/FLOW LINE, FACE OF BUILDING, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
  - ALL ACCESSIBLE ROUTES SHALL BE CONSTRUCTED WITH A CROSS SLOPE NOT EXCEEDING 2% AND A RUNNING SLOPE NOT EXCEEDING 5%.
  - AT TURNING POINTS ALONG THE ACCESSIBLE ROUTE THE PAVEMENT SHALL NOT EXCEED 2% IN ANY DIRECTION FOR AN AREA 6' IN DIAMETER.
  - ALL PUBLIC SIDEWALKS SHALL BE CONSTRUCTED WITH A CROSS SLOPE NOT EXCEEDING 2% AND A RUNNING SLOPE NOT EXCEEDING 5%.
  - CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.16 FEET. RIM ELEVATIONS SHOWN ON PLANS DO NOT REFLECT SUMPED ELEVATIONS.
  - REFER TO GEOTECHNICAL EVALUATION REPORT BY BRAUN INTERTEC FOR AN EXISTING SUBSURFACE SITE CONDITION ANALYSIS AND CONSTRUCTION RECOMMENDATIONS INCLUDING BUT NOT LIMITED TO:
    - A. REUSE OF ON-SITE SOILS
    - B. GROUNDWATER AND RECOMMENDATIONS FOR EXCAVATION DEWATERING.
    - C. SITE GRADING AND SUBGRADE PREPARATION.
    - D. PAVEMENTS AND EXTERIOR SLABS.
    - E. TRENCH EXCAVATION AND BACKFILL.
    - F. EXTERIOR UTILITY SUPPORTS.
    - G. FROST PROTECTION.
  - CITY AND WATERSHED SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONSTRUCTION OF STORMWATER BMPs.
  - ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE MINIMUM OF 6 INCHES OF TOP SOIL AND SEED/MULCH OR SOIL. THESE AREAS SHALL BE WATER MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION IS ESTABLISHED. REFER TO THE LANDSCAPE PLAN, DETAILS AND SPECIFICATIONS FOR FINAL SITE STABILIZATION.
  - FOR SITE RETAINING WALLS "TW" EQUALS SURFACE GRADE AT TOP FACE OF WALL (NOT TOP OF WALL) AND "BW" EQUALS SURFACE GRADE AT BOTTOM FACE OF WALL (NOT BOTTOM OF BURIED WALL COURSE).
  - FOR SITE STAIRS, "TS" EQUALS SURFACE ELEVATION AT TOP OF STAIRS AND "BS" EQUALS SURFACE ELEVATION AT BOTTOM OF STAIRS. REFER TO SITE PLAN FOR NUMBER OF RISERS AND RISER HEIGHT.
  - STREETS MUST BE CLEANED AND SWEEP WHENEVER TRACKING OF SEDIMENTS OCCURS AND BEFORE SITES ARE LEFT IDLE FOR WEEKENDS AND HOLIDAYS. A REGULAR SWEEPING SCHEDULE MUST BE ESTABLISHED.
  - DUST MUST BE ADEQUATELY CONTROLLED.
  - SEE SWPPP FOR ADDITIONAL EROSION CONTROL NOTES AND REQUIREMENTS.
  - SEE UTILITY PLAN FOR WATERMAIN, STORM SEWER, AND SANITARY SEWER INFORMATION.
  - SEE SITE PLAN FOR CURB AND BITUMINOUS TAPER LOCATIONS.
  - REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING ELEVATIONS.
  - THE CONTRACTOR ALONG WITH THE OWNER SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM GOVERNING AUTHORITIES INCLUDING ANY CITY PERMITS AND THE WATERSHED PERMIT.
  - INSTALL EROSION CONTROL AND TREE PROTECTION MEASURES BEFORE BEGINNING SITE GRADING ACTIVITIES. SCOUR EROSION CONTROLS SUCH AS BALE CHECKS AND TEMPORARY SILT PONDS MAY BE INSTALLED AS GRADING OCCURS IN SPECIFIC AREAS. MAINTAIN EROSION CONTROLS THROUGHOUT THE GRADING PROCESS AND REMOVE WHEN TURF HAS BEEN ESTABLISHED.
  - CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION OF GRADING ACTIVITIES AS NEEDED PER APPLICABLE PERMIT REQUIREMENTS AND/OR DEVELOPMENT AGREEMENTS.
  - TOPSOIL TO BE INSTALLED AS PART OF THE SITE RESTORATION WILL CONTAIN AT LEAST 5 PERCENT ORGANIC CONTENT CONSISTENT WITH THE DISTRICT'S TOPSOIL DEFINITION.
  - STAKING OFF AND MARKING OF PROPOSED INFILTRATION FACILITIES TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND TRAFFIC. IF INFILTRATION FACILITIES ARE IN PLACE DURING CONSTRUCTION ACTIVITIES, BEST PRACTICES MUST BE EMPLOYED TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE PRACTICAL INFILTRATION FACILITIES MUST NOT BE EXCAVATED TO WITHIN 3 FEET FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED. ANY ACCUMULATED SEDIMENT IN AN INFILTRATION FACILITY MUST BE REMOVED IN A MANNER THAT PREVENTS CONSTRUCTION OF THE FACILITY BOTTOM.
  - ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.



I hereby certify that this drawing was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer in the State of Minnesota.  
 Title: Professional Engineer  
 No. 1000000000  
 Exp. 12/31/2024  
 License Number: 58588

**NOT FOR CONSTRUCTION**



REVISION	DATE	DESCRIPTION	BY
10/20/2022		WATERSHED SUBMITTAL	
11/16/2022		TEP SUBMITTAL	
11/16/2022		SCHEMATIC DESIGN PACKAGE	
1/26/2023		SE PACKAGE ADDENDUM	
01/17/2023		CITY SUBMISSION	
02/28/2023		WATERSHED SUBMISSION	
08/29/2023		DESIGN DEVELOPMENT PACKAGE	
07/10/2023		WATERSHED RE-SUBMISSION	

