

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2023-055

**Considered at Board of Managers Meeting:** October 4, 2023

**Application Received complete:** September 18, 2023

**Applicant:** Ron Clark Construction, Mike Waldo

**Consultant:** Campion Engineering Service Inc., Marty Campion

**Project:** Ridgewood Ponds development– The applicant proposes the demolition of an existing single-family home and the construction of eleven residential single-family homes and associated stormwater infiltration basins.

**Location:** 18116 Ridgewood Road in Minnetonka, MN

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

### 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 October 4, 2023 meeting of the managers:

Resolved that the application for Permit 2023-055 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 have been met, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2023-055 to the applicant on behalf of RPBCWD.

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

### Applicable Rule Conformance Summary

Rule	Issue	Conforms to RPBCWD Rules?		Comments
C	Erosion Control Plan	Yes		
D	Wetland and Creek Buffers	See Comment		See rule-specific permit condition D1 related to recordation of buffer maintenance declaration.
J	Stormwater Management	Rate	Yes	
		Volume	See Comment	See stipulation #6 related to infiltration testing during construction.
		Water Quality	Yes	
		Low Floor Elev.	Yes	

Rule	Issue	Conforms to RPBCWD Rules?		Comments
		Maintenance	See comment.	See rule-specific permit condition J1 related to recordation of stormwater facility maintenance declaration.
		Chloride Management	See Comment	See stipulation #7 related to providing the chloride management before project close-out.
		Wetland Protection	Yes	
L	Permit Fee Deposit	Yes		\$3000 received August 21, 2023. As of September 29, 2023 the amount due is \$2,798.
M	Financial Assurances	See Comment		The financial assurance is calculated at \$200,135.

**Project Description**

The applicant proposes the subdivision of an existing single family home parcel into an eleven-lot single-family residential development with associated sewer and utilities, and the construction of two infiltration basins for stormwater management. The project also includes the removal of an existing home and driveway. The applicant proposes two infiltration basins to provide volume control, water quality, and rate control.

The water resources within the project site or downgradient of the proposed activities are summarized in the following table.

**Water resource impacted by proposed project**

Water Resource	Projected resource impacts
Wetland 1	A Wetland Conservation Act-protected wetland onsite and downgradient from proposed land-disturbing activities.
Wetland 2	An on-site Public Water Wetland (27-820-W) downgradient from proposed land-disturbing activities.
Wetland 3	A Wetland Conservation Act-protected wetland onsite and downgradient from and disturbed by proposed land-disturbing activities.

The project site information is summarized below:

Project Site Information	Area (acres)
Total Site Area	23.73
Existing Site Impervious	0.84
Proposed Site Impervious Area	1.47
Change in Site Impervious Area	0.63 (75% increase)
Disturbed Impervious Area	0.84 (100% disturbed)
Total Disturbed Area	4.2

Exhibits:

1. Permit Application received August 18, 2023 (The applicant was notified on September 8, 2023 that the submittal was incomplete; materials completing the application were received on September 18, 2023)
2. Stormwater Management Plan dated August 17, 2023 (revised September 14, 2023 and September 19, 2023)
3. Wetland Buffer exhibit dated July 19, 2023 (revised September 6, 2023 and September 16)
4. Grading Plan dated August 17, 2023
5. Construction Plan Set dated September 16, 2023 (including updated grading plan, revisions received September 20, 2023)
6. Existing and proposed conditions HydroCAD model received September 18, 2023 (revised September 20, 2023)
7. Existing and proposed conditions P8 model received September 18, 2023 (revised September 20, 2023)
8. Wetland Delineation report dated September 26, 2022 (including MnRAMs)
9. Minnesota Wetland Conservation Act Notice of Decision for the wetland type and boundary dated November 3, 2023
10. Geotechnical Evaluation Report dated January 17, 2023
11. Addendum 1 to the geotechnical evaluation report dated August 29, 2023
12. Cost Estimate date September 18, 2023
13. Response to review comments received September 20, 2023

**Rule Specific Permit Conditions**

**Rule C: Erosion and Sediment Control**

Because the applicant proposes to alter 4.2 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 Champion Engineering Service Inc. includes installation of silt fence perimeter control, rock construction entrance, inlet protection, weekly inspection, placement of a minimum of 6 inches of topsoil with 5 percent organic content, decompaction of areas compacted during construction, and retention of native topsoil onsite. The construction drawing list Kevin Trujillo with Ron Clark Construction (612-363-2772; [KevinT@ronClark.com](mailto:KevinT@ronClark.com)) as the individual responsible for erosion control at the site. The proposed project conforms to the RPBCWD Rule C requirements.

**Rule D: Wetland and Creek Buffers**

Because the proposed work triggers a permit under RPBCWD Rule J and the three onsite wetlands are downgradient from the proposed construction activities, Rule D, Subsections 2.1a and 3.1 require buffer along the edge of Wetlands 1 and 2 downgradient of the activities. Because the city of Minnetonka, the

local government unit responsible for administering the Wetland Conservation Act, allowed the excavation of 6-inches of material from the wetland, Rule D subsection 3.1b requires wetland buffer around the entirety of Wetland 3.

The MnRAM analyses indicate that Wetland 1 is low value, while Wetlands 2 and 3 are medium value. Rule D, Subsection 3.2.a.iii requires wetland buffer with an average of 40 feet from the delineated edge of the wetland, minimum 20 feet for medium value wetlands. Rule D, subsection 3.2.a.iv, requires a 20-foot average, 10-foot minimum width buffer along the downgradient edge of Wetland 1. The buffer widths are summarized in the table below.

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 1	Low	10	20	7,060	13,532	20	38.3
Wetland 2 (DNR Public Wetland 27-874W)	Medium	20	40	73,361	73,643	25	40.1
Wetland 3	Medium	20	40	13,034	15,002	20	46.0

The plans require revegetating disturbed areas within the proposed buffer with native vegetation, thus conforming to Rule D, Subsection 3.3. The engineer’s review of plan sheets shows that buffer markers will be placed per District criteria (Subsection 3.4).

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 3.6.

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

- D1. Before any work subject to District permit requirements commences, buffer areas and maintenance requirements, including locations of buffer markers, must be documented in a declaration recorded after review and approval by RPBCWD in accordance with Rule D, Subsection 3.5.

**Rule J: Stormwater Management**

Because the project will disturb 4.2 acres of land-surface area, the project must meet the criteria of RPBCWD’s Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 apply to the entire project site and all impervious area because the applicant proposes to disturb 100% of the existing impervious surface and increase the imperviousness of the entire site by 75% percent (i.e., more than 50 percent; Rule J, Subsection 2.3). The applicant proposes two infiltration basins to provide volume control, water quality, and rate control.

**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.

Modeled 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
Wetland 2	4.0	1.8	8.1	7.6	19.2	17.7	1.0	0.8
Wetland 3	1.4	0.6	2.4	1.5	4.5	3.9	0.4	0.3

The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events. Thus, the proposed project meets the rate control requirements in Rule J, Subsection 3.1a.

**Volume Abstraction**

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from all regulated impervious surface on the site. An abstraction volume of 5,880 cubic feet is required from the 1.47 acres (64,149 square feet) of regulated impervious area within the project site. Plans indicate pretreatment for runoff entering the infiltration facilities is provided by vegetated yards and sump manholes, thus the proposed project conforms with RPBCWD Rule J, Subsection 3.1b.1.

Eleven soil borings in the Geotechnical Evaluation Report by Bruan Intertec indicate the site is predominately poorly graded sands. Groundwater was encountered at six of the borings. The subsurface investigation information summarized in the table below shows that groundwater is at least 3 feet below the bottom of the proposed infiltration basin (Rule J, Subsection 3.1.b.2.a).

Proposed BMP	Boring ID	Boring is within footprint?	Groundwater Elevation (feet)	BMP Bottom Elevation (feet)	Separation (feet)
Infiltration Basin 1	ST-5	Yes	889.5	896.0	6.5
Infiltration Basin 2	PZ-2	Yes	889.9	893.0	3.1

Based on the presence of poorly graded sand, the applicant used a design infiltration rate of 0.8 in/hr for infiltration basin 1 and 0.45 in/hr for infiltration basin 2 based on the Minnesota Pollution Control Agency’s recommended design infiltration rates for the underlying soils. The engineer finds that under these presumed design infiltration rates, the infiltration stormwater management facilities will draw down within 48 hours (Rule J, subsection 3.1biii). The geotechnical report does not contain infiltration or hydraulic

conductivity testing results at the infiltration stormwater management facilities as required by Rule J, subsection 3.1.b.ii.C. To confirm the design presumptions and ensure the applicant has incorporated abstraction in accordance with Rule J, subsection 3.1.b, supporting information in the form of infiltration or hydraulic conductivity testing at the proposed infiltration stormwater management facilities must be provided before the proposed BMPs are constructed. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1.b for the proposed infiltration stormwater management facilities or there is less than three feet of separation to groundwater, design modifications to achieve compliance with RPBCWD requirements to maximize the abstraction will need to be submitted (in the form of an application for a permit modification or new permit).

The applicant has maximized the two proposed infiltration basin to provide a total abstraction volume of 7,550 cubic feet which is greater than the required equivalent volume of 1.1” off the impervious surface. However, because the engineer concurs that the existing sanitary sewer location and depth combined with the grades required to connect to the existing street presents existing site restrictions limiting the ability to route the runoff from 0.039 acres of street to the proposed infiltration basin, the abstraction standard in Subsection 3.1 of Rule J cannot practicably be met and the site is considered restricted. For restricted sites, Subsection 3.3 of Rule J requires rate control in accordance with Subsection 3.1a 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.

The table below summarizes the volume abstraction for the site.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	5,880	1.06	5,641

With the conditions noted above, the engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.3.a.

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant to 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 infiltration basins to achieve the required TP and TSS removals.

The P8 modeling results of runoff from 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)	11,637	10,473 (90%)	10,721 (92.1%)
Total Phosphorus (TP)	37.8	22.7 (60%)	34.4 (91.0%)

**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)	8,913	916	-7,997
Total Phosphorus (TP)	29.2	3.4	-25.8

**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 of a stormwater facility or waterbody 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 elevations of the proposed houses and the 100-year high water elevation of the infiltration basins and wetlands are summarized below. Because the low floor elevations of the proposed structures on Lots 2-8, 10, and 11 are more than two feet above the 100-year high water elevation of the stormwater facility or waterbody, the proposed project is in conformance with Rule J, Subsection 3.6, as to those parcels. Because the low floor elevation of Lots 1 and 9 are less than 2 feet above the 100-year high-water elevation, an alternative low floor analysis was conducted as outlined in Rule J, Appendix J.1 – Low-Floor Elevation Assessment. The results of the low floor analysis using *Appendix J1 Plot 2: Minimum Depth to Water Table for No Further Evaluation* is summarized in the above table. The results demonstrate the provided separation is greater than the minimum required, thus meeting the habitable structure requirements in Rule J, Subsection 3.6.

Lot	Waterbody or Stormwater Facility	100-year Event Flood Elevation of Feature (feet)	Lowest Floor Elevation of Building (feet)	Freeboard provided (feet)	Distance from Building to Adjacent Facility (ft)	Seasonal Water Table Elevation (ft)	Minimum Permissible Depth to Water Table (ft)	Provided Depth from Low Floor Elevation to Water Table (ft)
Lot 1	Infiltration Basin 1	899.2	894.8	-4.4	98	894.3	0.24	0.5
Lot 2	Wetland 2	891.0	897.6	6.6	-	-	-	-
Lot 3	Wetland 2	891.0	900.1	9.1	-	-	-	-
Lot 4	Wetland 2	891.0	900.1	9.1	-	-	-	-
Lot 5	Wetland 2	891.0	899.6	8.6	-	-	-	-
Lot 6	Wetland 2	891.0	899.4	8.4	-	-	-	-
Lot 7	Wetland 2	891.0	899.6	8.6	-	-	-	-
Lot 8	Infiltration Basin 2	895.2	897.2	2.0	-	-	-	-
Lot 9	Infiltration Basin 1	899.2	898.0	-1.2	49	891.5	0.19	6.5
Lot 10	Wetland 3	896.0	898.0	2.0	-	-	-	-
Lot 11	Wetland 3	896.0	898.5	2.5	-	-	-	-

### ***Maintenance***

Subsection 3.7 of Rule J requires the submission of a maintenance plan. 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. A maintenance declaration template is available on the permits page of the RPBCWD website. (<http://www.rpbcwd.org/permits/>). A draft declaration must be provided for District review and approval prior to recording.

