

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2020-061

Considered at Board of Managers Meeting: March 2, 2022

Received complete: October 7, 2020 (RPBCWD extended the application-review period by 60 days on November 25, 2020 and the RPBCWD approved the applicant's requests for second, third and fourth extensions, extending the review period until April 17, 2022)

Applicant: Post Development, LLC., Barry Post

Consultant: Civil Methods, Inc., Kent Brander, PE

Project: Purgatory Creek 2nd Addition: The project is a 3.07 acre, 7-lot single family residential development that will disturb 2.95 acres. Stormwater management will be provided by two rain gardens and two detention/rock infiltration trenches to provide volume control, water quality, and rate control.

Location: 12420 Sunnybrook Road, Eden Prairie, MN

Reviewer: Scott Sobiech P.E., Barr Engineering

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 March 2, 2022 meeting of the managers:

Resolved that the application for Permit 2020-061 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 affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2021-060 to the applicant on behalf of RPBCWD.

Upon roll call vote, the resolutions were adopted, _____.

Applicable Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments
C	Erosion Control Plan	See Comment.	See rule-specific permit conditions C1 -C2 to name of individual responsible for on-site erosion control and ensuring overland sheet flow from BMP 1
J	Stormwater Management	Rate	Yes
		Volume	See Comment
			See rule-specific permit conditions J1 related to consistent representation of the bottom of BMP#2 and stipulation 4 related to verifying the infiltration capacity of the soils and that the volume control capacity

Rule	Issue	Conforms to RBPCWD Rules?	Comments
			is calculated using the measured infiltration rate as well as adequate groundwater separation
	Water Quality	Yes	
	Low Floor Elev.	See Comment	See rule-specific permit condition J2 related to confirm the BMP placement maintains adequate freeboard to existing, adjacent habitable structures
	Maintenance	See Comment	See rule-specific permit condition J3 related to recordation of stormwater facility maintenance declaration.
	Chloride Management	Yes	
	Wetland Protection	Yes	
L	Permit Fee Deposit	Yes	\$3,000 received September 24, 2020
M	Financial Assurances	See Comment	The financial assurance is calculated at \$60,462

Background

The proposed construction includes subdividing an existing single-family home property into a 7 lot subdivision along with associated roadway and municipal infrastructure. Stormwater management will be provided by two rain gardens and two detention/rock infiltration trenches to provide volume control, water quality, and rate control. Relevant project site information is provided below.

	Area
Total Site Area (acres)	3.07
Existing Site Impervious (acres)	0.03
Post Construction Site Impervious (acres)	1.04
New (Increase) in Site Impervious Area (acres)	1.01
Disturbed impervious surface (acres)	0.03
Total Disturbed Area (acres)	2.95

The following materials were reviewed in support of the permit request:

1. Permit Application received September 22, 2020. Application was received complete on October 7, 2020 (RPBCWD extended the application-review period by 60 days on November 25, 2020 and the RPBCWD approved the applicant's requests for second, third and fourth extensions, extending the review period to April 17, 2022)
2. Stormwater Management narrative dated September 15, 2020 by James R Hill
3. Stormwater Management narrative dated October 15, 2021 by Civil Methods, Inc. (revised January 26, 2022, February 18, 2022)

4. Project plan set (12 sheets) by James R Hill dated September 22, 2020
5. Project plan set (6 sheets) by Civil Methods, Inc. dated October 15, 2021 (revised 7 sheets January 26, 2022, February 18, 2022)
6. Purgatory Creek Estates- 2nd Addition - Drainage Narrative by James R Hill dated July 15, 2015 but received on January 5, 2021
7. Purgatory Creek Estates- 2nd Addition - Plan sheets 1–9 by James R Hill dated September 2, 2013 but received on January 5, 2021
8. Geotechnical Evaluation Report dated June 12, 2015, prepared by ITCO ALLIED Engineering Co
9. Subsurface Soil Investigation by Interstate Geotechnical Engineering dated May 3, 2021
10. 60-day permit review timeline extension request via email dated November 25, 2020
11. 90-day permit review timeline extension request via email dated January 21, 2021
12. 180-day permit review timeline extension request via email dated April 22, 2021
13. Second 180-day permit review timeline extension request via email dated October 3, 2021
14. 12420 Sunnybrook Rd Eden Prairie -Infiltration Test Results received September 24, 2021
15. Report of Geotechnical Exploration by American Engineering Testing, Inc. dated May 14, 2021
16. Electronic HydroCAD models received on September 23, 2020 (revised October 15, 2021, January 26, 2022)
17. Electronic P8 water quality models received on October 7, 2020
18. Response to review comments received January 26, 2022
19. Response to review comments received February 18, 2022
20. Opinion of Probable Costs for stormwater received on January 26, 2022