CLIENT

1891 Arboretum Boulevard  
Chanhassen, MN 55317

**Xcel Energy  
Service Center  
Chanhassen**

DRAWING TITLE

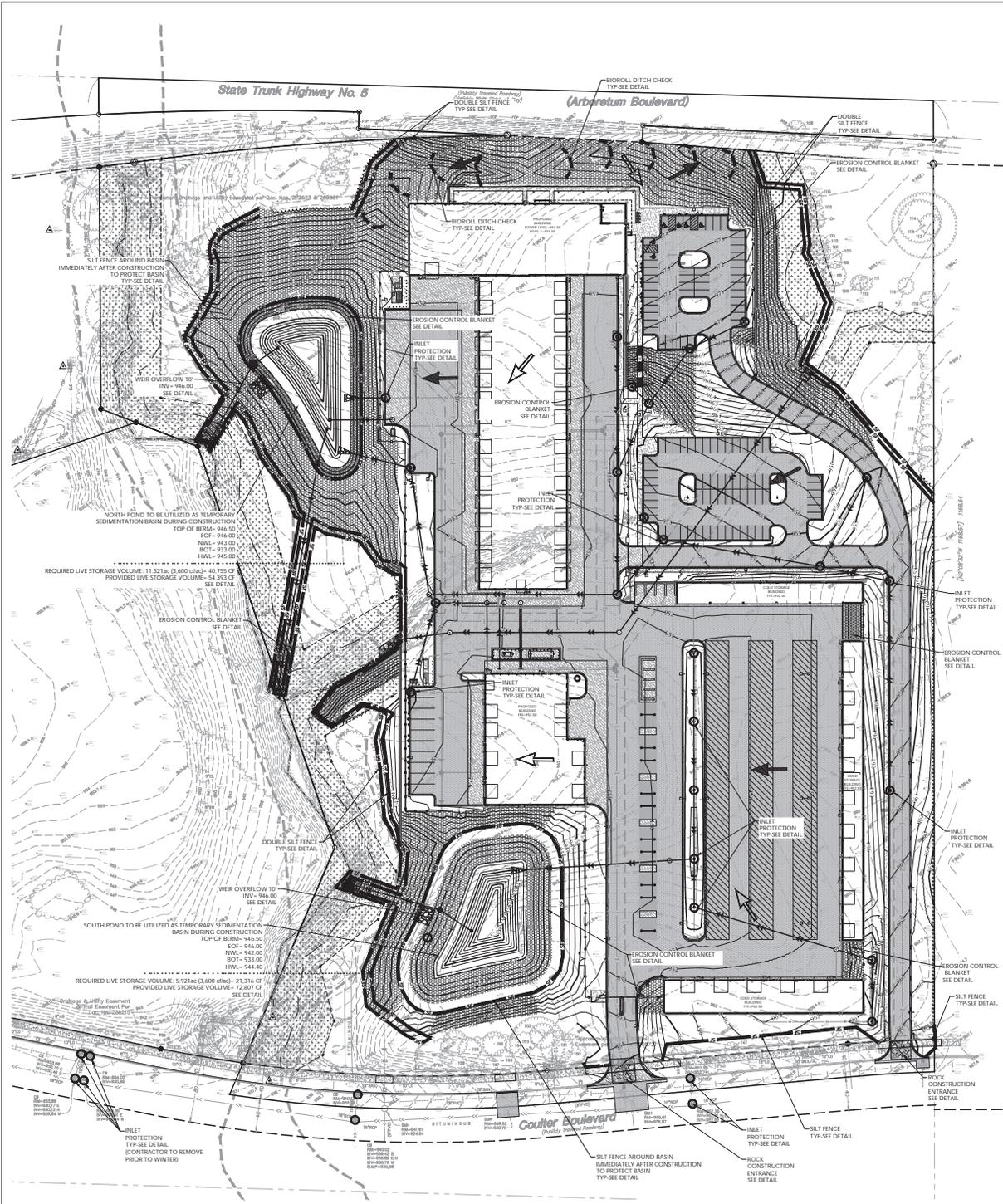
**GRADING PLAN  
OVERALL**

DRAWING NUMBER

**C3.0**

**CALL BEFORE YOU DIG**  
Gopher State One Call  
TWIN CITY AREA: 651-64-0022  
TOL. FREE: 1-800-552-1661

**WARNING:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL BURIED UTILITIES. THEY SHALL COORDINATE WITH ALL UTILITY OPERATIONS IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.  
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 48 HOURS BEFORE ANY EXCAVATION TO VERIFY THE LOCATIONS OF ALL UNDERGROUND WELLS, CABLES, CONDUITS, TRENCHES, MANHOLES, VALVES, OR OTHER BURIED UTILITIES BEFORE EXCAVATING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



**RPCBCWD STANDARD EROSION CONTROL NOTES**

- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
- ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.
- FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.
- CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICAL LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
- SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERSISTENT UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 LB/PCSQ INCHES OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER.
- THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
- ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AGRI-CULTURAL PESTICIDES (E.G., ZEBRA MULLERS, EUGENIAN WATERBUFFALO, ETC.) TO THE MAXIMUM EXTENT POSSIBLE.
- TOPSOIL TO BE INSTALLED AS PART OF THE SITE RESTORATION WILL CONTAIN AT LEAST 5 PERCENT ORGANIC CONTENT CONSISTENT WITH THE DISTRICT'S TOPSOIL DEFINITION.
- STAKING OFF AND MARKING OF PROPOSED INFILTRATION FACILITIES TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND TRAFFIC, IF INFILTRATION FACILITIES ARE IN PLACE DURING CONSTRUCTION ACTIVITIES. BEST PRACTICES MUST BE DEPLOYED TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE PRACTICE. INFILTRATION FACILITIES MUST NOT BE EXCAVATED TO WITHIN 3 FEET FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED. ANY ACCUMULATED SEDIMENT IN AN INFILTRATION FACILITY MUST BE REMOVED IN A MANNER THAT PREVENTS CORROSION OF THE FACILITY BOTTOM.
- ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
- NO ACTIVITY AFFECTING THE BED OR BANKS OF PROTECTED WATER MAY BE CONDUCTED BETWEEN MARCH 15 AND JUNE 15 ON WATERBODIES, OR BETWEEN APRIL 1 AND JUNE 30 ON ALL OTHER PUBLIC WATERBODIES, TO MINIMIZE IMPACTS ON FISH SPawning AND MIGRATION.
- BANKS MUST BE STABILIZED IMMEDIATELY AFTER COMPLETION OF PERMITTED WORK AND REVEGETATED AS SOON AS GROWING CONDITIONS ALLOW.

**NOTE:**  
EXISTING CONDITIONS INFORMATION SHOWN IS FROM AN ALTA/NSPS LAND TITLE SURVEY PREPARED BY LOUCKS, DATED 03/24/2022.

**LEGEND**

**EXISTING**

- CATCH BASIN
- STORM MANHOLE
- FLARED END SECTION
- SANITARY MANHOLE
- HYDRANT
- GATE VALVE
- POST INDICATION VALVE
- WATER MANHOLE / WALL
- LIGHT POLE
- POWER POLE
- ELECTRIC METER
- GAS METER
- TELEPHONE PEDESTAL
- TELEPHONE
- BENCHMARK
- SOIL BORING
- PARKING STALL COUNT
- ACCESSIBLE PARKING STALL
- STORM SEWER
- DRAIN TILE
- SANITARY SEWER
- FORCE MAIN
- WATER MAIN
- SANITARY SEWER SERVICE
- WATER SERVICE
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBER OPTIC
- UNDERGROUND GAS
- UNDERGROUND TELEPHONE
- OVERHEAD UTILITY
- FENCE
- CHAIN LINK FENCE
- CONCRETE CURB
- RETAINING WALL
- CONCRETE
- NO PARKING
- BUILDING
- CONTOUR
- SPOT ELEVATION
- DIRECTION OF FLOW
- TREE LINE
- PARKING STRIP TRACK LINE
- BUILDING STRIP TRACK LINE

**PROPOSED**

- SILT FENCE
- NO ROLLS
- INLET PROTECTION
- EXISTING DRAINAGE PATTERN
- PROPOSED DRAINAGE PATTERN
- EROSION CONTROL BLANKET
- NO ROLLS
- INLET PROTECTION
- EXISTING DRAINAGE PATTERN
- PROPOSED DRAINAGE PATTERN
- EROSION CONTROL BLANKET

**SWPPP LEGEND**

- SILT FENCE
- NO ROLLS
- INLET PROTECTION
- EXISTING DRAINAGE PATTERN
- PROPOSED DRAINAGE PATTERN
- EROSION CONTROL BLANKET

**ESTIMATED QUANTITIES**

DESCRIPTION	UNIT	QUANTITY
TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	2
PREFABRICATED CONCRETE WASHOUT	EA	3
SILT FENCE	LF	*****
EROSION CONTROL BLANKET	SF	*****
INLET PROTECTION	EA	34
NO ROLLS	LF	*****

**HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS**

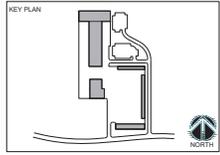
**Xcel Energy**

**LOUCKS**  
LOUCKS PROJECT NO. 21602

**ERA ERICKSEN ROED & ASSOCIATES**

**emanuelson-podas consulting engineers**

I hereby certify that this drawing was prepared by me or under my direct supervision and is a duly licensed Professional Engineer in the State of Minnesota.  
Title: Professional Engineer  
No. 1000000000  
Date: 03/24/2022  
Revision Number: 58588



**REVISION**

REVISION	DATE	DESCRIPTION	BY
10/09/2022		WATERPANEL SUBMITTAL	
11/16/2022		TEP SUBMITTAL	
11/16/2022		SCHEMATIC DESIGN PACKAGE	
1/06/2023		SE PACKAGE ADDENDUM	
01/12/2023		CITY SUBMISSION	
02/06/2023		CITY WATER RESUBMISSION	
08/29/2023		DESIGN DEVELOPMENT PACKAGE	
07/07/2023		WATERPANEL SUBMISSION	

**CLIENT**

1891 Arbonetum Boulevard  
Chanhassen, MN 55317

**Xcel Energy Service Center Chanhassen**

**DRAWING TITLE**  
**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

**DRAWING NUMBER**  
**C3.4**

**CALL BEFORE YOU DIG**  
**Gopher State One Call**  
TWIN CITY AREA: 855-64-2002  
TOLL FREE: 1-800-552-5667

**WARNING:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL UNDERGROUND UTILITIES. THEY SHALL COORDINATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.  
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 48 HOURS PRIOR TO ANY WORK IN ADVANCE OF THE LOCATIONS OF ALL UNDERGROUND WELLS, CABLES, CONDUITS, TRIPLES, MANHOLES, VALVES, OR OTHER BARRIERS, STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

**SWPPP NOTES**

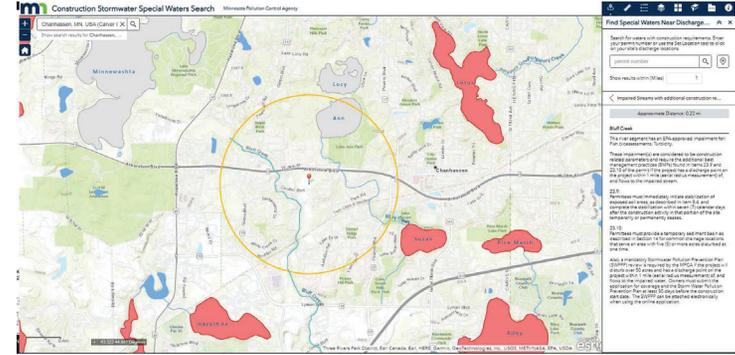
- THE NATURE OF THIS PROJECT WILL CONSIST OF CONSTRUCTING PROPOSED BUILDINGS, SURFACE PAVEMENTS, UTILITIES, AND STORMWATER MANAGEMENT SYSTEMS.
- THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES ARE AS FOLLOWS:
  - INSTALL VEHICLE TRACKING BMP (SUMMER 2023)
  - INSTALL SILT FENCE AROUND SITE (SUMMER 2023)
  - CLEAR AND GRUB SITE (SUMMER 2023)
  - REMOVE PAVEMENTS AND DRIVEWAYS (SUMMER 2023)
  - STRIP AND STOCKPILE TOPSOIL (SUMMER 2023)
  - ROUGH GRADE SITE (SUMMER 2023)
  - IMPORT CLEAN FILL FOR RECONSTRUCTION AND DRAINAGE (SUMMER 2023)
  - INSTALL BUILDING FOUNDATIONS (FALL 2023)
  - INSTALL CURBS AND GUTTER SPRINGS (2024)
  - INSTALL BARRIERS AND WETLANDS (SPRING 2024)
  - FINAL GRADE SITE (SPRING 2024)
  - REMOVE ACCESSIBLE AND SEDIMENT FROM STORMWATER SYSTEMS (DATA)
  - SEED AND MULCH (SUMMER 2024)
  - REMOVE ALL CONSTRUCTION ACTIVITIES COMPLETE AND THE SITE IS STABILIZED; REMOVE SILT FENCE, INLET PROTECTION, AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.
- SITE DATA:
  - DISTURBED AREA: 17,242 AC
  - PRE-CONSTRUCTION IMPERVIOUS AREA: 0.110 AC
  - POST-CONSTRUCTION IMPERVIOUS AREA: 9,651 AC

GENERAL SOIL TYPE: SEE GEOTECHNICAL REPORT B2070371, DATED NOVEMBER 4, 2022.  
PROVIDED BY BRAUN INTERTEC.