### ***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. The RPBCWD chloride-management plan requirement applies to the streets and common areas of the project site, but not the individual single-family homes. To close out the permit and release the \$5,000 in financial assurance held for the purpose of 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 for the common areas (e.g., streets) at the site.

### ***Wetland Protection***

Because runoff from the redeveloped site is tributary to onsite, low and medium value wetlands, the project must comply with RPBCWD's wetland protection criteria in Rule J, subsection 3.10. In accordance

with Rule J, subsection 3.10a, the proposed land-disturbing activities will not increase the bounce in water level, duration of inundation, or change the runout elevation in the subwatershed, for the receiving wetland. Because the applicant’s HydroCAD model results demonstrate, and the engineer concurs, that the proposed flow rate and volumes flowing towards the wetlands are less than the under existing conditions, the bounce and inundation will not increase, thus the project meets the Bounce and Inundation criterion.

Rule J, Subsection 3.10b requires that any discharge to low- or medium-value wetlands be treated to the water quality treatment criteria in Rule J, subsection 3.1c. The applicant provided P8 modeling as summarized in the following tables demonstrating the runoff from the disturbed areas tributary to the wetlands will be treated in conformance with Rule J, Subsection 3.10b.

Wetland	Wetland Value	Required TSS Removal	Required TP Removal	Provided TSS Removal	Provided TP Removal
Wetland 1	Low	90%	60%	92.3	91.4
Wetland 2	Medium	90%	60%	92.1	91.0
Wetland 3	Medium	90%	60%	92.3	91.4

**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 August 21, 2023 . 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 September 29, 2023 the amount due is \$2,798.

**Rule M: Financial Assurance:**

	Unit	Unit Cost	# of Units	Total
<b>Rule C: Erosion Control</b>				
Silt Fence	LF	\$2.50	5,682	\$14,205
Inlet Protection	EA	\$100	4	\$400

	Unit	Unit Cost	# of Units	Total
Rock Entrance	EA	\$250	1	\$250
Restoration of disturbance	Ac	\$2,500	4.2	\$10,500
<b>Rule D: Wetland Buffer</b>	LS	\$5,000	1	\$5,000
<b>Rule J: Stormwater Management</b> Infiltration basin: 125% of engineer's opinion of cost (\$117,269)	EA	125% OPC	1	\$146,586
<b>Chloride Management Plan</b>	LS	\$5,000	1	\$5,000
Contingency (10%)		10%		\$18,194
<b>Total Financial Assurance</b>				<b>\$200,135</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 C, D, and J if the Rule Specific Permit Conditions listed above are met.

**Recommendation:**

Approval of the permit contingent upon:

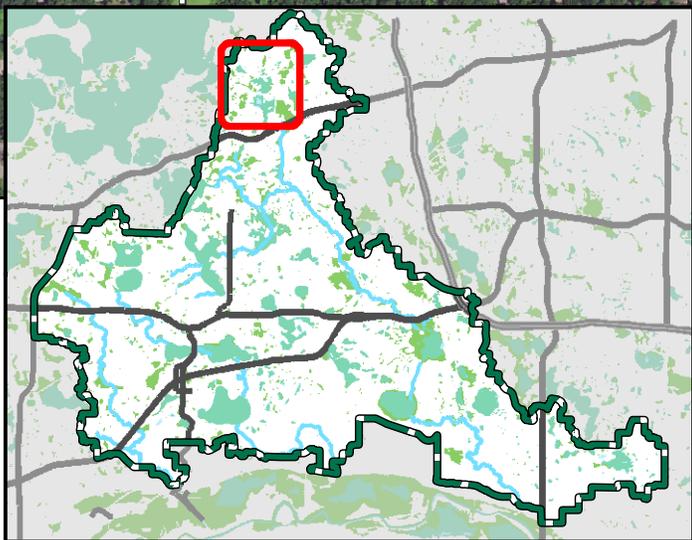
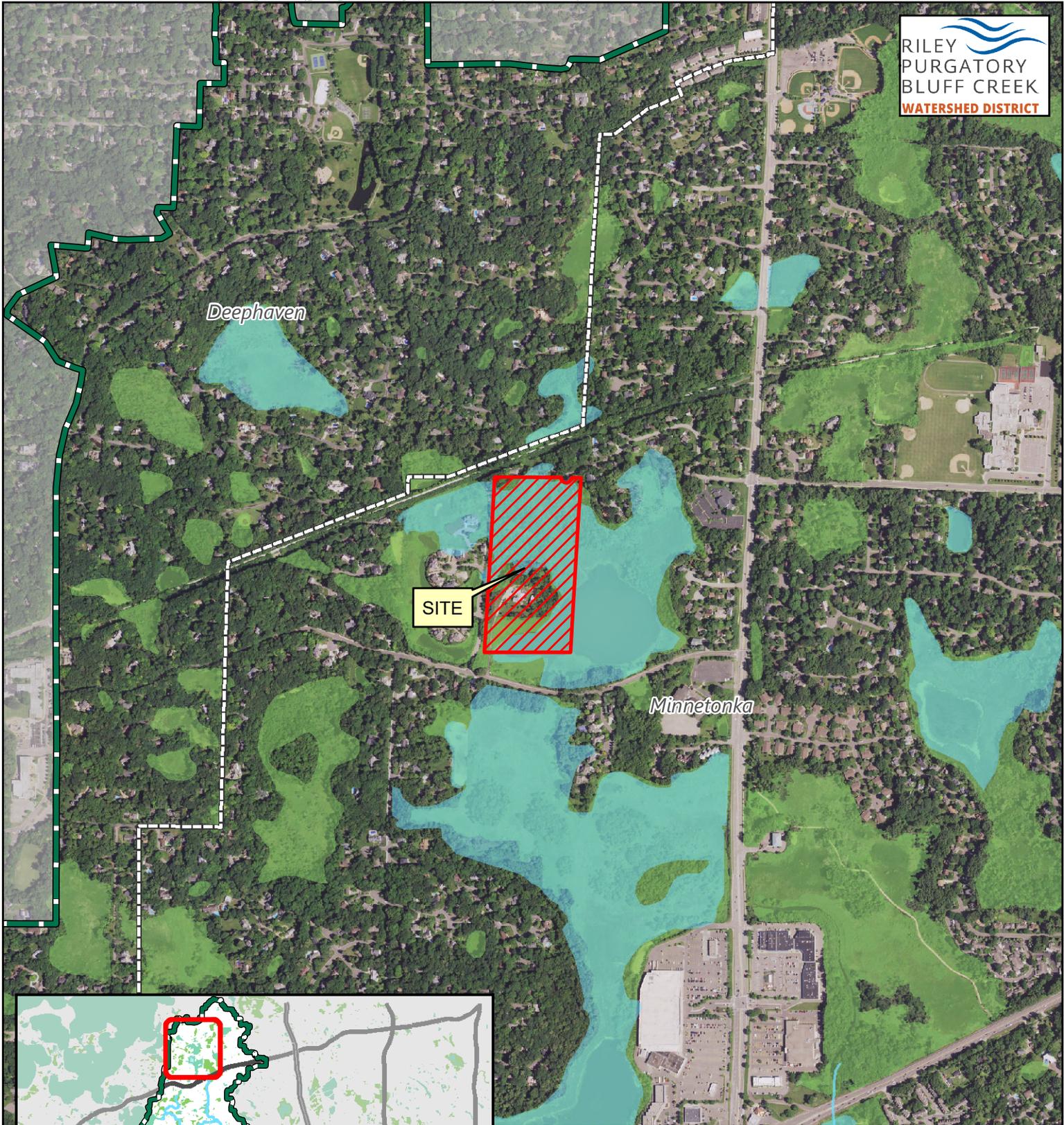
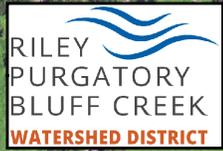
1. Financial Assurance in the amount of \$200,135.
2. Receipt in recordation a maintenance declaration for the operation and maintenance the wetland buffer areas and stormwater management facilities. Drafts of all documents to be recorded must be reviewed and approved by the District prior to recordation and proof of recordation must be provided to RPBCWD.
3. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of September 29, 2023 the amount due is \$2,798.

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 the stormwater 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 disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria
4. The work on the Ridgewood Ponds development under the terms of permit 2023-055, 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. Replenish the permit fee deposit to the original amount or such lesser amount as the RPBCWD administrator determines 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.
6. Per Rule J, Subsection 3.1.b.ii measured infiltration capacity of the soils at the bottom of the infiltration BMPs must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate. In addition, subsurface soil investigation is needed to verify adequate

separation to groundwater (Rule J subsection 3.1.b.2). If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.3b or there is inadequate separation to groundwater, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).

7. To close out the permit and release the \$5,000 in financial assurance held for the purpose, 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.



Feet



Permit Location Map

RIDGEWOOD PONDS

**Permit 2023-055**

Riley Purgatory Bluff Creek  
Watershed District

**WARNING:**

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

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, 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.

CALL BEFORE YOU DIG  
**GOPHER STATE ONE CALL**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE 1-800-252-1166

# CONSTRUCTION PLANS FOR: RIDGEWOOD PONDS MINNETONKA, MN

**PROJECT DIRECTORY**

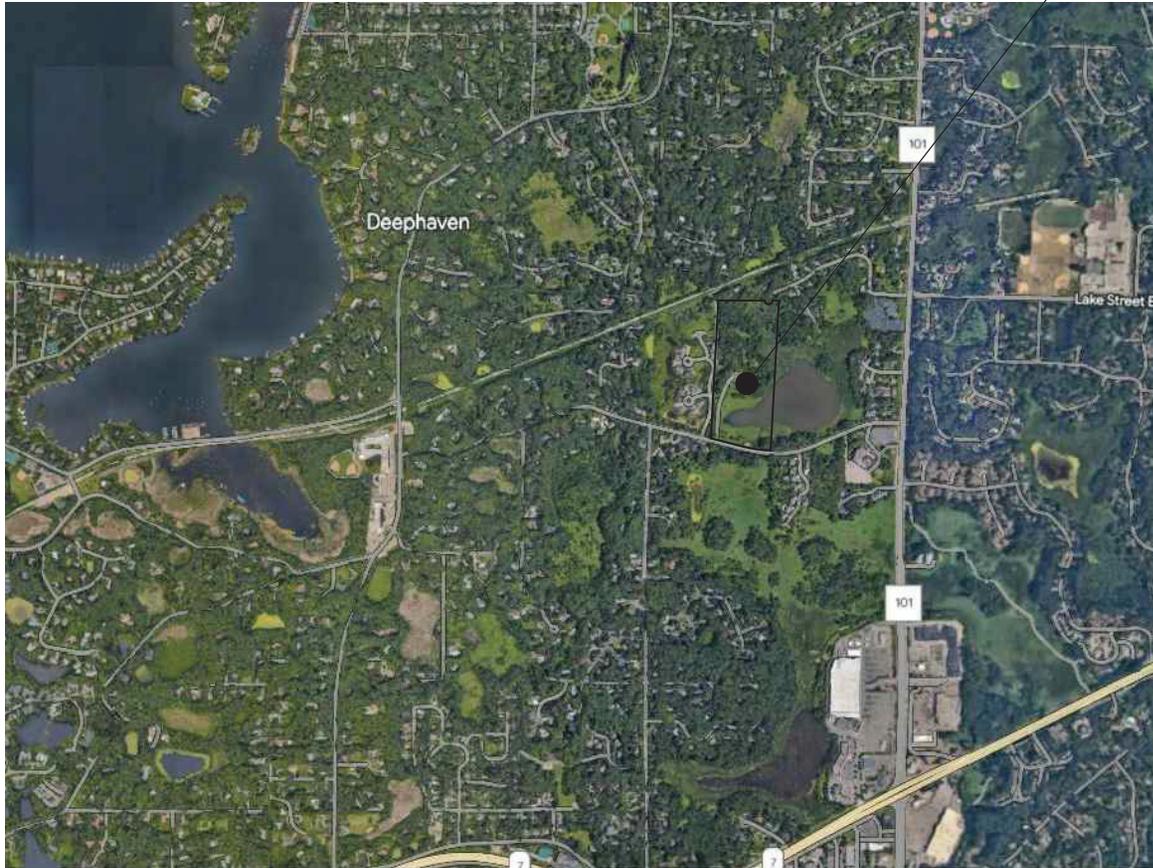
**OWNER:**  
 RON CLARK CONSTRUCTION  
 MIKE WALDO  
 7500 WEST 78TH ST.  
 EDINA, MN 55439  
 PHONE: 952.947.3037  
 EMAIL: MWALDO@RONCLARK.COM

**ENGINEER:**  
 CAMPION ENGINEERING SERVICES, INC.  
 MARTY CAMPION  
 P.O. BOX 41486  
 PLYMOUTH, MN 55441  
 PHONE: 763.486.3799  
 EMAIL: MCAMPION@CAMPIONENG.COM

**LANDSCAPE ARCHITECT:**  
 CIVIL SITE GROUP  
 JORDAN LOCKMAN  
 5000 GLENWOOD AVENUE,  
 GOLDEN VALLEY, MN 55422  
 PHONE: 612.968.5319  
 EMAIL: JLOCKMAN@CIVILSITEGROUP.COM

**SURVEYOR:**  
 STANTEC  
 GARY BJORKLUND  
 1 CARLSON PARKWAY N  
 PLYMOUTH, MN 55447

PROJECT LOCATION



NOTE:  
 BOUNDARY AND TOPOGRAPHIC INFORMATION PER SURVEY PREPARED BY STANTEC

**GOVERNING SPECIFICATIONS:**

1. THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" LATEST EDITION & SUPPLEMENTS.
2. CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD UTILITIES SPECIFICATIONS. (LATEST EDITION)
3. ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCE WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.
4. CITY OF MINNETONKA STANDARD SPECIFICATIONS & DETAILS.