Rule Specific Permit Conditions

Rule C: Erosion Prevention and Sediment Control

Because the project will involve 2.95 acres of land-disturbing activity, the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1). The erosion and sediment control plan prepared by Civil Methods, Inc. includes installation of silt fence, inlet protection for storm sewer catch basins, a stabilized rock construction entrance, decompaction of areas compacted during construction, six inches of topsoil, and retention of native topsoil onsite. To conform to RPBCWD Rule C requirements, the following revisions are needed:

- C1. The overflow from the northern rain garden (BMP#1) should be modified to ensure any discharge from the facility leave the site via overland sheet flow rather than concentrated flow.
- C2. The Applicant must provide the name and contact information of the individual responsible for erosion prevention and sediment control at the site. RPBCWD must be notified if the responsible person changes during the permit term.

Rule J: Stormwater Management

Because the project will involve 2.95 acres of land-disturbing activity, the project must meet the criteria of RPBCWD’s Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will apply to the entire site because the project is a redevelopment that will disturb more than 50% of the existing impervious surface on the parcel and will increase imperviousness of the parcel by more than 50 percent (Rule J, Subsection 2.3).

The applicant proposes construction of two rain gardens and two detention/rock infiltration trenches to provide volume control, water quality, and rate control. Pretreatment of runoff will be provided by sump catch basins.

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
Northeast	0.2	0.1	0.7	0.2	2.4	2.4	0.2	0.2
South	0.9	0.5	3.5	3.3	11.9	11.0	1.2	1.1

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 the new and disturbed impervious surface of the parcel. An abstraction volume of 4,164 cubic feet is required from the 1.04 acres of impervious area for volume retention. The Applicant proposes two rain gardens and two detention/rock infiltration trenches to provide volume abstraction. Pretreatment is provided a sump catch basins (Rule J, Subsection 3.1.b.1).

Ten soil borings were collected on the site and show surface soils at the proposed stormwater facilities are sandy loam, sand, and clay loam. Three infiltration tests conducted at the proposed bottom of the detention/infiltration trenches measured an infiltration rate of 0.4 inches per hour (in/hr). The subsurface investigation information summarized below shows that additional infomratin is need to

confirm groundwater is at least 3 feet below the bottom of the proposed stormwater management facilities (Rule J, Subsection 3.1.b.2.a).

Groundwater Separation Analysis

Proposed BMP	Nearest Subsurface Investigation	Boring is within footprint?	Groundwater Elevation (feet)	BMP Bottom Elevation (feet)	Separation (feet)
Rain Garden (BMP #1)	8	No	No groundwater observed at boring bottom (approx. el 833.5)	842	Needs confirmation
Detention/Rock Infiltration Trench (BMP #2)	1	Yes	827.5	830.5	3.0
Detention/Rock Infiltration Trench (BMP #3)	1a	Yes	No groundwater observed at boring bottom (approx. el 823.5)	823.0	Needs confirmation
Rain Garden (BMP #4)	4	Yes	814	825.7	11.7

The engineer concurs with the applicant’s design infiltration rates of 0.4 inches per hour for the site soil based on the measured infiltration rate. Based on the design infiltration rate, the engineer concurs that the stormwater management facilities will draw down within 48 hours (Rule J, subsection 3.1b.3).

The table below summarizes the volume abstraction for the site. The proposed project is in conformance with Rule J, Subsection 3.1.b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	4,164	1.1	4,176

While an infiltration rate of 0.4 in/hr was measured at the proposed detention/rock infiltration trenches, no infiltration or hydraulic conductivity testing results were provided at the two proposed rain garden as required by Rule J, Subsection 3.1.b.ii.c. The applicant must submit documentation verifying the infiltration capacity of the soils at the rain gardens (BMP #1 and #4) and that the volume control capacity is calculated using the measured infiltration rate prior to project close-out. Also, additional soil investigation is needed to confirm adequate separation to groundwater below the southern detention/rock infiltration trench (BMP#3) and northern rain garden (BMP#1). If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1b or 3 feet of separation to groundwater is not verified, 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). To conform to the RPBCWD Rule J, Subsection 3.1.b the following revision is needed:

J1. The stormwater narrative indicated the bottom of the northern detention/rock infiltration trench was raised to elevation 830.5 feet in response to comments and to provide 3 feet of separation to the groundwater, which is confirmed by the cross section on sheet C04. However, plan sheet C01 indicates the bottom of the facility remained at elevation 828.8 feet. The applicant must provide an updated grading plan demonstrating 3 feet of separation to groundwater.