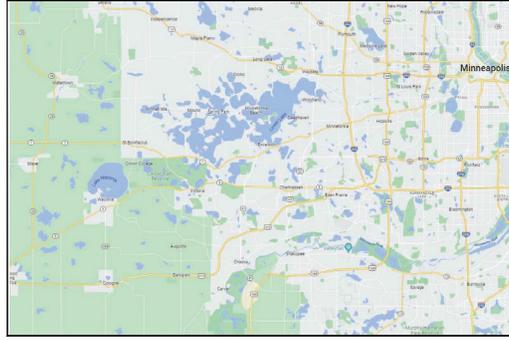
HYDROLOGY INFORMATION: SEE HYDROLOGY REPORT PREPARED BY LOUCKS
- EROSION AND SEDIMENT CONTROLS WERE DESIGNED TO EFFECTIVELY CONTROL STORMWATER RUNOFF WITHIN THE PROJECT AREA. EROSION AND SEDIMENT CONTROL HAVE BEEN PROPOSED TO SURFACE CHANNEL EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS. FACTORS THAT WERE CONSIDERED INCLUDE PROPOSED IMPERVIOUS AREAS, SLOPE OF IMPERVIOUS SURFACES, STORMWATER INFRASTRUCTURE DISCHARGE POINTS, AND ANNUAL AVERAGE PRECIPITATION DATA FOR THE PROJECT AREA.
  - CARVER COUNTY RECEIVES AN AVERAGE OF 31 INCHES OF PRECIPITATION PER YEAR. THE FOLLOWING CARVER COUNTY 24-HOUR STORM EVENTS ARE BASED ON ATLAS 14 RAINFALL DATA:
    - 2 HR: 2.8 INCHES
    - 10-VR: 4.27 INCHES
    - 100-VR: 7.41 INCHES
  - SEE "DRAINAGE: PROPOSED DRAINAGE AREAS" FOR SITE MAP WITH DRAINAGE AREA BOUNDARIES.
  - THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE IDENTIFIED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC. BEFORE CONSTRUCTION BEGINS.
- CONTRACTOR SHALL INSTALL RAIN GAUGE ON SITE.
- GROUNDWATER & DEWATERING:
  - REFER TO THE GEOTECHNICAL REPORT BY BRAUN INTERTEC FOR INFORMATION INCLUDING BUT NOT LIMITED TO GROUNDWATER CONDITIONS AND RECOMMENDATIONS FOR EXCAVATION DEWATERING.
  - FOLLOW LOCAL, STATE, AND FEDERAL REGULATIONS FOR GROUNDWATER PUMPING AND OBTAIN ALL NECESSARY PERMITS. A WATER USE PERMIT FROM THE DNR IS REQUIRED WHEN WITHDRAWING MORE THAN 10,000 GALLONS OF WATER PER DAY OR 1 MILLION GALLONS PER YEAR.
  - DISPOSE DISCHARGE USING APPROPRIATE ENERGY DISSIPATION MEASURES.
  - BMPs SHALL BE USED TO PREVENT TURBID OR SEDIMENT LADEN WATERS FROM LEAVING SITE.
  - DEWATERING SHALL NOT CAUSE NUISANCE CONDITIONS INCLUDING BUT NOT LIMITED TO EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR INUNDATION OF WETLANDS THAT CAUSES SIGNIFICANT ADVERSE IMPACTS TO THE WETLAND.
- REFER TO THE GEOTECHNICAL REPORT PREPARED BY BRAUN INTERTEC FOR INFORMATION AND RECOMMENDATIONS RELATED TO SOIL CONTAMINATION.
- ALL DISTURBED GROUND LEFT PRACTICE FOR SEVEN (7) OR MORE DAYS SHALL BE STABILIZED BY SEEDING OR SOILING OR MULCHING (RECOMMENDED RATE 2" TOPSOIL) OR COVERING OR OTHER EQUIVALENT CONTROL MEASURE. CONTRACTOR SHALL REFER TO SEED MIXTURE SELECTION TABLE IN THE MINNESOTA STORMWATER MANUAL FOR RECOMMENDATIONS ON APPLICABLE SEEDING TYPE AND RATE. REFER TO LANDSCAPE PLANS FOR FINAL STABILIZATION AND GROUND COVER ESTABLISHMENT.
- ON SLOPES 3:1 OR GREATER MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES. SLOPE LENGTHS CAN NOT BE GREATER THAN 75 FEET.
- ALL STORM DRAINS AND INLETS MUST BE PROTECTED UNTIL ALL SOURCES OF POTENTIAL DISCHARGE ARE STABILIZED.
- SOIL COMPACTION SHALL BE MINIMIZED DURING CONSTRUCTION.
- TEMPORARY SOIL STOCKPILES MUST HAVE EFFECTIVE SEDIMENT CONTROL AND CAN NOT BE PLACED IN SURFACE WATERS OR STORM WATER CONVEYANCE SYSTEMS. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT AMOUNT OF SILT, CLAY, OR ORGANIC COMPOUNDS ARE EXPTM EX. CLEAN AGGREGATE STOCK PILES, DIMENSIONAL CONCRETE STOCKPILES, SAND STOCKPILES.
- SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED ON ALL DOWNGRADE PERIMETERS AND UPGRADE OF ANY BUFFER ZONES.
- SEDIMENT LADEN WATER MUST BE DISCHARGED TO A SEDIMENTATION BASIN WHENEVER POSSIBLE. IF NOT POSSIBLE, IT MUST BE TREATED WITH THE APPROPRIATE BMPs.
- SOLID WASTE MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPICA DISPOSAL REQUIREMENTS.
- NO VEHICLE WASHING ALLOWED ON SITE.
- NO ENGINE DEGREASING IS ALLOWED ON SITE.
- THE OWNER IS RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THE PERMIT. THE OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH SECTIONS 3, 4, & 22, 24 AND APPLICABLE REQUIREMENTS FOR CONSTRUCTION ACTIVITY IN SECTION 23.
- TERMINATION OF COVERAGE PERMITS: WISHING TO TERMINATE COVERAGE MUST SUBMIT A NOTICE OF TERMINATION TO THE MPICA. ALL PERMITS MUST SUBMIT A NOTICE WITHIN 30 DAYS AFTER THE FOLLOWING CONDITIONS HAVE BEEN MET:
  - PERMIT TERMINATION CONDITIONS, PER NPDES PERMIT SECTION 13.1 HAVE BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITS IS CONSIDERED.
  - PERMANENT UPRIVER PERENNIAL VEGETATION COVER MUST BE ESTABLISHED AT 70% DENSITY OF ITS EXPECTED FINAL GROWTH.
  - THE PERMANENT STORMWATER TREATMENT SYSTEM IS CONTROLLED, MEETS ALL REQUIREMENTS, AND IS OPERATING AS DESIGNED.
  - ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPs MUST BE REMOVED.
  - CLEAN OUT SEDIMENT FROM CONVEYANCE SYSTEMS AND PERMANENT STORMWATER TREATMENT SYSTEMS RETURN TO DESIGN CAPACITY.
- INSPECTIONS:
  - INITIAL INSPECTION FOLLOWING SILT FENCE INSTALLATION BY CITY REPRESENTATIVE IS REQUIRED.
  - EXPOSED SOIL AREAS: ONCE EVERY 7 DAYS AND WITHIN 24 HOURS FOLLOWING A 0.5" OVER 24 HOUR RAIN EVENT.
  - STABILIZED AREAS: ONCE EVERY 30 DAYS.
  - FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.
  - INSPECTION AND MAINTENANCE RECORDS MUST BE RETAINED FOR 3 YEARS AFTER FILING OF THE NOTICE OF TERMINATION AND MUST INCLUDE: DATE AND TIME OF ACTION, NAME OF PERSON(S) CONDUCTING WORK, FINDINGS OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION, DATE AND AMOUNT OF RAINFALL EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD.
  - OBSERVE ANY DISCHARGE OCCURRING ONSITE AND DOCUMENT CORRECTIVE ACTIONS TAKEN. DISCHARGE SHOULD BE DESCRIBED AND PHOTOGRAPHED.
- MINIMUM MAINTENANCE:
  - ALL NON-FUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY OR AS SOON AS FIELD CONDITIONS ALLOW.
  - REPAIR, REPLACE, OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NON-FUNCTIONAL OR THE SEDIMENT REACHES THE HEIGHT OF THE DEVICE.
  - SEDIMENT BASINS DRAINED AND SEDIMENT REMOVED WHEN REACHES 1/2 STORAGE VOLUME.
  - SEDIMENT REMOVED FROM SURFACE WATERS WITHIN 72 HOURS CALENDAR DAYS OF DISCOVERY.
  - CONSTRUCTION SITE EXITS INSPECTED, TRACKED SEDIMENT REMOVED WITHIN 72 HOURS CALENDAR DAY.
  - PROVIDE COPIES OF EROSION INSPECTION RESULTS TO CITY ENGINEER FOR ALL EVENTS GREATER THAN 0.5" IN 24 HOURS.
- THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION ACTIVITY BY THE PERMITTEES WHO HAVE OPERATIONAL CONTROL OF THE SITE.
- OWNER MUST KEEP RECORDS OF ALL PERMITS REQUIRED FOR THE PROJECT, THE SWPPP, ALL INSPECTIONS AND MAINTENANCE, PERMANENT OPERATION AND MAINTENANCE AGREEMENTS, AND REQUIRED CALCULATIONS FOR TEMPORARY AND PERMANENT STORM WATER MANAGEMENT SYSTEMS. THESE RECORDS MUST BE RETAINED FOR THREE YEARS AFTER FILING NPDES NOTICE OF TERMINATION.
- SWPPP MUST BE AMENDED WHEN:
  - THERE IS A CHANGE IN DESIGN, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON DISCHARGE.
  - INSPECTIONS INDICATE THAT THE SWPPP IS NOT EFFECTIVE AND DISCHARGE IS EXCEEDING WATER QUALITY STANDARDS.
  - THE BMPs IN THE SWPPP ARE NOT CONTROLLING POLLUTANTS IN DISCHARGES OR IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE PERMIT.
- CONCRETE WASHOUT AREA:
  - THE WASHOUT AND CLEANOUT OF STUCCO, PAINT, CONCRETE FORM RELEASE OILS, CURING COMPOUND, AND OTHER CONSTRUCTION MATERIALS SHALL BE PROPERLY CONTAINED AND COLLECTED. THE PERSON RESPONSIBLE FOR THE WASHOUT SHALL BE RESPONSIBLE FOR PROVIDING AND USING APPROVED METHODS OF CONTAINMENT SUCH AS PRE-FABRICATED WASHOUT CONTAINERS, CONCRETE WASHOUT TOTE, READY MIX TRUCKS WITH SELF-CONTAINED CHUTE CLEANOUT, ETC.
  - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY.
- IN THE EVENT OF ENCOUNTERING A WELL OR SPRING DURING CONSTRUCTION CONTRACTOR TO CEASE CONSTRUCTION ACTIVITY AND NOTIFY ENGINEER.
- PIPE OULETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
- FINAL STABILIZATION:
 