**INDEX**

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	EXISTING CONDITIONS
3.	COMPOSITE UTILITY PLAN
4.	SANITARY SEWER & WATERMAIN PLAN & PROFILE
5.	STREET & STORM SEWER PLAN & PROFILE
6.	GRADING PLAN
7.	STORM WATER POLLUTION PREVENTION PLAN
8.	DETAILS
9.	DETAILS
10.	DETAILS



PLOT DATE: 8/1/2023

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NO.	DATE	DESCRIPTION
1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS



• Civil Engineering • Land Planning  
 PO BOX 41486  
 PLYMOUTH, MN 55441  
 PHONE: (763)486.3799  
 EMAIL: MCAMPION@CAMPIONENG.COM

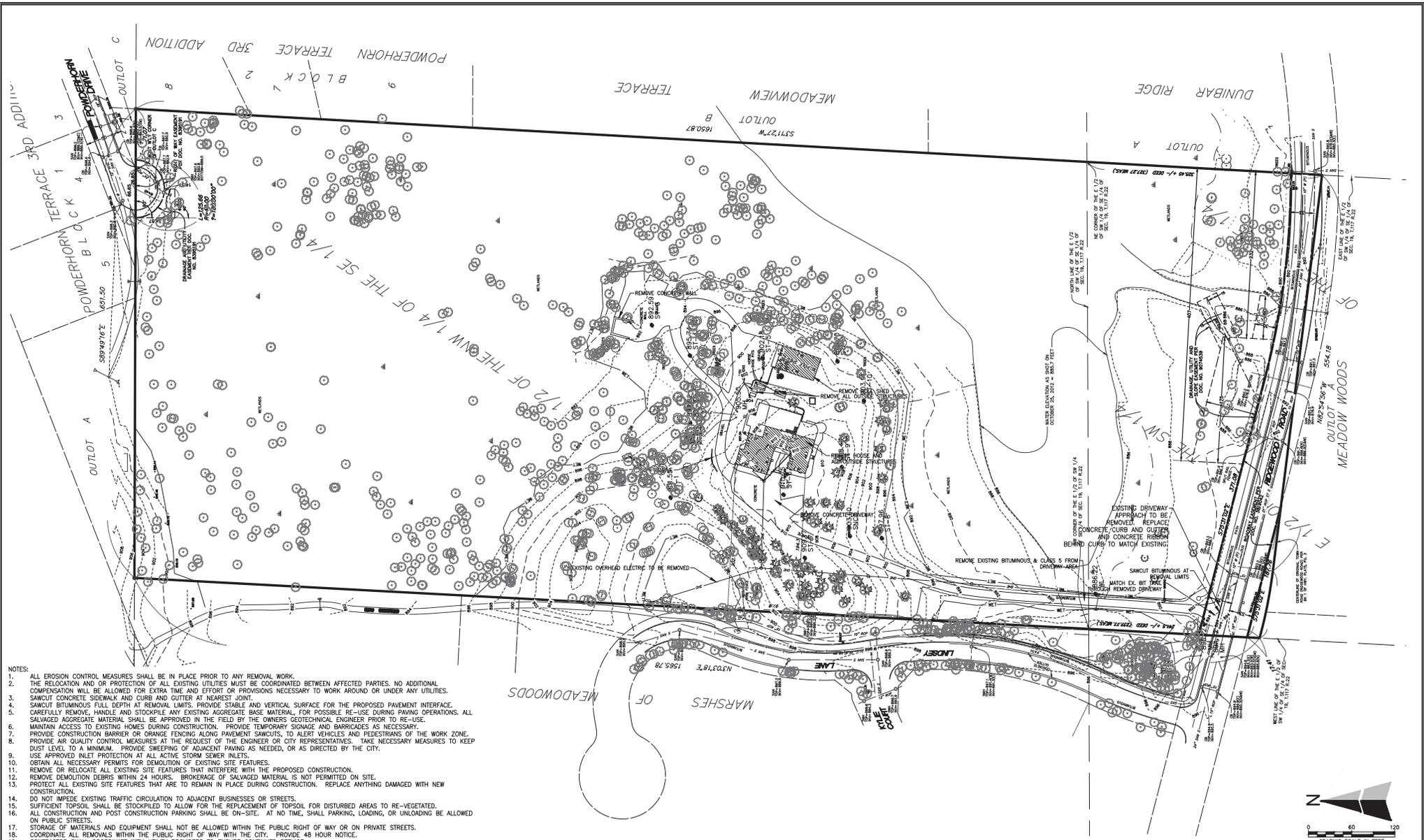
I hereby certify that this plan, specification or report has been prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.  
*Marty Campion* 09/16/2023  
 Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
 RON CLARK CONSTRUCTION  
 MINNETONKA, MN

COVER SHEET	PROJECT NO: 22-023
SHEET NO. 1 OF 10 SHEETS	DATE: 09/01/2023

Plot Date & Time:

C:\Users\Mark\Desktop\2023\22-023 - RIDGEWOOD\_PONDS\_CAD - CONSTRUCTION.EP - CONSTRUCTION.dwg



- NOTES:
1. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY REMOVAL WORK.
  2. THE RELOCATION AND OR PROTECTION OF ALL EXISTING UTILITIES MUST BE COORDINATED BETWEEN AFFECTED PARTIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA TIME AND EFFORT OR PROVISIONS NECESSARY TO WORK AROUND OR UNDER ANY UTILITIES.
  3. SAWCUT CONCRETE SIDEWALK AND CURB AND CUTTER AT NEAREST JOINT.
  4. SAWCUT BITUMINOUS FULL DEPTH AT REMOVAL LIMITS. PROVIDE STABLE AND VERTICAL SURFACE FOR THE PROPOSED PAVEMENT INTERFACE.
  5. CAREFULLY REMOVE, HANDLE AND STOCKPILE ANY EXISTING AGGREGATE BASE MATERIAL, FOR POSSIBLE RE-USE DURING PAVING OPERATIONS. ALL SALVAGED AGGREGATE MATERIAL SHALL BE APPROVED IN THE FIELD BY THE OWNERS GEOTECHNICAL ENGINEER PRIOR TO RE-USE.
  6. MAINTAIN ACCESS TO EXISTING HOMES DURING CONSTRUCTION. PROVIDE TEMPORARY SIGNAGE AND BARRICADES AS NECESSARY.
  7. PROVIDE CONSTRUCTION BARRIER OR ORANGE FENCING ALONG PAVEMENT SAWCUTS, TO ALERT VEHICLES AND PEDESTRIANS OF THE WORK ZONE.
  8. PROVIDE AIR QUALITY CONTROL MEASURES AT THE REQUEST OF THE ENGINEER OR CITY REPRESENTATIVES. TAKE NECESSARY MEASURES TO KEEP DUST LEVEL TO A MINIMUM. PROVIDE SWEEPING OF ADJACENT PAVING AS NEEDED, OR AS DIRECTED BY THE CITY.
  9. USE APPROVED INLET PROTECTION AT ALL ACTIVE STORM SEWER INLETS.
  10. OBTAIN ALL NECESSARY PERMITS FOR DEMOLITION OF EXISTING SITE FEATURES.
  11. REMOVE OR RELOCATE ALL EXISTING SITE FEATURES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION.
  12. REMOVE DEMOLITION DEBRIS WITHIN 24 HOURS. BROCKRAGE OF SALVAGED MATERIAL IS NOT PERMITTED ON SITE.
  13. PROTECT ALL EXISTING SITE FEATURES THAT ARE TO REMAIN IN PLACE DURING CONSTRUCTION. REPLACE ANYTHING DAMAGED WITH NEW CONSTRUCTION.
  14. DO NOT IMPIDE EXISTING TRAFFIC CIRCULATION TO ADJACENT BUSINESSES OR STREETS.
  15. SUFFICIENT TOPSOIL SHALL BE STOCKPILED TO ALLOW FOR THE REPLACEMENT OF TOPSOIL FOR DISTURBED AREAS TO RE-VEGETATED.
  16. ALL CONSTRUCTION AND POST CONSTRUCTION PARKING SHALL BE ON-SITE. AT NO TIME SHALL PARKING, LOADING, OR UNLOADING BE ALLOWED ON PUBLIC STREETS.
  17. STORAGE OF MATERIALS AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN THE PUBLIC RIGHT OF WAY OR ON PRIVATE STREETS.
  18. COORDINATE ALL REMOVALS WITHIN THE PUBLIC RIGHT OF WAY WITH THE CITY. PROVIDE 48 HOUR NOTICE.
  19. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDERS TO ENSURE CONTINUED SERVICE.

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EMAIL: MCAMPION@CAMPIONENG.COM

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*Mark P. Campion* 09/16/2023  
Mark P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
RON CLARK CONSTRUCTION  
MINNETONKA, MN

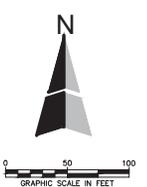
EXISTING CONDITIONS & REMOVAL PLAN	PROJECT NO: 22-023
SHEET NO. 2 OF 10 SHEETS	DATE: 09/01/2023



- SANITARY SEWER AND WATERMAIN NOTES:**
1. ALL WATERMAIN SHALL BE 6" DIP WITH 8 MIL POLYETHYLENE WRAP (IF DEEMED NECESSARY).
  2. ALL WATERMAIN SHALL HAVE 7.5' FEET MINIMUM COVER.
  3. ALL HYDRANTS SHALL BE INSTALLED WITH 7.5' BURY.
  4. WATERMAIN NUTS AND BOLTS SHALL BE COR-BLU.
  5. 8" PVC SANITARY SEWER LESS THAN 16" DEEP SHALL BE SDR 35. 16" - 28" DEEP SHALL BE SDR 26.
  6. SANITARY SEWER SERVICES SHALL BE 6" PVC SDR 26.
  7. WATER SERVICES SHALL BE 1 1/2" TYPE 'K' COPPER.
  8. CURB STOPS IN PAVED AREAS SHALL BE COVERED WITH METER BOX COVER (FORD A - 1 OR APPROVED EQUAL).
  9. PROVIDE TEMPORARY TRAFFIC CONTROL IN COMPLIANCE WITH MNDOT 'TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - FIELD MANUAL, LATEST REVISION)
  10. SANITARY SEWER SERVICE SHALL BE EXTENDED 1' INTO PROPERTY.
  11. CURB STOP FOR ALL SERVICES SHALL BE INSTALLED 1' INTO PROPERTY.
  12. CONTRACTOR SHALL MARK END OF SANITARY SERVICE WITH STEEL 'T' POST.
  13. TRACER WIRES SHALL BE INSTALLED ALONG ALL SANITARY AND WATER SERVICE LINES.
  14. CONTRACTOR SHALL JET AND VACUUM (IF REQUIRED BY CITY) AND TELEVIEW ALL SANITARY MAINS AFTER MANHOLES HAVE BEEN ADJUSTED TO BASE COURSE AND PRIOR TO ACCEPTANCE BY THE CITY. THE CITY ENGINEER SHALL BE PROVIDED WITH 2 COPIES OF THE TELEVISIONING DVD'S.
  15. CURB BOXES SHALL BE MARKED WITH A STEEL FENCE POST.
  16. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY CONFLICTS.
  17. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND FACILITIES TO ALLOW PROPER FUNCTIONING DURING AND AFTER CONSTRUCTION. SUPPORTING STRUCTURES, IF REQUIRED, SHALL BE SUPPLIED BY THE CONTRACTOR AS WORK INCIDENTAL TO THE CONTRACT.
  18. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION. THE ENGINEER WILL COORDINATE WITH UTILITY COMPANY IN QUESTION TO DETERMINE THE NEED FOR RELOCATION OF THE EXISTING UTILITY.
  19. EXISTING CONDITIONS SUCH AS SAND IN MANHOLES OR VALVE BOXES SHALL BE IDENTIFIED BY THE CONTRACTOR AND THESE SHALL BE REPORTED TO THE ENGINEER PRIOR TO EXCAVATION BY THE CONTRACTOR. ONCE CONSTRUCTION HAS BEGUN, ALL DAMAGE TO UNDERGROUND UTILITIES WILL BE ASSUMED TO HAVE BEEN CAUSED BY THE CONTRACTOR, AND REPAIRS NECESSARY SHALL BE PERFORMED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
  20. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND THE PROJECT ENGINEER 48 HOURS PRIOR TO STARTING WORK OR AS REQUIRED BY THE CITY.
  21. THE CONTRACTOR SHALL KEEP ACCESS ROADS CLEAR OF SOIL OR OTHER DEBRIS, AND PERFORM DAILY STREET CLEANING AS REQUIRED. POSITIVE DRAINAGE, CONTROLLED WITH EROSION CONTROL AND EROSION PREVENTION MEASURES AS REQUIRED SHALL BE PERFORMED.
  22. THE OWNER SHALL PAY FOR ALL COMPACTION TESTING. ANY AREAS WHICH FAIL TO MEET THE ABOVE STANDARDS SHALL BE CORRECTED AND RE-TESTED BY THE OWNER'S TESTING AGENT AT THE CONTRACTOR'S EXPENSE.
  23. CONNECTIONS AND DISCONNECTIONS AT THE CITY SANITARY SEWER AND WATERMANS WILL REQUIRE A RIGHT-OF-WAY PERMIT.
  24. PRIVATE SANITARY SEWER AND WATERMAIN CONSTRUCTION ARE SUBJECT TO SEWER AND WATER PERMITS ISSUED BY THE COMMUNITY DEVELOPMENT DEPARTMENT.