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant provide volume abstraction in accordance with 3.1b or 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. Because the stormwater management facilities proposed by the applicant provide abstraction meeting 3.1b and the engineer concurs with the modeling, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.1.c, as long as the condition of approval above is met.

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 existing building as well as the 100-year flood elevation of the proposed subsurface stormwater management system is summarized below. Because the low floor elevations of the existing structures are more than one foot above the proposed 100-year flood elevation of the proposed stormwater management facility, the proposed project is in conformance with Rule J, Subsection 3.6a.

Structure	Applicant Computed 100-Yr Flood Elevation	Low Floor Elevation	Freeboard (ft)
Lot 1	828.4	830.4	2
Lot 2	828.4	830.4	2
Lot 3	834.3	836.3	2
Lot 4	834.3	836.3	2
Lot 6	843.8	845.8	2
Lot 7	843.8	845.8	2

To conform to the RPBCWD Rule J, Subsection 3.6.b related to the requirements for siting of the stormwater management facilities the following revisions are needed:

- J2. Permit applicant must provide information demonstrating the low floor of the existing habitable structures on the adjacent lots to the east will not be brought into noncompliance with the low floor criteria. If separation proves noncompliant with the low floor requirement in subsection 3.6b, design modifications to achieve compliance with RPBCWD requirements will need to be submitted.

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. To conform to the RPBCWD Rule J the following revisions are needed:

- J3. Permit applicant must provide a maintenance and inspection declaration as required by Rule J, Subsection 3.7. The declaration must also include an Exhibit A, a scaled site plan, showing the stormwater management facilities and all pretreatment features. In addition, the exhibit must show a cross section of the proposed stormwater management facilities with elevations listed. A draft declaration must be provided for District approval prior to recordation 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. The RPBCWD chloride-management plan requirement applies to the streets and common areas of the project site, but not the individual single-family homes. Because the streets within the proposed residential development will be dedicated to the city as public right of way and therefore maintained by Eden Prairie and the city has provided its chloride management plan and its designated state-certified chloride applicator is Eden Prairie's Streets Division Manager Larry Doig, the proposed development conforms with Rule J, subsection 3.8.

Wetland Protection

Because runoff from this site is directly tributary to a downstream stormwater pond and is not tributary to any wetland, the proposed project does not trigger analysis under Rule J, subsection 3.10.

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. 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 September 24, 2020. 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.

Rule M: Financial Assurance:

	Unit	Unit Cost	# of Units	Total
Rules C: Silt fence:	LF	\$2.50	1600	\$4,000
Inlet protection	EA	\$100	7	\$700
Rock Entrance	EA	\$250	1	\$250
Restoration	Ac	\$2,500	2.95	\$7,375
Rules J: Stormwater Management Underground infiltration system: 125% of engineer’s opinion of cost (\$34,112)	EA	125% OPC	1	\$42,640
Contingency (10%)		10%		\$5,497
Total Financial Assurance				\$60,462

Applicable General Requirements:

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. 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.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. 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.
6. 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.

7. 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.
8. 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 Rules C and J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