FINAL STABILIZATION REQUIRES THAT ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND THAT DISTURBED AREAS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH 70% OF THE EXPECTED FINAL DENSITY, AND THAT ALL PERMANENT PAVEMENTS HAVE BEEN INSTALLED. ALL TEMPORARY BMPs SHALL BE REMOVED, DITCHES STABILIZED, AND SEDIMENT SHALL BE REMOVED FROM PERIMETER CONVEYANCES AND SEDIMENTATION BASINS IN ORDER TO RETURN THE POND TO DESIGN CAPACITY.
- RESPONSIBILITIES:
  - THE OWNER MUST IDENTIFY A PERSON WHO WILL OVERSEE THE SWPPP IMPLEMENTATION AND THE PERSON RESPONSIBLE FOR INSPECTION AND MAINTENANCE.  
CONTACT: TBD  
COMPANY: TBD  
PHONE: TBD
  - THE OWNER MUST IDENTIFY THE A PERSON WHO WILL BE RESPONSIBLE FOR LONG TERM OPERATIONS AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM.  
CONTACT: TBD  
COMPANY: TBD  
PHONE: TBD
  - THE WATERSHED DISTRICT OR THE CITY MAY HAVE REQUIREMENTS FOR INSPECTIONS OR AS-BUILT DRAWINGS VERIFYING PROPER CONSTRUCTION OF THE BMPs.
  - EROSION CONTROL DEVICES CANNOT BE REMOVED UNTIL THE WATERSHED DISTRICT AND CITY HAVE DETERMINED THE SITE HAS BEEN PERMANENTLY RESTABILIZED AND SHALL BE REMOVED WITHIN 30 DAYS THEREAFTER.

**CONSTRUCTION STORMWATER SPECIAL WATERS SEARCH MAP**



**SITE VICINITY MAP**



UNIVERSITY OF MINNESOTA  
**Zachary B. Moen**

Design of Construction SWPPP (May 31 2025)

**HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS**

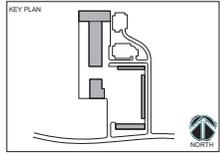
**Xcel Energy**

**LOUCKS**  
LOUCKS PROJECT NO. 21602

**ERA ERICKSEN ROED & ASSOCIATES**

**emanuelson-podas consulting engineers**

I hereby certify that this drawing was prepared by me or under my direct supervision and is a duly Licensed Professional Engineer in the State of Minnesota.  
Title: Professional E.  
Date: 10/11/2022  
Project Number: 58585



REVISION	DATE	DESCRIPTION	BY
1	10/10/2022	WATERSHED SUBMITTAL	
2	11/16/2022	TEP SUBMITTAL	
3	11/16/2022	SCHEMATIC DESIGN PACKAGE	
4	1/06/2023	SE PACKAGE ADDENDUM	
5	01/12/2023	CITY SUBMISSION	
6	02/02/2023	CITY/WTWATERSHED SUBMISSION	
7	08/29/2023	DESIGN DEVELOPMENT PACKAGE	
8	07/07/2023	WATERSHED SUBMISSION	

CLIENT  
1891 Arbonum Boulevard  
Chanhassen, MN 55317

**Xcel Energy Service Center Chanhassen**

DRAWING TITLE  
**SWPPP NOTES & DETAILS**

DRAWING NUMBER  
**C3.5**



**CITY OF CHANHASSEN NOTES**

ALL PUBLIC UTILITIES ARE REQUIRED TO BE INSTALLED PER THE CITY OF CHANHASSEN STANDARD SPECIFICATIONS AND DETAIL PLATES AND NOTIFIED BY THE CITY INSPECTOR.

**SANITARY SEWER & WATERMAIN NOTES**

1. ALL SANITARY SEWER AND WATERMAIN UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS, THE MINNESOTA PLUMBING CODE, THE LOCAL GOVERNING UNIT, AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM, CURRENT EDITION).
2. ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL. ALL CONNECTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION AND THE GEOTECHNICAL REPORT.
3. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED PER THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTIONS, THE CITY DEPARTMENT OF ENGINEERING AND BUILDING INSPECTIONS DEPARTMENT AND THE CONSTRUCTION ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT OF WAY, OR WORK IMPACTING PUBLIC UTILITIES.
4. ALL SITE UTILITY SERVICES SHALL TERMINATE 5' FROM THE EXTERIOR BUILDING WALL UNLESS OTHERWISE NOTED. THE SITE UTILITY CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR, MECHANICAL CONTRACTOR AND MECHANICAL ENGINEER TO DETERMINE THE RESPONSIBILITY OF BRINGING THE SERVICE(S) INTO THE BUILDING, NOTIFICATIONS AND TESTING PER APPLICABLE GOVERNING AGENCIES.
5. ALL NEW WATERMAIN AND SERVICES MUST HAVE A MINIMUM OF 7.5 FEET OF COVER. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. THE CONTRACTOR SHALL FIELD ADJUST WATERMANS TO AVOID CONTACTS WITH SANITARY SEWER, STORM SEWER, AND SERVICES AS REQUIRED. INSULATION OF WATERMAIN AND SANITARY SEWER LINES SHALL BE PROVIDED WHERE 7.5 FEET MINIMUM DEPTH CAN NOT BE ATTAINED.
6. PER MINNESOTA DEPARTMENT OF LABOR & INDUSTRY REQUIREMENTS, A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FROM WATERMAIN TO ANY MANHOLE, SEPTIC SYSTEM, CATCH BASIN, SEWER PIPE, OR OTHER SOURCE OF CONTAMINATION. MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE UNLESS OTHERWISE SHOWN.
7. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF SANITARY STRUCTURES AND UNDERGROUND SYSTEMS FOR ENGINEER'S REVIEW. ANY INFRASTRUCTURE THAT IS PUBLIC SHALL ALSO BE REVIEWED BY THE CITY ENGINEER.
8. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
9. REFER TO GEOTECHNICAL EVALUATION REPORT AS PREPARED BY BRAUN INTERTIC.

**FOR AN EXISTING SUBSURIACE SITE CONDITION ANALYSIS AND CONSTRUCTION RECOMMENDATIONS INCLUDING BUT NOT LIMITED TO:**

- A. REUSE OF ON-SITE SOILS.
- B. GROUNDWATER AND RECOMMENDATIONS FOR EXCAVATION Dewatering.
- C. SITE GRADING AND SURFACE PREPARATION.
- D. PAVEMENTS AND EXTERIOR SLABS.
- E. TRENCH EXCAVATION AND BACKFILL.
- F. EXTERIOR UTILITY SUPPORTS.
- G. FROST PROTECTION.

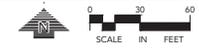
10. CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION OF CONSTRUCTED UTILITIES (RECOMMENDED PRIOR TO BACKFILLING) PER APPLICABLE PERMITS REQUIREMENTS AND/OR DEVELOPMENT AGREEMENTS. SEE SECTION 9.19 OF THE CITY OF CHANHASSEN STANDARD SPECIFICATIONS FOR DETAILS.