- STORM SEWER NOTES:**
1. ALL STORM SEWER SHALL BE RCP CLASS 3 UNLESS OTHERWISE NOTED.
  2. INSTALL SILT FENCE AT BACK OF CURB IMMEDIATELY AFTER BACKFILLING.
  3. ALL CATCH BASIN CASTINGS IN CURB SHALL BE SUMPED 0.15'. ALL MANHOLE CASTINGS IN PAVED AREAS SHALL BE SUMPED 0.05'.
  4. RIM ELEVATIONS SHOWN ON PLAN REPRESENT SUMPED ELEVATIONS.
  5. EXTENTS OF DRAINFIELD SHALL BE VERIFIED IN THE FIELD BY THE CITY ENGINEER BASED UPON SITE CONDITIONS.

- STREET NOTES:**
1. CURB ON PUBLIC STREET SHALL BE B612.
  2. CURB ON PRIVATE DRIVE SHALL BE SURMOUNTABLE.



NO.	DATE	DESCRIPTION
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*Martin P. Campion* 09/16/2023  
Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
RON CLARK CONSTRUCTION  
MINNETONKA, MN

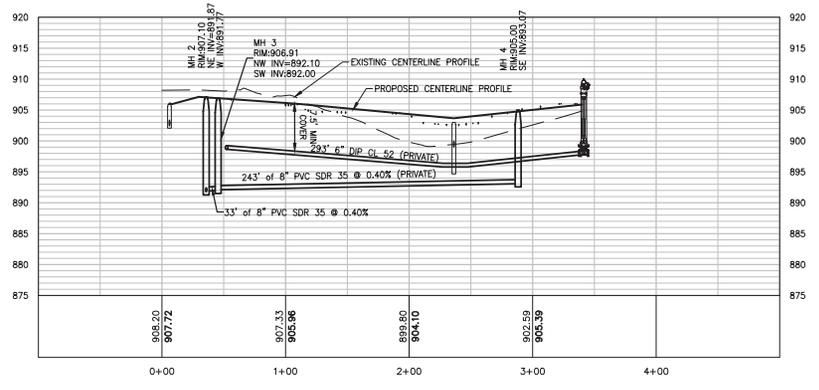
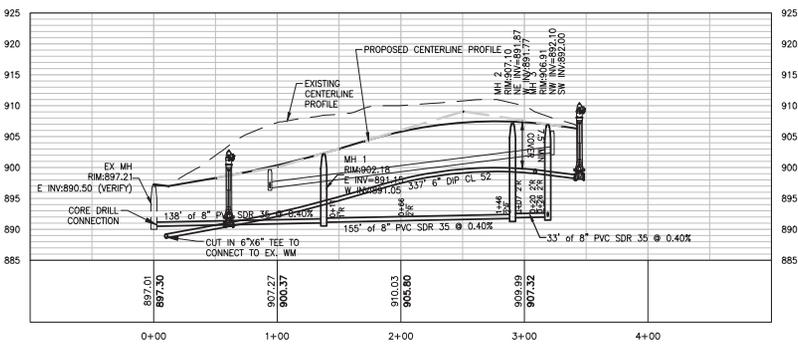
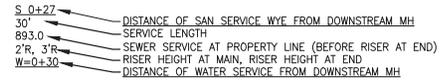
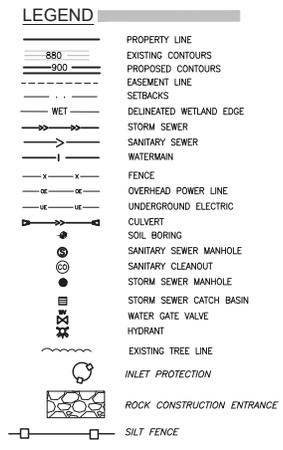
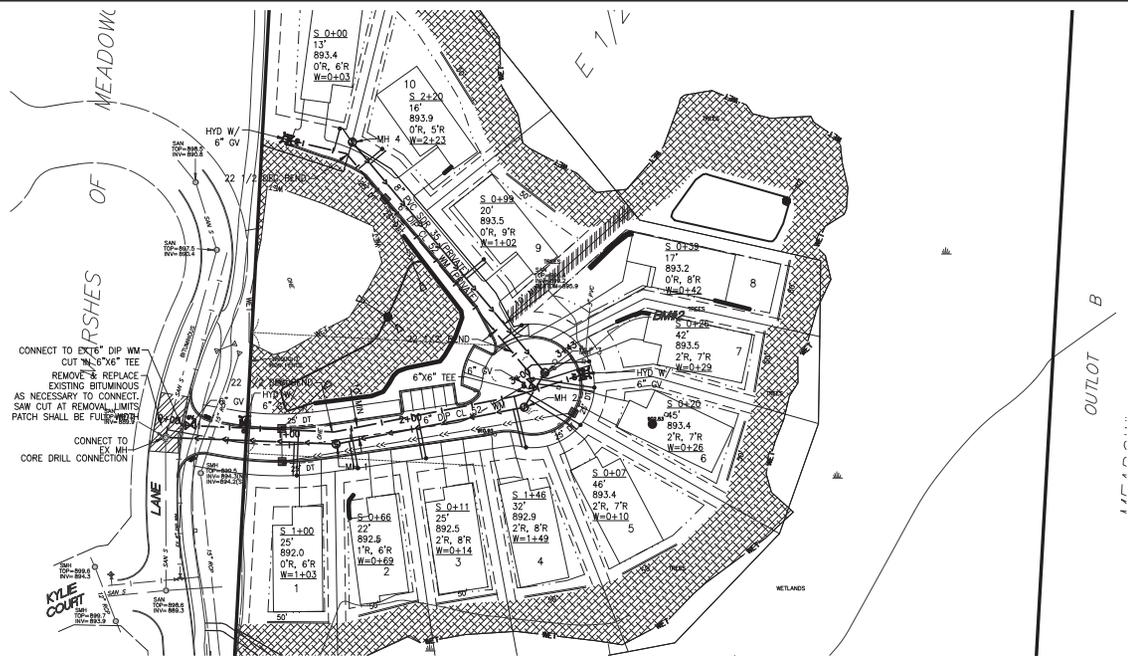
COMPOSITE UTILITY PLAN		PROJECT NO: 22-023
SHEET NO. 3 OF 10 SHEETS		DATE: 09/01/2023

PRJ: 22-023

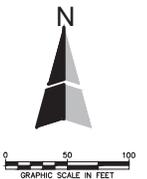
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PRJ. DATE: 8/2023

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SEE SHEET 3 FOR SANITARY SEWER & WATERMAIN NOTES



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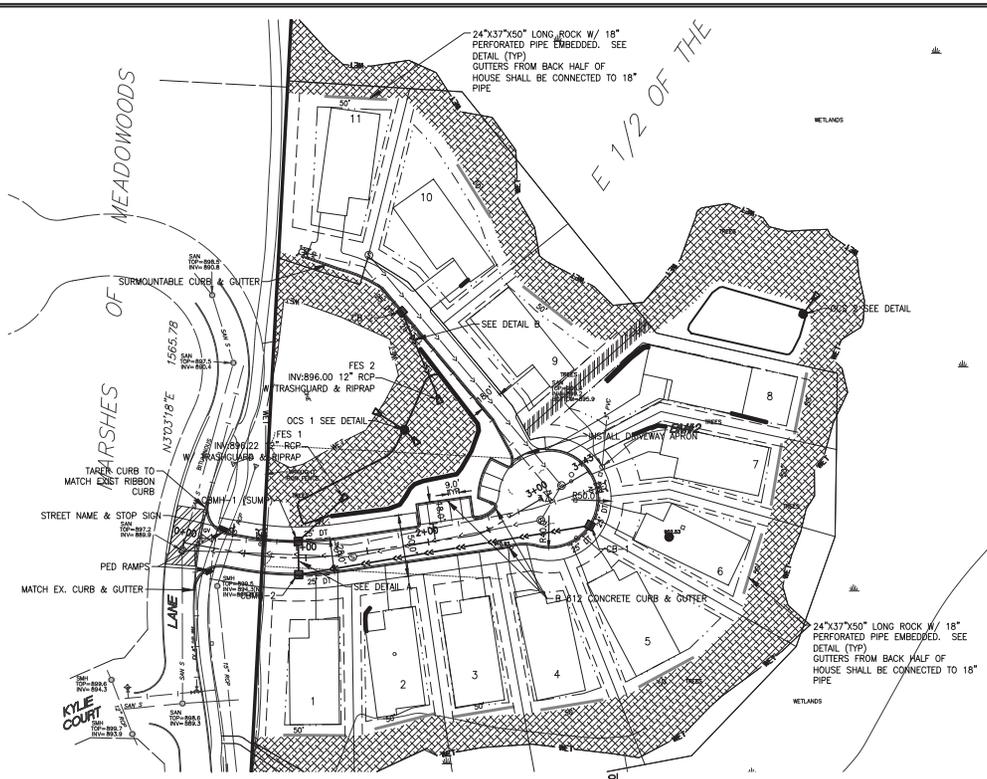
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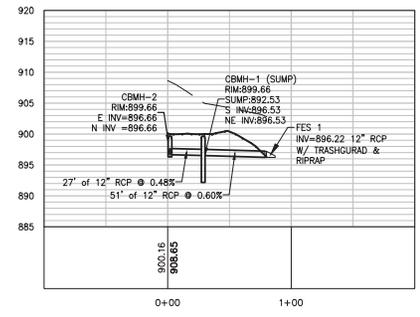
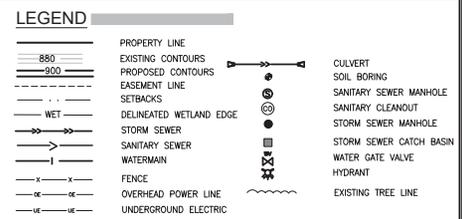
SANITARY SEWER & WATERMAIN PLAN & PROFILE		PROJECT NO: 22-023
SHEET NO. 4 OF 10 SHEETS		DATE: 09/01/2023

PRJ: Date & Time:

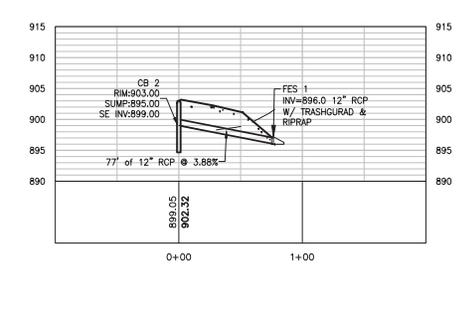


STRUCTURE NO.	SIZE	CASTING
CB 1	24"X36"	NEENAH R-3501-TB
CB 2	27"	NEENAH R-3250-1
CBMH 1	48"	NEENAH R-3250-1
CBMH 2	48"	NEENAH R-3250-1