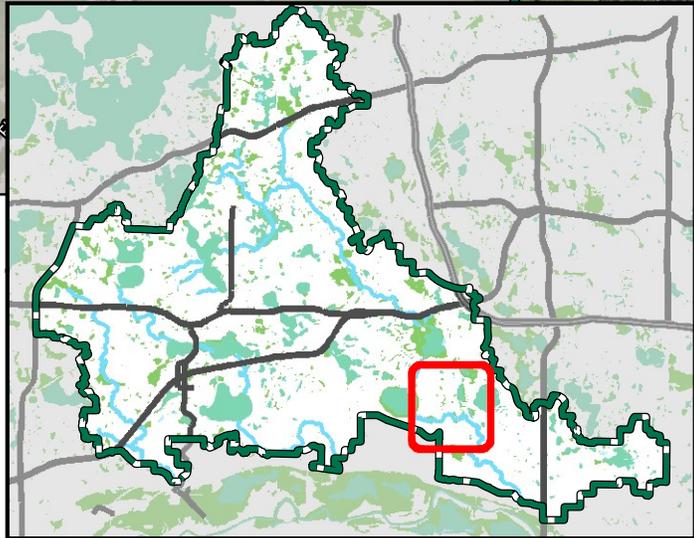
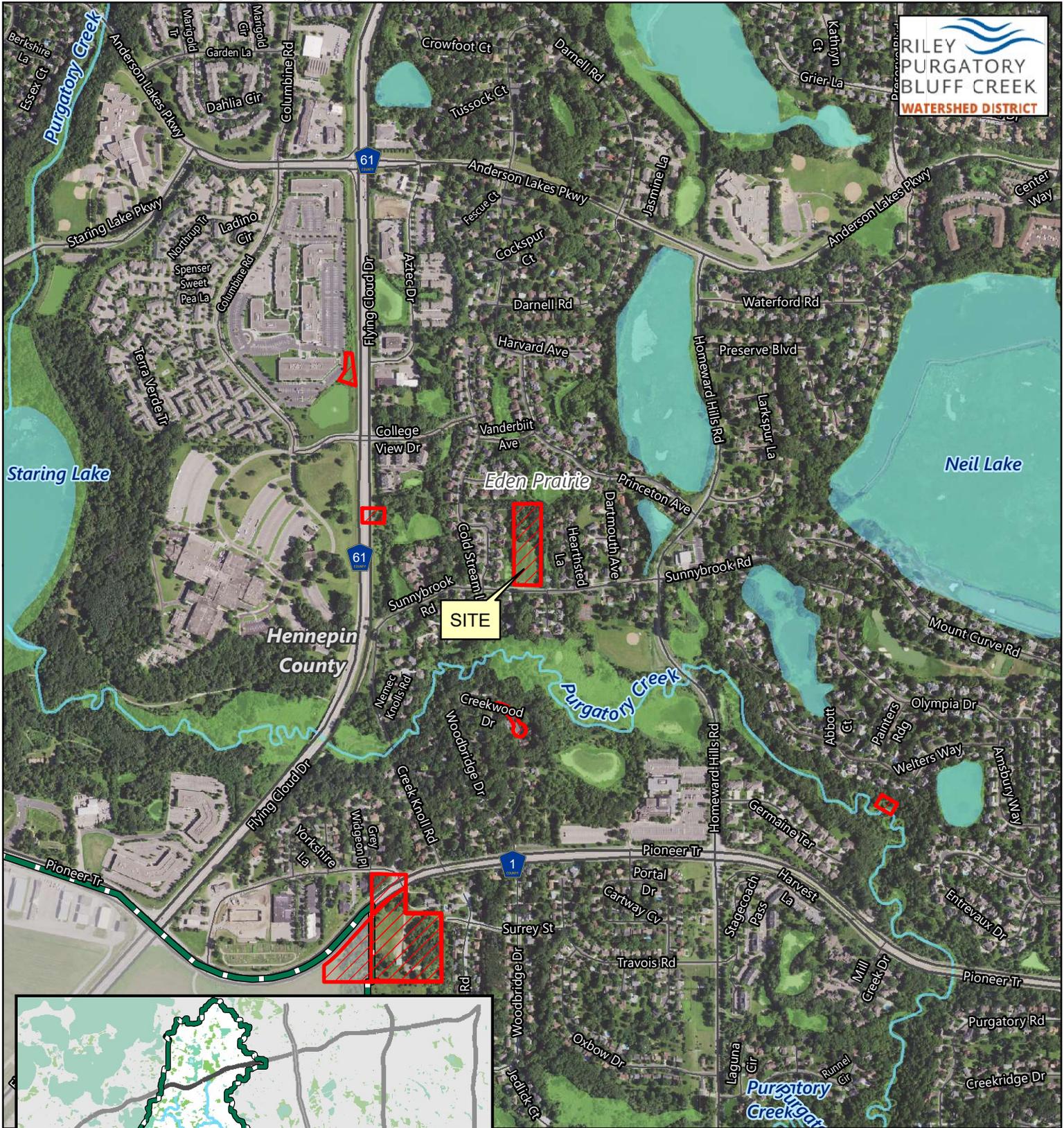
Approval, contingent upon:

1. Financial Assurance in the amount of \$60,462.
2. Permit applicant must provide the name and contact information of the general contractor responsible for erosion and sediment control at the site. RPBCWD must be notified if the responsible party changes during the permit term.
3. Receipt of updated plans showing the following:
 - a. Revisions to the overflow from the northern rain garden (BMP#1) ensure any discharge from BMP#1 leaving the site via overland sheet flow rather than concentrated flow.
 - b. Revisions to the grading plan to show the bottom of the northern detention/rock infiltration trench raised to elevation 830.5 feet for consistency with the response to comments the cross section on sheet C04.
4. Receipt of information demonstrating the low floor of the existing habitable structures on the adjacent lots to the east will not be brought into noncompliance with the low floor criteria.
5. Receipt in recordation a maintenance declaration for the stormwater management facilities. A draft must be approved by the District prior to recordation.
6. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued.