11. ALL UNUSED UTILITY SERVICES SHALL BE ABANDONED PER THE REQUIREMENTS OF THE APPLICABLE GOVERNING AGENCIES.

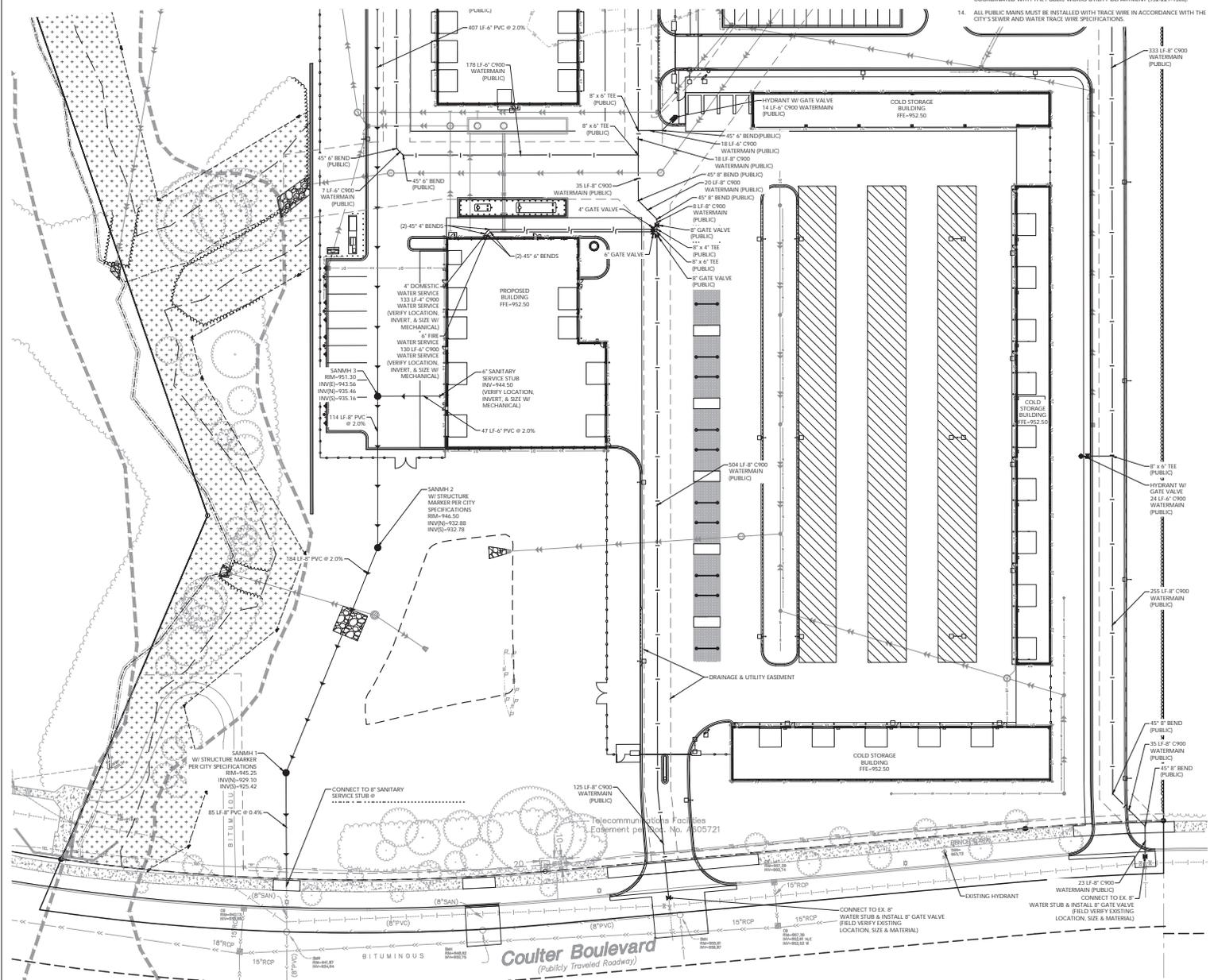
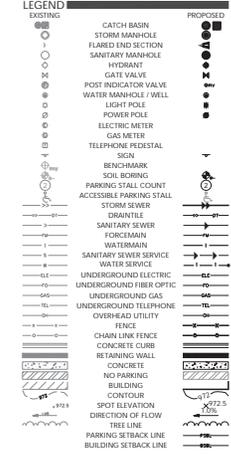
12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED UTILITY PERMITS FROM THE APPLICABLE GOVERNING AGENCIES.

13. WATER VALVE OPERATIONS ARE TO BE CONDUCTED BY THE CITY AND SHALL BE COORDINATED WITH THE PUBLIC WORKS UTILITY DEPARTMENT 952-227-1300.

14. ALL PUBLIC MAINS MUST BE INSTALLED WITH TRACE WIRE IN ACCORDANCE WITH THE CITY'S SEWER AND WATER TRACE WIRE SPECIFICATIONS.



**NOTE:**  
EXISTING CONDITIONS INFORMATION SHOWN IS FROM AN ALTA/NPS LAND TITLE SURVEY PREPARED BY LOUCKS, DATED 03/24/2022.



**HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS**

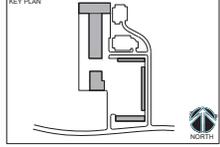
**Xcel Energy**

**LOUCKS**  
LOUCKS PROJECT NO. 21602

**ERA ERICKSEN ROED & ASSOCIATES**

**emanuelson-podas consulting engineers**

I hereby certify that this drawing was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer in the State of Minnesota.  
Title: Professional Engineer  
No. 16466 - State of MN - FE - Expiration: 10/31/2024  
Professional Number: 58688



REVISION	DATE	DESCRIPTION	BY
10/20/2022		WATERSEWER SUBMITTAL	
11/16/2022		TEP SUBMITTAL	
09/06/2022		SCHEMATIC DESIGN PACKAGE	
09/06/2022		SE PACKAGE ADDENDUM	
01/12/2023		CITY SUBMISSION	
02/06/2023		CITY WATERSEWER SUBMISSION	
08/29/2023		DESIGN DEVELOPMENT PACKAGE	
07/07/2023		WATERSEWER SUBMISSION	

**Xcel Energy Service Center Chanhassen**

**UTILITY PLAN SOUTH SANITARY SEWER & WATERMAIN**

**C4.4**

**Gopher State One Call**  
TOWN CITY AREA: 405-461-2002  
CALL: 1-800-552-8688

**WARNING:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COORDINATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND 5' OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 800-552-8688 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WELLS, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.