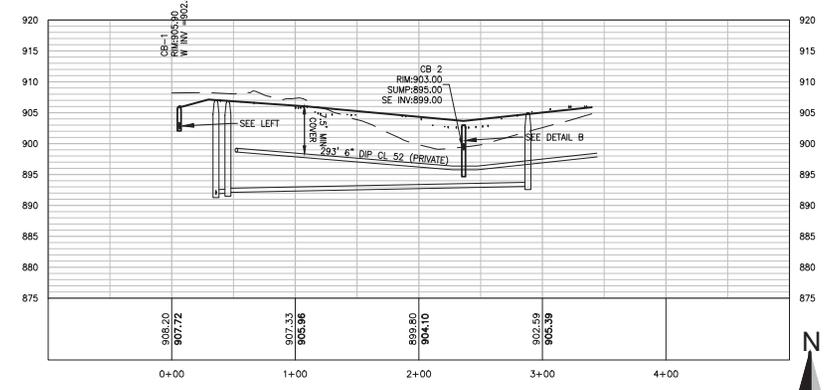
LOT	BOTTOM OF TRENCH ELEVATION
1	894.0
2	894.0
3	894.5
4	895.5
5	895.5
6	893.5
7	895.5
8	895.0
9	894.5
10	894.5
11	895.0



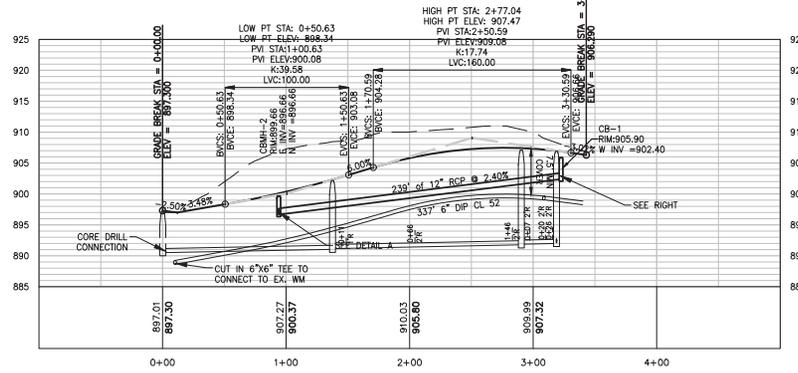
DETAIL A



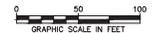
DETAIL B



PRIVATE STREET



PUBLIC STREET



SEE SHEET 3 FOR STREET & STORM SEWER NOTES

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1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS

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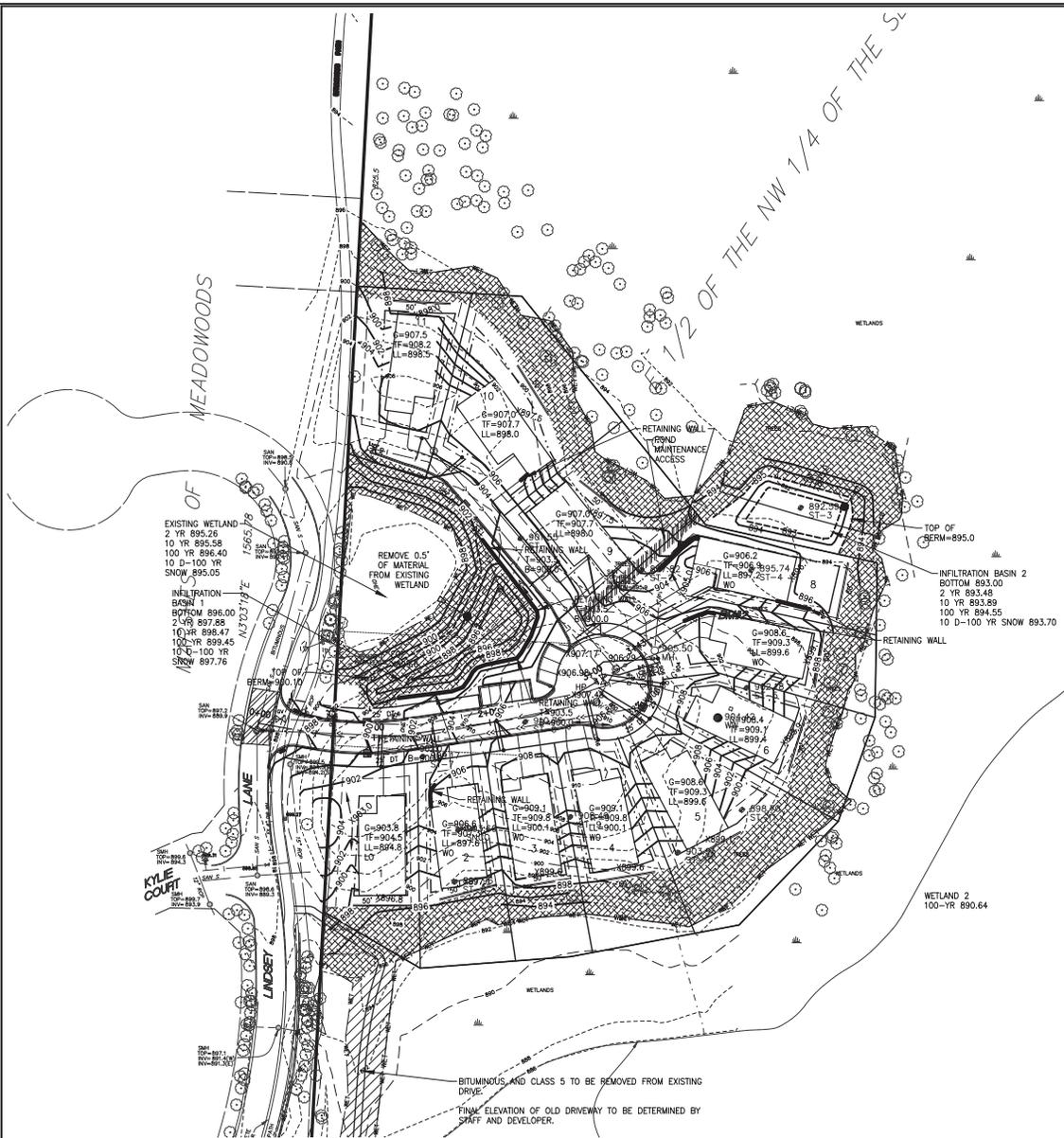
*Martin P. Campion* 09/16/2023  
 Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
 RON CLARK CONSTRUCTION  
 MINNETONKA, MN

STREET & STORM SEWER PLAN & PROFILE	PROJECT NO: 22-023
SHEET NO. 5 OF 10 SHEETS	DATE: 09/01/2023

PH: DATE: 8/2023

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CALL 48 HOURS BEFORE DIGGING:  
 GOPHER STATE ONE CALL  
 TWIN CITY AREA 651-454-0002  
 MN. TOLL FREE 1-800-252-1166

**GENERAL NOTES**

- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- THE CONTRACTOR MUST CONTACT ALL APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE LOCATIONS OF SMALL UTILITIES SHALL BE OBTAINED BY THE CONTRACTOR BY CALLING GOPHER STATE ONE CALL (1-800-252-1166).
- THE CONTRACTOR SHALL MARK THE LOCATIONS OF EXISTING GATE VALVES AND MANHOLES WITH STEEL FENCE POSTS PRIOR TO BEGINNING GRADING.
- SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
- THE CONTRACTOR SHALL RESTRICT ALL GRADING AND CONSTRUCTION ACTIVITIES TO AREAS DESIGNATED ON THE PLANS. ACTIVITIES PROHIBITED OUTSIDE THE CONSTRUCTION BOUNDARIES INCLUDE, BUT ARE NOT LIMITED TO: STOCKPILING SOILS AND OTHER MATERIAL, STORING EQUIPMENT OR OTHER MACHINERY, DRIVING VEHICLES, LEAKING OR SPILLING OF ANY "WASHOUT" OR OTHER TOXIC MATERIALS.
- ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
- PRIOR TO PLACEMENT OF ANY STRUCTURE OR PAVEMENT, A TEST ROLL WILL BE REQUIRED ON THE SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER AND AS SPECIFIED.
- THE EXISTING TOPSOIL ON THIS SITE VARIES IN DEPTH. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ALL SURFACE VEGETATION AND ANY TOPSOIL OR OTHER LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIAL BE REMOVED FROM THE PARKING LOT, AND BUILDING PAD AREAS PRIOR TO PLACEMENT OF ANY EMBANKMENT IN ACCORDANCE WITH THE SOILS REPORT AND RECOMMENDATION OF THE SOILS ENGINEER.
- EMBANKMENT MATERIAL NOT PLACED IN THE PARKING LOT OR BUILDING PAD AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE QUALITY COMPACTION METHOD AS OUTLINED IN MN/DOT 2105.3F2 OR AS DIRECTED BY THE SOILS ENGINEER.
- EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. EMBANKMENT MATERIAL PLACED IN THE PARKING LOT SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFIED DENSITY METHOD AS OUTLINED IN MN/DOT 2105.3F1. EMBANKMENT MATERIAL PLACED IN THE BUILDING PAD AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE SOILS REPORT.
- TOLERANCES:
  - THE PARKING LOT SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
  - AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.20 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED BY THE ENGINEER.
  - TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/8 INCH OF THE SPECIFIED THICKNESS.
- ALL DISTURBED UNSURFACED AREAS ARE TO IMMEDIATELY RECEIVE SIX INCHES OF TOPSOIL, SEED AND MULCH AND BE WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- SPOT ELEVATIONS SHOWN INDICATE FINISHED GRADE ELEVATION UNLESS OTHERWISE NOTED.
- PROPOSED CONTOURS ARE TO FINISH SURFACE GRADE.

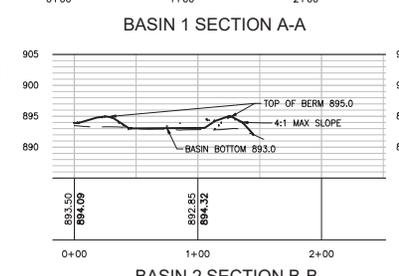
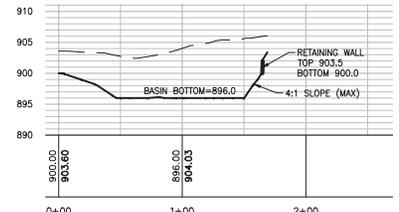
**INFILTRATION BASIN NOTES:**

- THE CONTRACTOR SHALL AVOID COMPACTING THE BASIN BOTTOM. RUBBER Tired EQUIPMENT SHALL BE PROHIBITED WHEN WORKING IN THE INFILTRATION AREA.
- BASIN SHALL NOT BE GRADED TO WITHIN 3" OF FINAL ELEVATION UNTIL SITE GRADING IS SUBSTANTIALLY COMPLETE. ONCE UPGRADIENT VEGETATION HAS BEEN ESTABLISHED, THE BASIN SHALL BE GRADED TO FINISH ELEVATION, THE NATIVE SOILS DECOMPACTED TO A DEPTH OF 12"-18" AND THE BASIN RESTORED.
- SILT FENCE SHALL BE INSTALLED AROUND BASIN IMMEDIATELY UPON COMPLETION OF GRADING.

**CAUTION NOTES:**

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE.

THE CONTRACTOR MUST CONTACT ALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE LOCATIONS OF SMALL UTILITIES SHALL BE OBTAINED BY THE CONTRACTOR BY CALLING GOPHER STATE ONE CALL AT 800-252-1166 OR 651-454-0002.