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, the 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;
 - d. other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
3. Providing the following additional close-out materials:
 - a. Documentation that constructed stormwater management 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. Per Rule J, Subsection 3.1.b measured infiltration capacity of the soils at the bottom of the rain gardens 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 at the rain gardens (BMP #1 and #4) prior to project close-out. Also, additional soil investigation is needed to confirm adequate separation to groundwater below the southern detention/rock infiltration trench (BMP#3) and northern rain garden (BMP#1). If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.1b or 3 feet of separation to groundwater is not verified, 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).



Permit Location Map

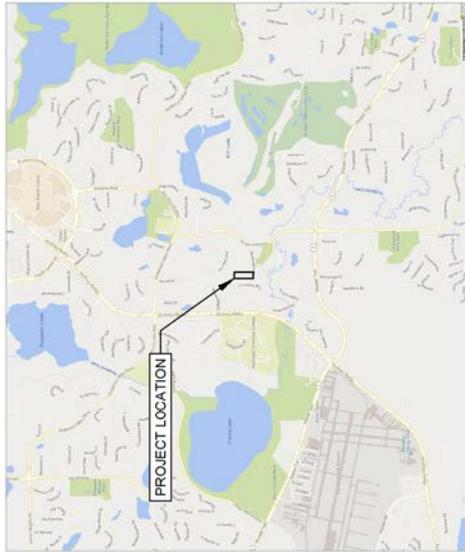
PURGATORY CREEK 2ND ADDITON
Permit 2020-061
Riley Purgatory Bluff Creek
Watershed District



Feet



PRELIMINARY PLANS FOR
PURGATORY CREEK ESTATES 2ND ADDITION
 EDEN PRAIRIE, MN
 FEBRUARY 2022



VICINITY MAP
CONTACTS

OWNER:
 Post Development, LLC
 12420 Sunnybrook Road
 Eden Prairie, MN 55344
 Attn: Barry Post
 Ph: (612) 865-1687
 postdevelopment12420@gmail.com

SURVEY:
 Original Survey Completed By:
 James R. Hill, Inc.
 2999 CR 42 W Site 100
 Burnsville, MN 55306-5904
 Ph: (952) 890-6044
 jdavis@jhinc.com

CIVIL:
 Civil Methods, Inc.
 PO Box 28038
 St. Paul, MN 55128
 Attn: Kent Brander, PE
 Ph: 763.210.5713
 kent.brander@civilmethods.com

CITY / TOWNSHIP:
 City of Eden Prairie
 8080 Mitchell Road
 Eden Prairie, MN 55344
 Attn: Patrick Sejkora, PE
 Ph: (952) 948-8360
 psejkora@edenprairie.org

WATERSHED DISTRICT:
 Riley-Purgatory-Bluff Creek WD
 18681 Lake Drive East
 Chamhassen, MN 55317
 Attn: Terry Jeffery, Administrator
 Ph: (952) 607-6512
 tjeffery@rpbawd.org

WATERSHED ENGINEERING CONSULTANT:
 Barr Engineering Co.
 4300 MarketPointe Drive
 Minneapolis, MN 55435
 Attn: Scott Sobrecht, CFM, PE
 Ph: (952) 632-2755
 ssobrecht@barr.com

PROJECT TITLE

INDEX

SHEET INDEX

T01	TITLE SHEET
C01	GRADING & DRAINAGE
C02	EROSION CONTROL
C03	SWPPP
C04-C06	DETAILS

NOTES

THE EXISTING UTILITY INFORMATION SHOWN IN THIS PLAN HAS BEEN SURVEYED BY OTHERS; THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY 811 OR GOPHER STATE ONE CALL (1.800.252.1166).

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL C. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 - ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

PLAN REFERENCES:

- MINNESOTA DEPT. OF TRANSPORTATION - STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION.
- CITY ENGINEERS ASSOCIATION OF MINNESOTA STANDARD SPECIFICATIONS, LATEST EDITION.
- UNREINFORCED CONCRETE PER ACI 330R-08 AND ACI 330.1-03.