NAME	TAG	SPECIES	DBH	INCH	CONDITION	CLASSIFICATION	REMOVED	REMAIN
1	WI	WILLOW	23.5	INCH	FAIR	SIGNIFICANT	X	
2	AS	GREEN ASH	16.5	INCH	GOOD	SIGNIFICANT		X
3	AS	GREEN ASH	19.5	INCH	FAIR	SIGNIFICANT		X
4	AS	GREEN ASH	19	INCH	FAIR	SIGNIFICANT		X
5	BA	BASSWOOD	41	INCH	GOOD	SIGNIFICANT		X
6	AS	GREEN ASH	25	INCH	FAIR	SIGNIFICANT		X
7	BA	BASSWOOD	35	INCH	GOOD	SIGNIFICANT	X	
8	EL	AMERICAN ELM	11	INCH	GOOD	SIGNIFICANT		X
9	AS	GREEN ASH	12	INCH	FAIR	SIGNIFICANT	X	
10	BO	BOXELDER	28	INCH	FAIR	SIGNIFICANT		X
11	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT		X
12	BO	BOXELDER	13.5	INCH	FAIR	SIGNIFICANT		X
13	AS	GREEN ASH	12	INCH	GOOD	SIGNIFICANT		X
14	BO	BOXELDER	11.5	INCH	FAIR	SIGNIFICANT		X
15	AS	GREEN ASH	11.5	INCH	FAIR	SIGNIFICANT		X
16	BO	BOXELDER	16	INCH	FAIR	SIGNIFICANT		X
17	BO	BOXELDER	12.5	INCH	FAIR	SIGNIFICANT		X
18	BO	BOXELDER	13.5	INCH	FAIR	SIGNIFICANT		X
19	BO	BOXELDER	18.5	INCH	FAIR	SIGNIFICANT		X
20	EL	SIBERIAN ELM	13	INCH	GOOD	SIGNIFICANT		X
21	EL	AMERICAN ELM	30	INCH	GOOD	SIGNIFICANT		X
22	AS	GREEN ASH	22.5	INCH	FAIR	SIGNIFICANT		X
23	BO	BOXELDER	19.5	INCH	GOOD	SIGNIFICANT		X
24	AS	GREEN ASH	14	INCH	GOOD	SIGNIFICANT		X
25	BO	BOXELDER	18.5	INCH	GOOD	SIGNIFICANT		X
26	BO	BOXELDER	25	INCH	GOOD	SIGNIFICANT		X
27	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
28	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT		X
29	BO	BOXELDER	16	INCH	GOOD	SIGNIFICANT	X	
30	BO	BOXELDER	15.5	INCH	GOOD	SIGNIFICANT	X	
31	BO	BOXELDER	12	INCH	GOOD	SIGNIFICANT	X	
32	BO	BOXELDER	12.5	INCH	GOOD	SIGNIFICANT	X	
33	BO	BOXELDER	50	INCH	FAIR	SIGNIFICANT	X	
34	BO	BOXELDER	12	INCH	GOOD	SIGNIFICANT	X	
35	BO	BOXELDER	20	INCH	FAIR	SIGNIFICANT	X	
36	AS	GREEN ASH	10	INCH	GOOD	SIGNIFICANT	X	
37	BO	BOXELDER	10	INCH	FAIR	SIGNIFICANT	X	
38	BO	BOXELDER	12	INCH	GOOD	SIGNIFICANT	X	
39	BO	BOXELDER	17	INCH	FAIR	SIGNIFICANT	X	
40	BO	BOXELDER	31	INCH	FAIR	SIGNIFICANT	X	
41	BO	BOXELDER	27.5	INCH	FAIR	SIGNIFICANT	X	
42	BO	BOXELDER	11	INCH	FAIR	SIGNIFICANT	X	
43	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
44	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
45	AS	GREEN ASH	26	INCH	POOR	SIGNIFICANT	X	
46	BO	BOXELDER	14.5	INCH	GOOD	SIGNIFICANT	X	
47	EL	AMERICAN ELM	17	INCH	GOOD	SIGNIFICANT	X	
48	BO	BOXELDER	11.5	INCH	GOOD	SIGNIFICANT	X	
49	BO	BOXELDER	10.5	INCH	GOOD	SIGNIFICANT	X	
50	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
51	BO	BOXELDER	11	INCH	FAIR	SIGNIFICANT	X	
52	AS	GREEN ASH	16.5	INCH	FAIR	SIGNIFICANT	X	
53	AS	GREEN ASH	21.5	INCH	FAIR	SIGNIFICANT	X	
54	BO	BOXELDER	12.5	INCH	GOOD	SIGNIFICANT	X	
55	BO	BOXELDER	10	INCH	FAIR	SIGNIFICANT	X	
56	CE	RED CEDAR	29	INCH	FAIR	SIGNIFICANT	X	
57	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
58	BO	BOXELDER	16	INCH	FAIR	SIGNIFICANT	X	
59	BO	BOXELDER	14.5	INCH	GOOD	SIGNIFICANT	X	
60	AS	GREEN ASH	11	INCH	POOR	SIGNIFICANT	X	
61	BO	BOXELDER	10	INCH	FAIR	SIGNIFICANT	X	
62	BO	BOXELDER	14.5	INCH	FAIR	SIGNIFICANT	X	
63	BO	BOXELDER	14	INCH	GOOD	SIGNIFICANT	X	
64	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
65	BO	BOXELDER	14	INCH	GOOD	SIGNIFICANT	X	
66	BO	BOXELDER	11.5	INCH	GOOD	SIGNIFICANT	X	
67	BO	BOXELDER	13.5	INCH	FAIR	SIGNIFICANT	X	
68	BO	BOXELDER	11	INCH	FAIR	SIGNIFICANT	X	
69	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
70	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
71	BO	BOXELDER	10	INCH	FAIR	SIGNIFICANT	X	
72	BO	BOXELDER	11.5	INCH	FAIR	SIGNIFICANT	X	
73	BO	BOXELDER	18	INCH	FAIR	SIGNIFICANT	X	
74	BO	BOXELDER	17.5	INCH	FAIR	SIGNIFICANT	X	
75	EL	AMERICAN ELM	30.5	INCH	GOOD	SIGNIFICANT	X	
76	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
77	EL	AMERICAN ELM	12	INCH	FAIR	SIGNIFICANT	X	
78	BO	BOXELDER	14	INCH	FAIR	SIGNIFICANT	X	
79	EL	AMERICAN ELM	18	INCH	FAIR	SIGNIFICANT	X	
80	BO	BOXELDER	13	INCH	GOOD	SIGNIFICANT	X	
81	HR	HACKBERRY	12.5	INCH	GOOD	SIGNIFICANT	X	
82	BO	BOXELDER	15.5	INCH	FAIR	SIGNIFICANT	X	
83	BO	BOXELDER	13.5	INCH	GOOD	SIGNIFICANT	X	
84	BO	BOXELDER	15	INCH	FAIR	SIGNIFICANT	X	
85	BO	BOXELDER	17	INCH	POOR	SIGNIFICANT	X	
86	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
87	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
88	WI	WILLOW	31	INCH	FAIR	SIGNIFICANT	X	
89	WI	WILLOW	21.5	INCH	GOOD	SIGNIFICANT	X	
90	WI	WILLOW	11.5	INCH	FAIR	SIGNIFICANT	X	
91	WI	WILLOW	24	INCH	GOOD	SIGNIFICANT	X	
92	WI	WILLOW	29	INCH	FAIR	SIGNIFICANT	X	
93	WI	WILLOW	11	INCH	GOOD	SIGNIFICANT	X	
94	WI	WILLOW	74	INCH	GOOD	SIGNIFICANT	X	
95	WI	WILLOW	11	INCH	GOOD	SIGNIFICANT	X	
96	WI	WILLOW	11	INCH	GOOD	SIGNIFICANT	X	
97	WI	WILLOW	19	INCH	FAIR	SIGNIFICANT	X	
98	WI	WILLOW	18	INCH	GOOD	SIGNIFICANT	X	
99	WI	WILLOW	11	INCH	GOOD	SIGNIFICANT	X	