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 Martin P. Campion - Lic. # 19901 Date:

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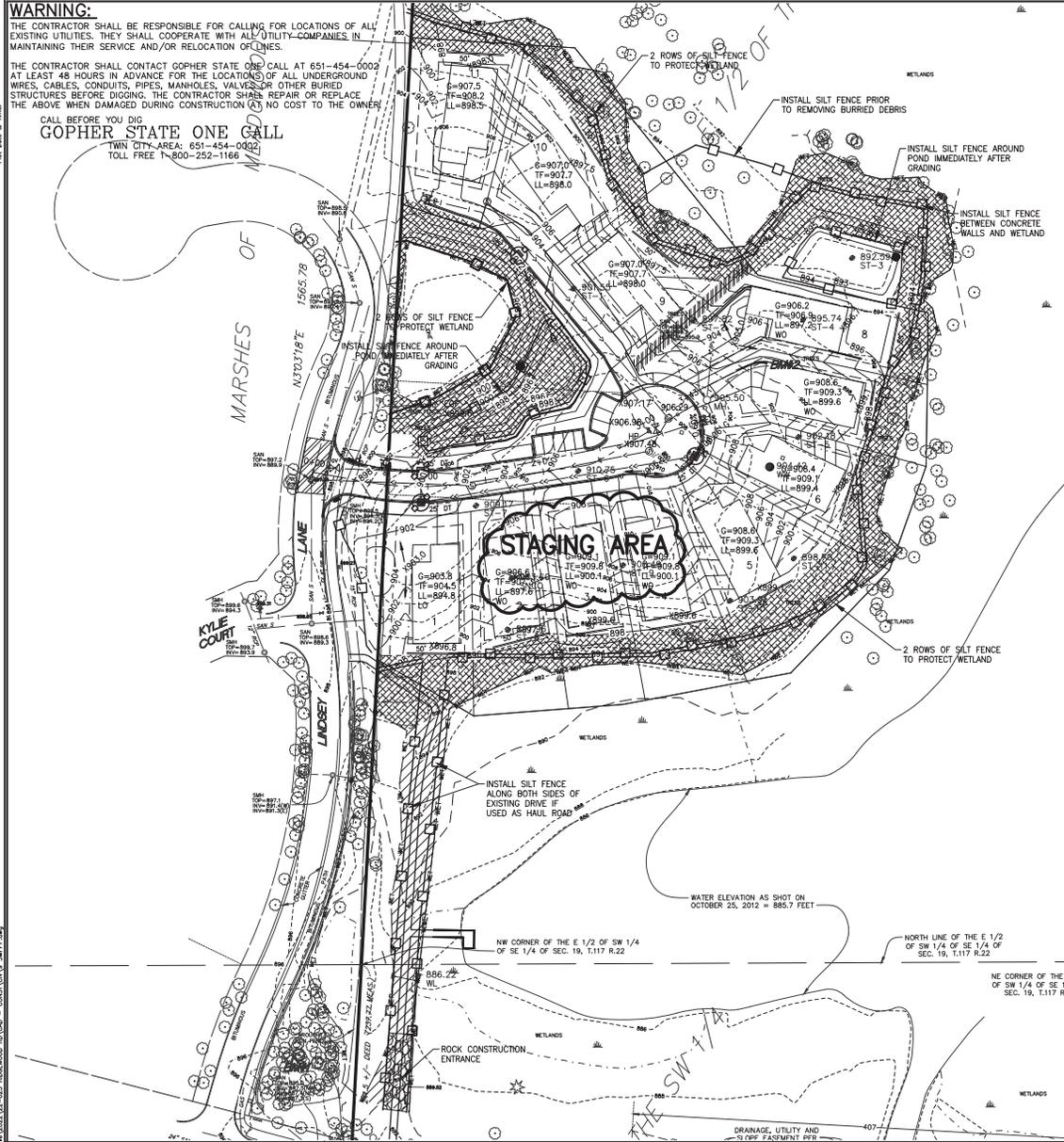
<b>GRADING PLAN</b>		PROJECT NO: <b>22-023</b>
SHEET NO. <b>6 OF 10 SHEETS</b>		DATE: <b>09/01/2023</b>

**WARNING:**

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

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, 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.

CALL BEFORE YOU DIG  
**GOPHER STATE ONE CALL**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE 1-800-252-1166



**EROSION/SILTATION CONTROL**

1. ALL EROSION CONTROL AND SILTATION CONTROL WILL COMPLY WITH MINNESOTA'S BEST MANAGEMENT PRACTICES MANUAL AND REGULATIONS OF THE CITY.
2. THE CONTRACTOR SHALL BE FAMILIAR WITH AND FOLLOW ALL REQUIREMENTS OF THE MPCA NPDES PHASE II PERMIT FOR CONSTRUCTION ACTIVITIES OF ALL CORRECTIVE MEASURES. INSPECTIONS AFTER RAIN EVENTS SHALL BE CONDUCTED WITHIN 24 HOURS. BY BEGINNING CONSTRUCTION, THE CONTRACTOR ACKNOWLEDGES THE TERMS OF THIS PERMIT AND AGREES TO ABIDE BY THEM.
3. ALL NONFUNCTIONAL BMP'S SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMP'S BY THE END OF THE NEXT BUSINESS DAY OR WHEN FIELD CONDITIONS ALLOW.
4. PERMETER CONTROL DEVICES SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN NONFUNCTIONAL OR SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE DEVICE.
5. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED WITHIN ONE CALENDAR DAY OF DISCOVERY. REMOVAL FROM EXISTING PAVEMENTS SHALL BE ACCOMPLISHED BY SWEEPING.
6. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION INCLUDING BUT NOT LIMITED TO ROCK ENTRANCES AND/OR SILT FENCES. CONTROL SHALL COMMENCE WITH GRADING AND CONTINUE THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR'S RESPONSIBILITY INCLUDES ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT, THE OWNER MAY, AT HIS/HER OPTION DIRECT THE CONTRACTOR IN HIS/HER METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS.
7. ALL SEDIMENT DEPOSITS AND DELTAS SHALL BE REMOVED FROM SURFACE WATERS (INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS) AND THE REMOVAL AREAS REESTABLISHED WITHIN 7 DAYS, ALL AT THE EXPENSE OF THE CONTRACTOR. THE SILT FENCES SHALL BE REMOVED AND THE SILT REMOVED FROM THE PONDING AREAS BY THE CONTRACTOR AFTER THE TURF IS ESTABLISHED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH AND THE MONITORING REQUIREMENTS OF THE MPCA PERMIT.
9. ALL DISTURBED AREAS, EXCEPT ROADWAYS, PARKING AREAS, BUILDING AREAS, AND SIDEWALKS, SHALL BE RESTORED WITH A MINIMUM 4 INCHES TOPSOIL, SEEDED AND MULCHED IN ACCORDANCE WITH THE LANDSCAPE PLAN.
10. CONSTRUCTION SHALL PROCEED IN THE FOLLOWING SEQUENCE:
  - a. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY.
  - b. INSTALL EROSION CONTROL MEASURES AND ROCK CONSTRUCTION ENTRANCE.
  - c. CONTACT CITY FOR APPROVAL OF EROSION CONTROL INSTALLATION.
  - d. MAINTAIN EROSION MEASURE, I.E. SILT FENCE, ROCK CONSTRUCTION ENTRANCE.
  - e. COMPLETE SITE GRADING TOLERANCING.
11. INSTALL SEED AND MULCH ON AREAS THAT ARE NOT TO BE HARD SURFACES.
12. ALL STORM SEWER INLETS AND FLARED END SECTIONS SHALL BE ADEQUATELY PROTECTED BEFORE AND AFTER PAVEMENT CONSTRUCTION UNTIL ALL DISTURBED AREAS ARE STABILIZED. CONTRACTOR SHALL PLACE MIRAFI FABRIC AND GRAVEL OVER ALL CATCH BASIN GRADE INLETS UNTIL PAVING SURFACES ARE PAVED AND THE LANDSCAPING IS COMPLETED.
13. STOCKPILE AREAS WHICH REMAIN ON THE SITE FOR MORE THAN SEVEN DAYS SHALL BE SEEDED, MULCHED, AND SURROUNDED BY SILT FENCE.
14. BIG LOGS SHALL BE INSTALLED AT PIPE INLETS AND OUTLETS UNTIL RIPRAP IS INSTALLED. PERMANENT ENERGY DISSIPATORS SHALL BE INSTALLED WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.
15. EROSION AND SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE UNTIL THE SITE SOILS HAVE BEEN PERMANENTLY STABILIZED AND SHALL BE REMOVED WITHIN 30 DAYS THEREAFTER.
16. ALL STOCKPILES OF SOIL OR OTHER MATERIALS SUBJECT TO EROSION BY WIND OR WATER SHALL BE COVERED, VEGETATED, ENCLOSED, FENCED ON THE DOWN GRADIENT SIDE OR OTHERWISE EFFECTIVELY PROTECTED FROM EROSION IN ACCORDANCE WITH THE AMOUNT OF TIME THE MATERIAL WILL BE ON SITE, AND THE MANNER OF ITS PROPER USE.
17. LOCATION OF CONCRETE WASHOUT AND HAZARDOUS MATERIALS STORAGE SHALL BE DETERMINED PRIOR TO START OF CONSTRUCTION. THE SWPPP WILL BE UPDATED AND LOCATIONS ADDED AT THAT TIME.
18. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION AND SHALL BE COMPLETED NOT LATER THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. INITIATED IMMEDIATELY MEANS TAKING AN ACTION TO COMMENCE STABILIZATION AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE WORK DAY, FOLLOWING THE DAY WHEN THE EARTH-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. INITIATED STABILIZATION IS DEFINED AS COMPLETING ONE (OR MORE) OF THE FOLLOWING: SOIL PREPARATION FOR VEGETATION, MULCHING (OR OTHER NON-VEGETATIVE BMP), SEEDING/PLANTING, OR SCHEDULING STABILIZATION MEASURES TO BE FULLY INSTALLED AND COMPLETED WITHIN THE 7 DAY TIME FRAME.
19. THE CONTRACTOR SHALL PROVIDE AND INSTALL A SWPPP MUXBOX (INCIDENTAL).
20. THE WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF ALL SWALES MUST BE STABILIZED WITHIN 24 HOURS OF CONNECTING TO A PROPERTY LINE OR SURFACE WATER.
21. TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.
22. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES CANNOT BE USED WITHIN THE NORMAL WETTED PERIMETER OF DRAINAGE DITCHES OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2%.
23. CONTRACTOR SHALL STRIP EXISTING TOPSOIL TO PRESERVE IN SUFFICIENT QUANTITY TO RESPADE A MINIMUM OF 6" OVER LAWN AND LANDSCAPE AREAS. TOPSOIL SHALL CONTAIN A MINIMUM OF 5% ORGANIC CONTENT CONSISTENT WITH RPBCWD DEFINITION.
24. CONTRACTOR SHALL PROVIDE COMPACTION IN LAWN AND LANDSCAPE AREAS. CONTRACTOR SHALL SCORIFY THE UPPER 12"-18" TO DECOMPACT AS NECESSARY TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUND PER SQUARE INCH.
25. DISCHARGES FROM BMP'S SHALL BE DIRECTED TO VEGETATED AREAS.
26. IF DEWATERING IS REQUIRED, CONTRACTOR SHALL PREPARE A PLAN TO PREVENT NUISANCE CONDITIONS AND EROSION.
27. ALL ONSITE ACTIVITIES MUST BE CONDUCTED SO AS TO MINIMIZE THE POTENTIAL TRANSFER OF AQUATIC INVASIVE SPECIES.

**EROSION CONTROL BLANKET REQUIREMENTS (PLACED ON SLOPES GREATER THAN 3:1)**

1. TEMPORARY EROSION BLANKET SHALL BE BIODEGRADABLE DOUBLBE-NET STRAW (NORTH AMERICAN GREEN S150 OR APPROVED EQUAL) AND EROSION MATS SHALL HAVE A MINIMUM FUNCTIONAL CONVEYITY OF 10 MONTHS.
2. EROSION BLANKET PLACED ON SLOPES 3:1 OR GREATER SHALL BE ROLLED DOWN SLOPE AND WITH 4" MINIMUM LAP AND STAPLED AT 1' O.C.
3. CONSTRUCT A 6"x12" ANCHOR TRENCH 3' BEYOND CREST AND TOE OF SLOPE. STAPLE EROSION BLANKET IN TRENCH AT 1' O.C.
4. EOP'S SHALL BE STABILIZED WITH MNDOT TRM CATEGORY 1 TURF REINFORCEMENT MAT.