CIVIL METHODS, INC.
 P.O. Box 28038
 St. Paul, MN 55128
 612.763.210.5713 | www.civilmethods.com

PRELIMINARY CONSTRUCTION
 DATE REVISION
 01-18-2022
 01-18-2022
 01-18-2022

OWNER:
 POST DEVELOPMENT, LLC
 12420 Sunnybrook Road
 Eden Prairie, MN 55347

TITLE:
 PURGATORY CREEK ESTATES 2ND ADDITION
 EDEN PRAIRIE, MN

SHEET NO:
 T01

DATE:
 FEBRUARY 2022

BENCHMARK
SEE SURVEY DOCUMENTATION



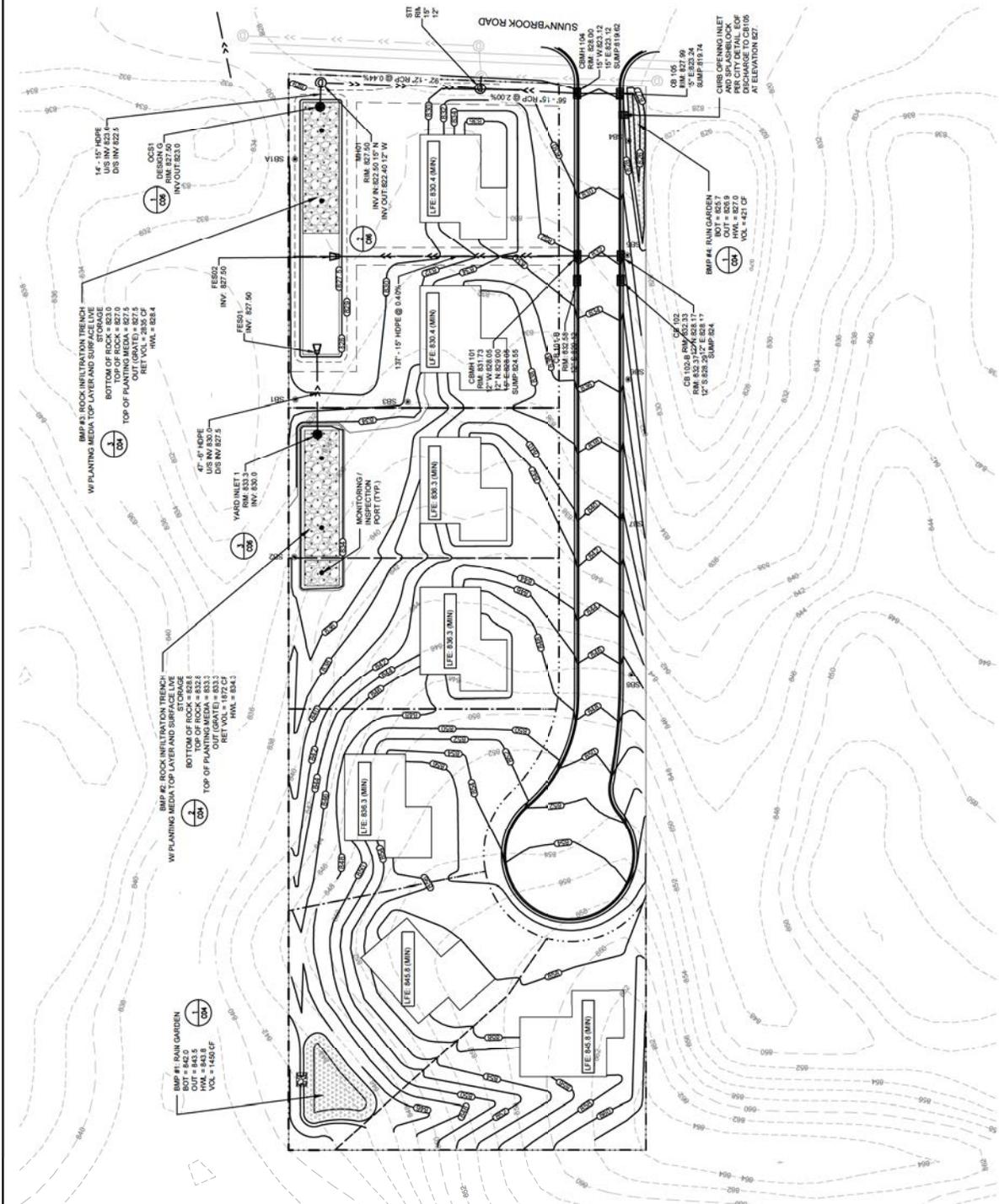
- LEGEND:**
- PROPERTY LINE
 - SETBACK
 - EASEMENT
 - PROP. CONTOUR
 - EAS. CONTOUR
 - PROP. FLOW DIRECTION
 - INFILTRATION BASIN REPAIR/REINFORCE
 - ROCK INFILTRATION TRENCH 18"
 - PLANTING MEDIA TOP LAYER