NAME	TAG	SPECIES	DBH	INCH	CONDITION	CLASSIFICATION	REMOVED	REMAIN
100	CD	COTTONWOOD	14	INCH	GOOD	SIGNIFICANT		X
101	CD	COTTONWOOD	15	INCH	GOOD	SIGNIFICANT		X
102	CO	COTTONWOOD	10	INCH	GOOD	SIGNIFICANT		X
103	CD	COTTONWOOD	10.5	INCH	GOOD	SIGNIFICANT		X
104	CD	COTTONWOOD	15.5	INCH	GOOD	SIGNIFICANT		X
105	CD	COTTONWOOD	11.5	INCH	GOOD	SIGNIFICANT		X
106	CD	COTTONWOOD	12	INCH	GOOD	SIGNIFICANT		X
107	CD	COTTONWOOD	10.5	INCH	GOOD	SIGNIFICANT		X
108	OL	OLIVE RUSSIAN	15	INCH	FAIR	SIGNIFICANT	X	
109	CO	COTTONWOOD	10	INCH	GOOD	SIGNIFICANT		X
110	CO	COTTONWOOD	10	INCH	GOOD	SIGNIFICANT		X
111	CO	COTTONWOOD	10	INCH	GOOD	SIGNIFICANT		X
112	EL	AMERICAN ELM	16	INCH	FAIR	SIGNIFICANT	X	
113	WI	WILLOW	56	INCH	FAIR	SIGNIFICANT	X	
114	CD	COTTONWOOD	36	INCH	POOR	SIGNIFICANT	X	
115	CD	COTTONWOOD	12	INCH	GOOD	SIGNIFICANT		X
116	EL	AMERICAN ELM	12.5	INCH	GOOD	SIGNIFICANT		X
117	AS	GREEN ASH	11	INCH	GOOD	SIGNIFICANT		X
118	BO	BOXELDER	21	INCH	FAIR	SIGNIFICANT		X
119	BO	BOXELDER	16	INCH	FAIR	SIGNIFICANT		X
120	BO	BOXELDER	18	INCH	GOOD	SIGNIFICANT	X	
121	AS	GREEN ASH	11	INCH	GOOD	SIGNIFICANT	X	
122	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
123	BO	BOXELDER	20	INCH	FAIR	SIGNIFICANT	X	
124	FR	CHERRY BLACK	16	INCH	GOOD	SIGNIFICANT	X	
125	AS	GREEN ASH	14	INCH	GOOD	SIGNIFICANT	X	
126	AS	GREEN ASH	10	INCH	GOOD	SIGNIFICANT	X	
127	AS	GREEN ASH	10	INCH	GOOD	SIGNIFICANT	X	
128	BO	BOXELDER	13.5	INCH	FAIR	SIGNIFICANT	X	
129	BO	BOXELDER	11	INCH	FAIR	SIGNIFICANT	X	
130	BO	BOXELDER	12	INCH	FAIR	SIGNIFICANT	X	
131	AS	GREEN ASH	10.5	INCH	GOOD	SIGNIFICANT	X	
132	BO	BOXELDER	18.5	INCH	FAIR	SIGNIFICANT	X	
133	BO	BOXELDER	17	INCH	FAIR	SIGNIFICANT	X	
134	AS	GREEN ASH	17	INCH	FAIR	SIGNIFICANT	X	
135	AS	GREEN ASH	10.5	INCH	GOOD	SIGNIFICANT	X	
136	BO	BOXELDER	19	INCH	FAIR	SIGNIFICANT	X	
137	BO	BOXELDER	13.5	INCH	GOOD	SIGNIFICANT	X	
138	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
139	BO	BOXELDER	10.5	INCH	GOOD	SIGNIFICANT	X	
140	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
141	BO	BOXELDER	27	INCH	GOOD	SIGNIFICANT	X	
142	BO	BOXELDER	18	INCH	GOOD	SIGNIFICANT	X	
143	BO	BOXELDER	20	INCH	FAIR	SIGNIFICANT	X	
144	BO	BOXELDER	11.5	INCH	GOOD	SIGNIFICANT	X	
145	BO	GREEN ASH	11.5	INCH	GOOD	SIGNIFICANT	X	
146	BO	GREEN ASH	11	INCH	GOOD	SIGNIFICANT	X	
147	BO	GREEN ASH	10.5	INCH	GOOD	SIGNIFICANT	X	
148	BO	GREEN ASH	10.5	INCH	GOOD	SIGNIFICANT	X	
149	AS	GREEN ASH	11	INCH	GOOD	SIGNIFICANT	X	
150	BO	BOXELDER	28	INCH	FAIR	SIGNIFICANT	X	
151	BO	BOXELDER	27	INCH	FAIR	SIGNIFICANT	X	
152	WI	WILLOW	20	INCH	GOOD	SIGNIFICANT	X	
153	WI	WILLOW	47	INCH	FAIR	SIGNIFICANT	X	
154	BO	BOXELDER	11.5	INCH	FAIR	SIGNIFICANT	X	
155	BO	BOXELDER	17	INCH	FAIR	SIGNIFICANT	X	
156	BO	BOXELDER	19	INCH	FAIR	SIGNIFICANT	X	
157	BO	BOXELDER	10.5	INCH	FAIR	SIGNIFICANT	X	
158	OA	BICOLOR OAK	12	INCH	GOOD	SIGNIFICANT	X	
159	BO	BOXELDER	18	INCH	FAIR	SIGNIFICANT	X	
160	BO	BOXELDER	20	INCH	FAIR	SIGNIFICANT	X	
161	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
162	BO	BOXELDER	13	INCH	FAIR	SIGNIFICANT	X	
163	OA	BICOLOR OAK	12	INCH	GOOD	SIGNIFICANT	X	
164	OA	BICOLOR OAK	10	INCH	GOOD	SIGNIFICANT	X	
165	MA	SUGAR MAPLE	11	INCH	POOR	SIGNIFICANT	X	
166	AS	GREEN ASH	11	INCH	GOOD	SIGNIFICANT	X	
167	AS	GREEN ASH	13	INCH	GOOD	SIGNIFICANT	X	
168	AS	GREEN ASH	11.5	INCH	GOOD	SIGNIFICANT	X	
169	MA	SUGAR MAPLE	13.5	INCH	GOOD	SIGNIFICANT	X	
170	BO	BOXELDER	10.5	INCH	GOOD	SIGNIFICANT	X	
171	BO	BOXELDER	21.5	INCH	FAIR	SIGNIFICANT	X	
172	BO	BOXELDER	14	INCH	FAIR	SIGNIFICANT	X	
173	BO	BOXELDER	22	INCH	GOOD	SIGNIFICANT	X	
174	BO	BOXELDER	13	INCH	GOOD	SIGNIFICANT	X	
175	BO	BOXELDER	23	INCH	FAIR	SIGNIFICANT	X	
176	BO	BOXELDER	12	INCH	GOOD	SIGNIFICANT	X	
177	BO	BOXELDER	14	INCH	GOOD	SIGNIFICANT	X	
178	BO	BOXELDER	14	INCH	FAIR	SIGNIFICANT	X	
179	BO	BOXELDER	10	INCH	FAIR	SIGNIFICANT	X	
180	BO	BOXELDER	11	INCH	GOOD	SIGNIFICANT	X	
181	BO	BOXELDER	10	INCH	POOR	SIGNIFICANT	X	
182	BO	BOXELDER	19	INCH	FAIR	SIGNIFICANT	X	
183	BO	BOXELDER	18	INCH	GOOD	SIGNIFICANT	X	
184	BO	BOXELDER	10	INCH	GOOD	SIGNIFICANT	X	
185	BO	BOXELDER	12	INCH	GOOD	SIGNIFICANT	X	
186	BO	BOXELDER	14.5	INCH	GOOD	SIGNIFICANT	X	
187	EL	AMERICAN ELM	14.5	INCH	GOOD	SIGNIFICANT	X	
188	AS	GREEN ASH	13.5	INCH	GOOD	SIGNIFICANT	X	