**EROSION CONTROL QUANTITIES:**

- SITE RESTORATION:**  
 SEED MIX 22-111 = X AC  
 SILT FENCE = 4907 LF  
 INLET PROTECTION = 4 EA  
 ROCK CONSTRUCTION ENTRANCE = 1 EA

- DENOTES INLET PROTECTION
- DENOTES ROCK CONSTRUCTION ENTRANCE
- DENOTES SILT FENCE

**PROJECT DIRECTORY**

**OWNER:**  
 RON CLARK CONSTRUCTION  
 MIKE WALDO  
 7500 WEST 78TH ST.  
 EDINA, MN 55439  
 PHONE: 952.947.3037  
 EMAIL: MMALDO@RONCLARK.COM

**SWPPP DESIGNER:**  
 CAMPION ENGINEERING SERVICES, INC.  
 MARY CAMPION  
 P.O. BOX 41486  
 PLYMOUTH, MN 55441  
 PHONE: 763.486.3799  
 EMAIL: MCAMPION@CAMPIONENG.COM

**SURVEYOR:**  
 STANTEC  
 GARY BJORKLUND  
 1 CARLSON PARKWAY N  
 PLYMOUTH, MN 55447

**SWPPP CONTACT:**  
 RON CLARK CONSTRUCTION  
 KEVIN TRUJILLO  
 PHONE: 612.363.2772  
 EMAIL: KEVIN@RONCLARK.COM

NO.	DATE	DESCRIPTION
1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS

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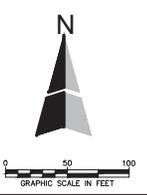
PO BOX 41486  
 PLYMOUTH, MN 55441  
 PHONE: (763)486.3799  
 EMAIL: MCAMPION@CAMPIONENG.COM

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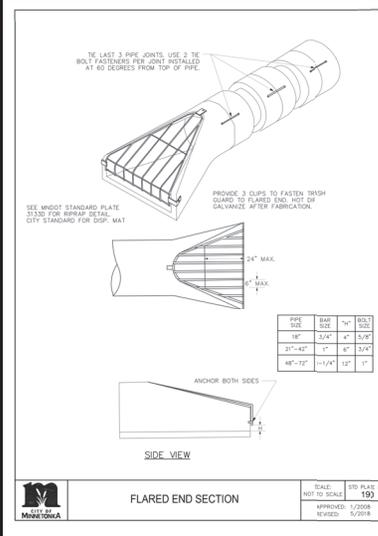
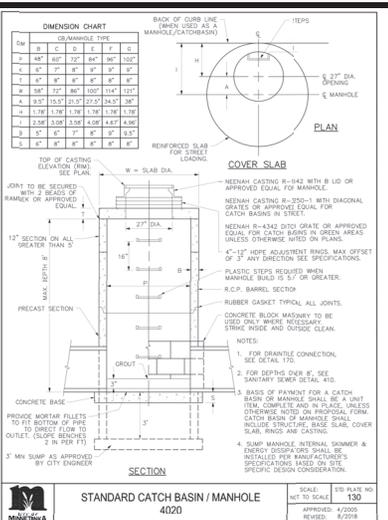
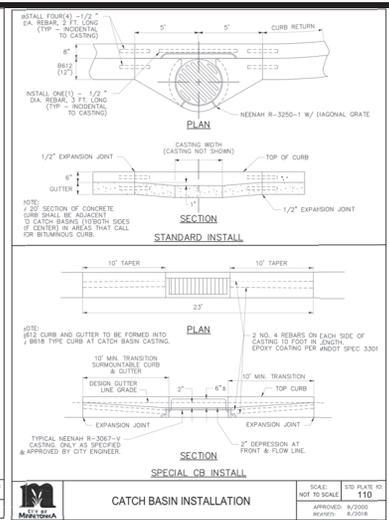
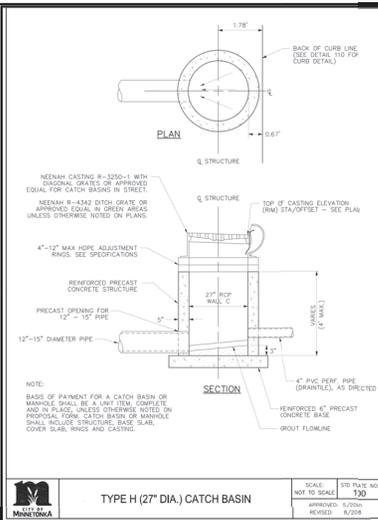
*Martin P. Campion* 09/16/2023  
 Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
**RON CLARK CONSTRUCTION**  
**MINNETONKA, MN**

<b>STORM WATER POLLUTION PREVENTION PLAN</b>		PROJECT NO: <b>22-023</b>
SHEET NO. 7 OF 10 SHEETS		DATE: <b>09/01/2023</b>



Proj. Date: 8/2018



**TABLE OF QUANTITIES RIPRAP AT ROOF OUTLETS**

SIZE OF MANHOLE (INCH)	GRADE "A"				GRADE "B"				GRADE "C"			
	12"	15"	18"	24"	12"	15"	18"	24"	12"	15"	18"	24"
12"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
15"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
18"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
24"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

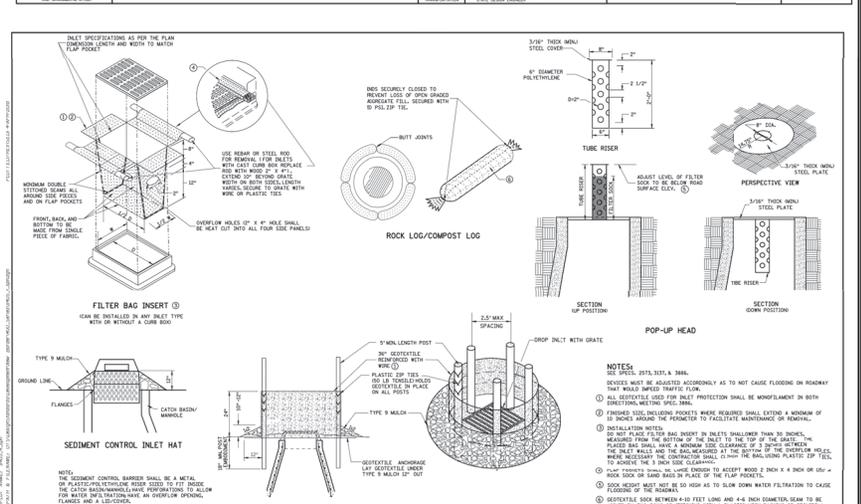
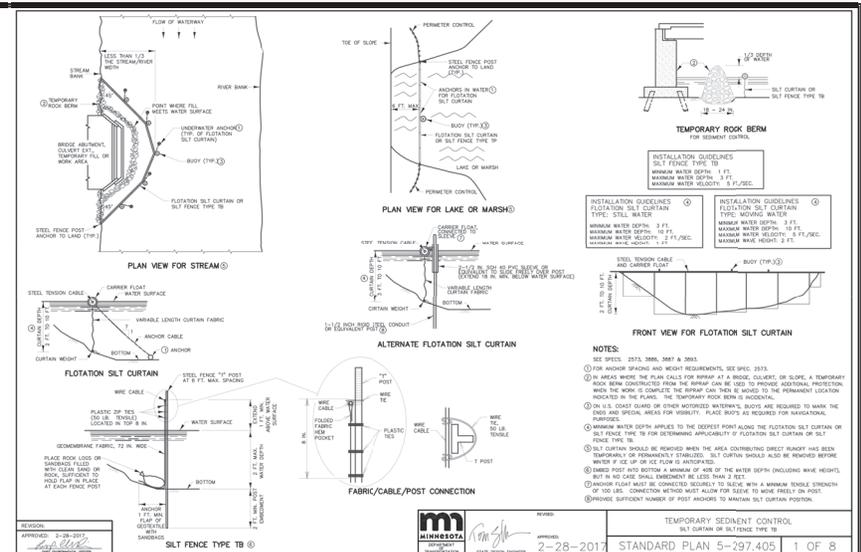
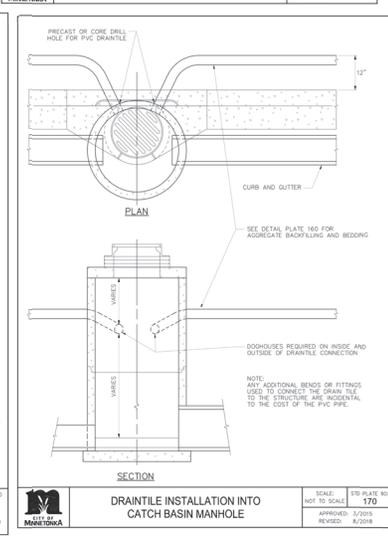
**TABLE OF QUANTITIES RIPRAP AT ROOF-A OUTLETS**

PIPE SIZE (INCH)	GRADE "A"				GRADE "B"				GRADE "C"			
	12"	15"	18"	24"	12"	15"	18"	24"	12"	15"	18"	24"
12"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
15"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
18"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
24"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

**TABLE OF QUANTITIES RIPRAP AT ROOF OUTLETS**

PIPE SIZE (INCH)	GRADE "A"				GRADE "B"				GRADE "C"			
	12"	15"	18"	24"	12"	15"	18"	24"	12"	15"	18"	24"
12"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
15"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
18"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
24"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION  
APPROVED: DECEMBER 9, 2018  
STATE ENGINEER



NO.	DATE	DESCRIPTION
1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS

**CAMPION ENGINEERING SERVICES, INC.**

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PO BOX 41486  
PLYMOUTH, MN 55441  
PHONE: (763)486.3799  
EMAIL: MCAMPION@CAMPIONENGS.COM

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*Martin P. Campion* 09/16/2023  
Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
RON CLARK CONSTRUCTION  
MINNETONKA, MN

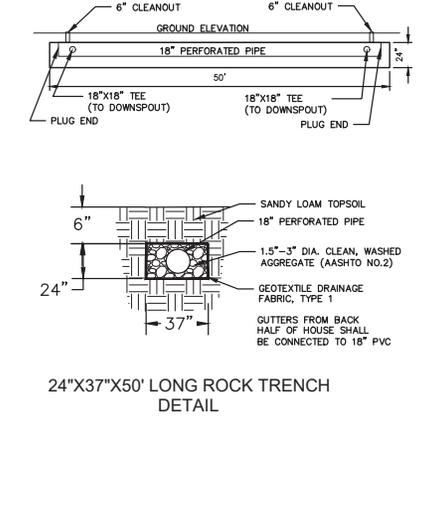
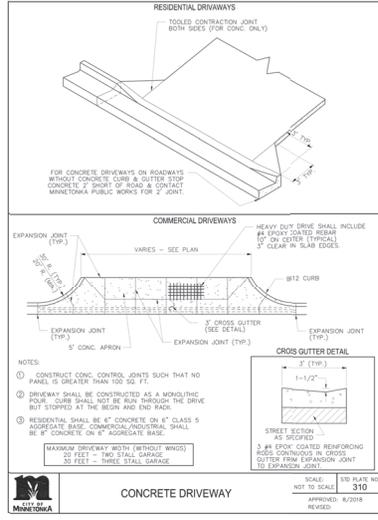
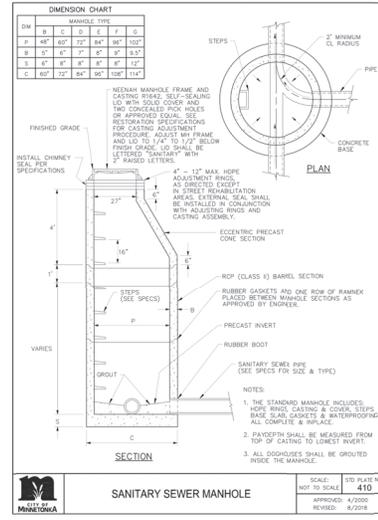
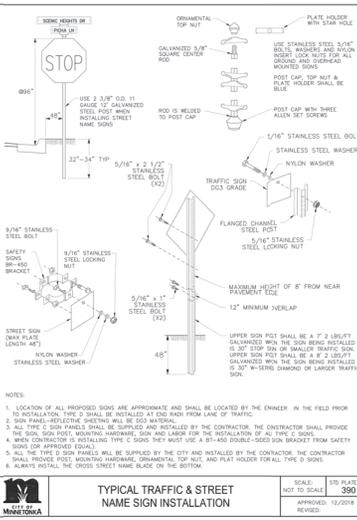
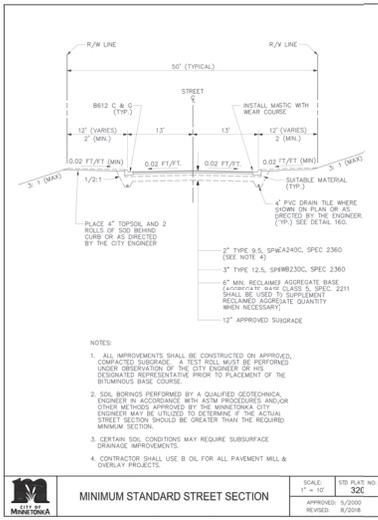
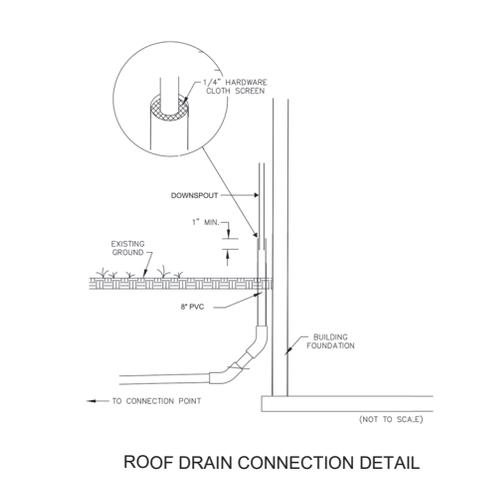
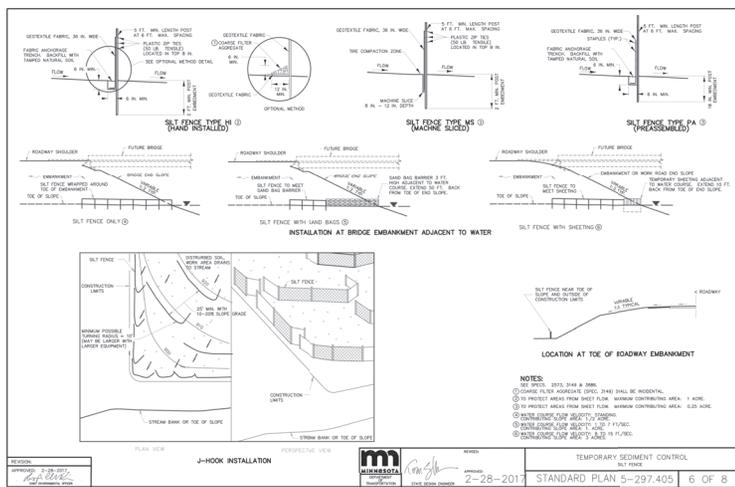
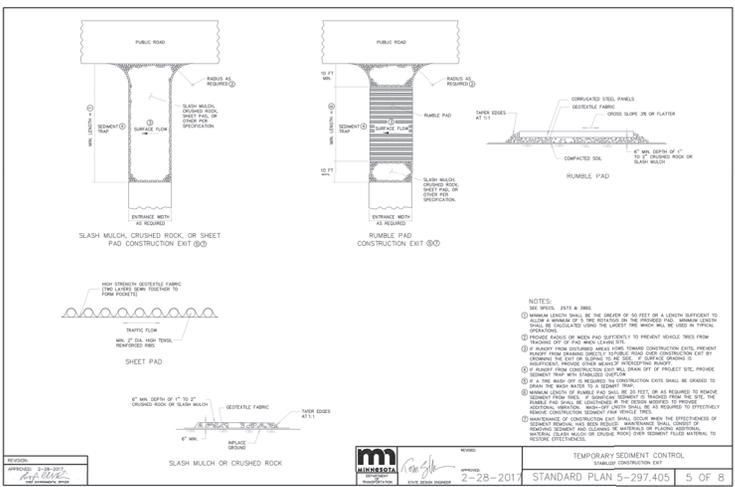
**DETAILS**