GENERAL NOTES:

1. The subsurface utility location information in this plan is utility quality level "D," this utility quality level was determined according to the guidelines of CIASCE 38-02, "IP" Standard does not guarantee the accuracy of utility locations or that all existing utilities are shown. Preliminary flat to include proposed parcel nomenclature and easements.
2. The Preservation: It is anticipated that all trees will be removed within the grading limits.
3. Site survey with existing utilities provided by others. Contractor is responsible for identifying location of all utilities (which may not be shown), including contacting Copier State One Call and ensuring utilities are located prior to digging.
4. Construction shall comply with all applicable governing codes.
5. Pump maintenance in ROW shall follow City of Eden Prairie Detail S-7 (60" structure, 3.5' ramp).
6. Contractor is solely responsible for jobsite conditions, including safety of all persons and property throughout the duration of the project (not limited to working hours).
7. Final grade shall be 0.5' below top of foundation elevation around building, all drainage damaged items or property not identified for removal shall be repaired or replaced at Contractor's expense; no extra compensation will be allowed for repair or replacement not indicated on plans or agreed upon with prior written authorization from the Owner.
8. Post elevations shown at flow lines, unless otherwise noted.

INFILTRATION BASIN AND ROCK TRENCH NOTES:

1. Excavate basin to subgrade with light-weight equipment or from outside the basin footprint to minimize compaction. If compacted, scarify subgrade 12".
2. Excavate basin to subgrade with light-weight equipment or from outside the basin footprint to minimize compaction. If compacted, scarify subgrade 12".
3. Excavate to final subgrade and install engineered soil media after upstream drainage area has been stabilized.
4. Prevent sheet flow from disturbed unvegetated areas from entering the graded basin directly; install sediment control log around top of basin (to remain in place until upslope dries); install sediment control log around top of basin (to remain in place until upslope dries).
5. Plant native seed mix and blanket / hydromulch bottom and sideslopes (to overflow) of rain garden.
6. Topsoil from grading areas shall be stripped, salvaged and stockpiled, about below final grade and replaced on top of basin to a depth of 6" (min.)
7. Unless noted otherwise, all proposed contours indicate finished grades.
8. All grading and erosion control shall adhere to City requirements.
9. Minimize compaction in trench areas below outlet elevation (OE), excavate with scarify bottom, place 6" granular material and proceed with rock trench installation per detail.
10. Rock trench may be covered with cedar, washed rock, or alternatively sandy topsoil with appropriate grass seed or vegetation (may require additional water to establish roots).
11. Rock infiltration trench shall be protected with sediment control log (or similar) from sediment-baden water until remaining property is stabilized with vegetation.



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POST DEVELOPMENT, LLC
12420 Sunnybrook Road
Eden Prairie, MN 55347