PROJECT NO: 22-023  
DATE: 09/01/2023

SHEET NO. 8 OF 10 SHEETS

STATE PROJ. NO. SHEET NO. OF SHEETS

P&L Date: 8/2023



C:\Users\mcc\OneDrive\Documents\2023\22-023 RidgeWood Ponds.dwg - CONSTRUCTION DETAIL.dwg

NO.	DATE	DESCRIPTION
1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS

**CAMPION ENGINEERING SERVICES, INC.**

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PO BOX 41486  
PLYMOUTH, MN 55441  
PHONE: (763)486.3799  
EMAIL: MCAMPION@CAMPIONENGS.COM

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*Martin P. Campion* 09/16/2023  
Martin P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**  
RON CLARK CONSTRUCTION  
MINNETONKA, MN

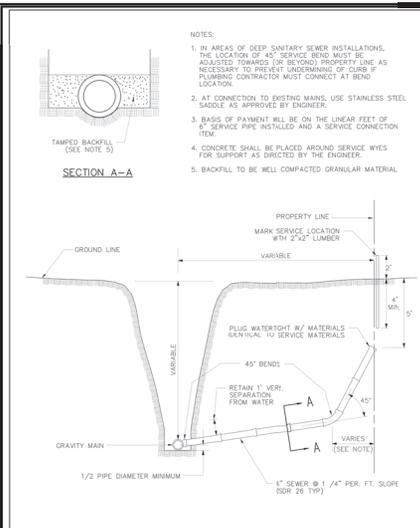
**DETAILS**

PROJECT NO: 22-023

SHEET NO. 9 OF 10 SHEETS

DATE: 09/01/2023

PL 006 & 106



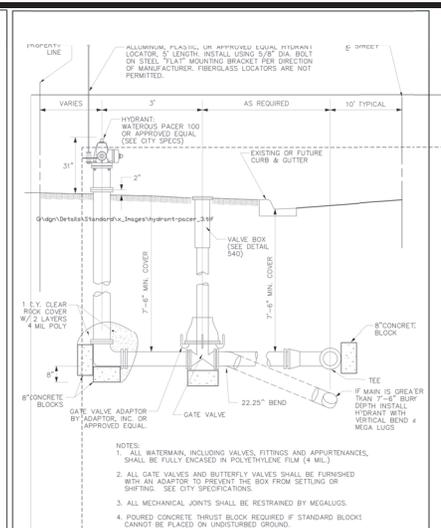
**SANITARY SEWER SERVICE CONNECTION**

SCALE: NOT TO SCALE

STD. PLAN NO. 440

APPROVED: 4/2004

REVISED: 8/2018



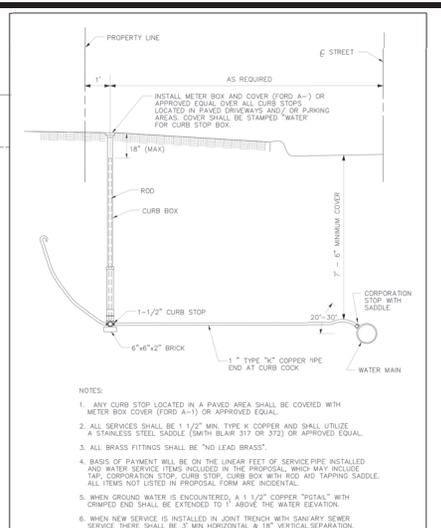
**HYDRANT**

SCALE: NOT TO SCALE

STD. PLAN NO. 500

APPROVED: 12/2004

REVISED: 8/2018



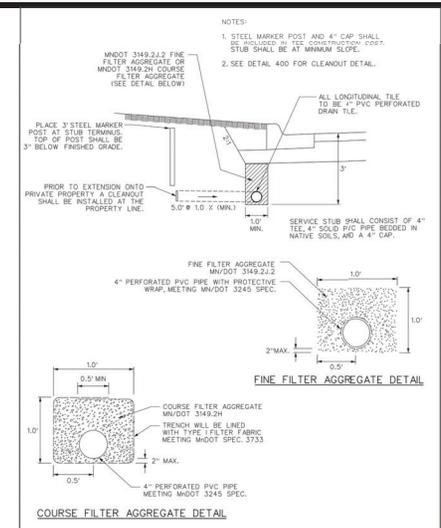
**WATER SERVICE CONNECTION**

SCALE: NOT TO SCALE

STD. PLAN NO. 610

APPROVED: 5/2000

REVISED: 8/2018



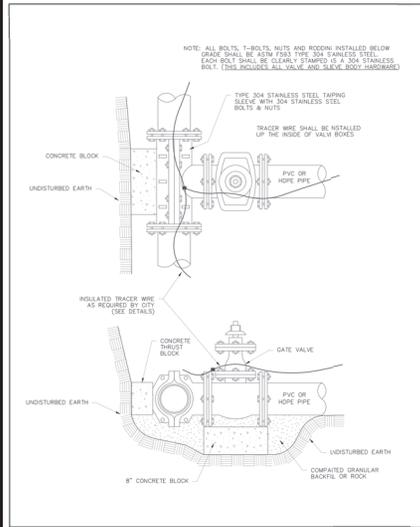
**DRAIN TILE INSTALLATION (CONCRETE CURB)**

SCALE: NOT TO SCALE

STD. PLAN NO. 160

APPROVED: 2/2001

REVISED: 8/2018



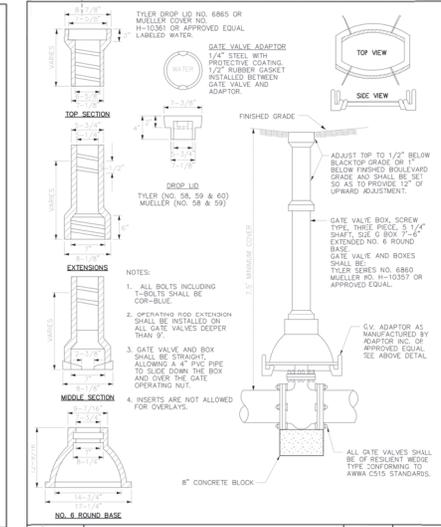
**WATERMAIN WET TAP**

SCALE: NOT TO SCALE

STD. PLAN NO. 550

APPROVED: 12/2018

REVISED:



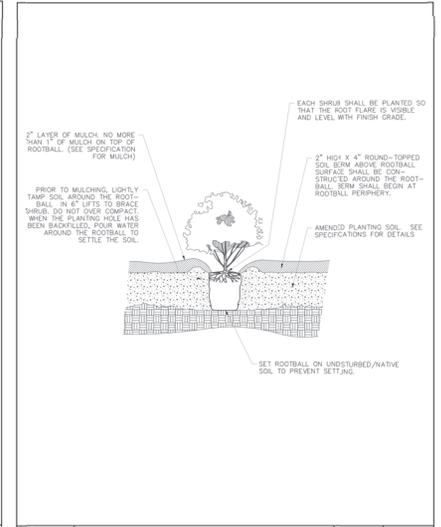
**GATE VALVE**

SCALE: NOT TO SCALE

STD. PLAN NO. 540

APPROVED: 1/2008

REVISED: 8/2018



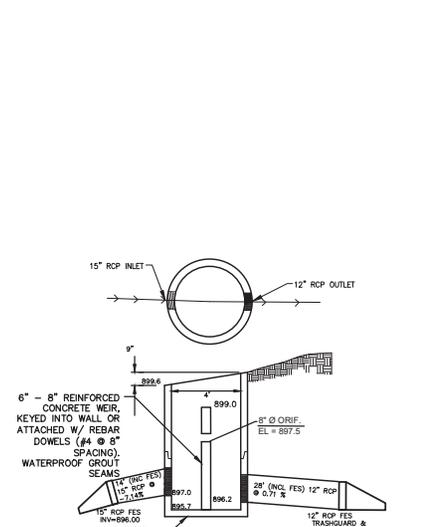
**CONTAINER SHRUB PLANTING**

SCALE: NOT TO SCALE

STD. PLAN NO. 270.3

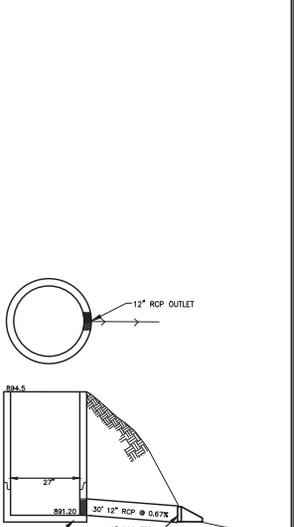
APPROVED: 8/2008

REVISED:



**OUTLET CONTROL STRUCTURE (OCS 1)**

NOTE: STRUCTURE REQUIRES TWO (2) PIECE GRATE.



**OUTLET CONTROL STRUCTURE (OCS 2)**

NENAH R-4342 CASTING

1	9-16-2023	PER 9-8-2023 WATERSHED COMMENTS
NO.	DATE	DESCRIPTION
		REVISIONS

**CAMPION ENGINEERING SERVICES, INC.**

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PO BOX 41486  
PLYMOUTH, MN 55441  
PHONE: (763)486.3799  
EMAIL: MCAMPION@CAMPIONENG.COM

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*Walter P. Campion* 09/16/2023  
Walter P. Campion - Lic. # 19901 Date:

**RIDGEWOOD PONDS**

**RON CLARK CONSTRUCTION**

**MINNETONKA, MN**

**DETAILS**

**SHEET NO. 10 OF 10 SHEETS**

PROJECT NO: 22-023

DATE: 09/01/2023