GRADING & DRAINAGE
PURGATORY CREEK ESTATES 2ND ADDITION
EDEN PRAIRIE, MN

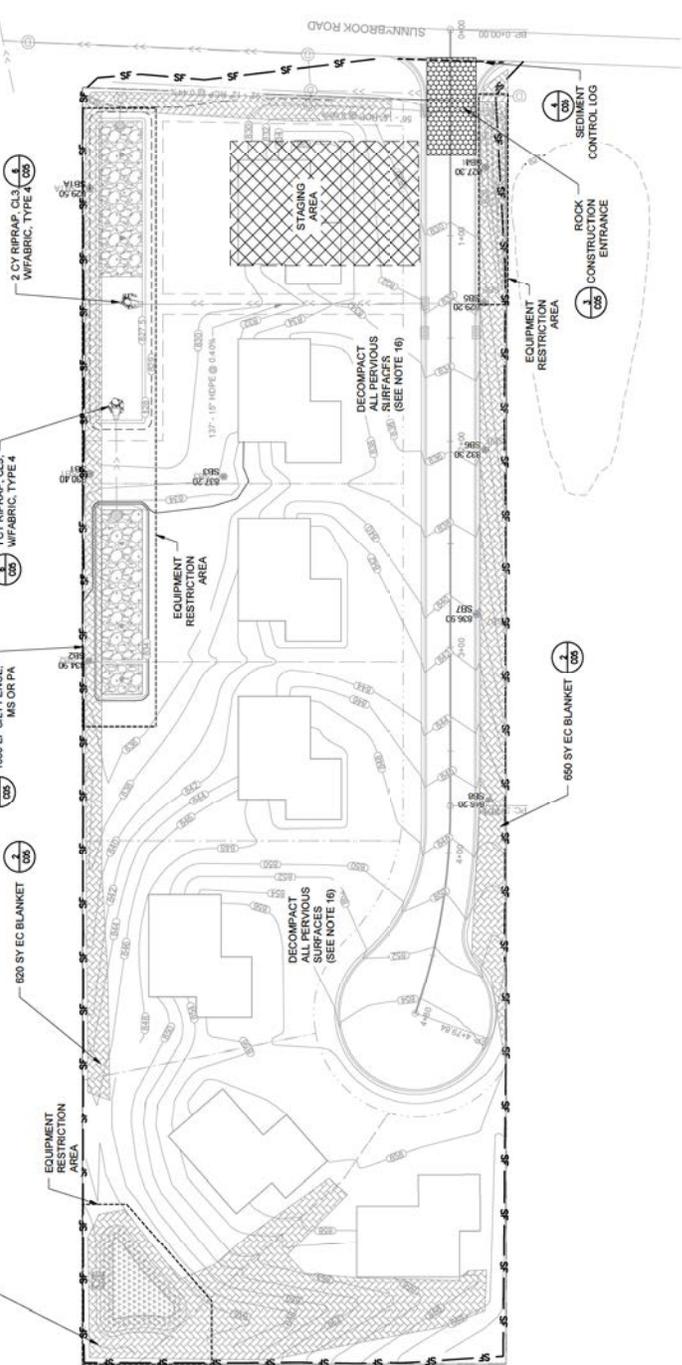
DATE REVISION
01-18-2022
01-18-2022
01-18-2022

OWNER: POST DEVELOPMENT, LLC
DATE REVISION: 01-18-2022
REVISION: 01-18-2022
PROJECT: GRADING & DRAINAGE
SCALE: AS SHOWN
DATE: 01-18-2022
PROJECT NO.: 44579

SHEET NO.: C01



- LEGEND:**
- PROPOSED FLOW DIRECTION
 - ▨ INFILTRATION BASIN REINFORCING
 - ▨ ROCK RIPRAP - RANDOM COURSED
 - ▨ STABILIZED CONSTRUCTION ENTRANCE
 - ▨ EROSION CONTROL BLANKET, CAT. 3
 - ▨ CONSTRUCTION PLACING AREA
 - ▨ CONSTRUCTION RECONSTRUCTION AREA
 - SILT FENCE
 - SEDIMENT CONTROL LOG



- SEDIMENT CONTROL & TURF RESTORATION NOTES:**
- In addition to this sheet, Contractor must be familiar with the SWPPP plan sheet. Contractor is responsible for ensuring MPCA NPDES construction Stormwater Permit is obtained as required prior to construction.
 - Natural topography and soil conditions must be protected, including retention onsite of native topsoil to construction.
 - Topsoil, vegetation, and erosion control items shall be installed and maintained per MnDOT 2574-2.275.
 - All topsoil used on the project shall conform to the Riley-Purgatory-Bluff Creek Watershed District (RPB/CMD) definition of topsoil which requires a minimum of 5% organic matter. Topsoil shall be installed to allow for high-flow bypass or overflow to prevent failure during significant rainfall. SM fence shall be of type indicated on the plan (MnDOT 3866).
 - Install silt fence or sediment control log around any soil stockpiles that will be present for more than 7 days. Silt fence shall be installed to prevent sediment from leaving the property, including vehicle tracking. Contractor is responsible for keeping sediment from leaving the property.
 - Inlet protection shall be in place on inlets throughout construction; type shall be suitable for each phase of construction.
 - Control logs around rim of stormwater management basins, immediately after construction and leave in place until construction has ended and site is stabilized with vegetation.
 - Sediment control logs shall be minimum 8" diameter wood or straw (MnDOT 3897).
 - The permittee must inspect for erosion prevention and sediment control facilities and soil stabilization measures to ensure integrity and effectiveness. The permittee must repair, replace or supplement all measures to ensure proper function. If a sediment control facility is damaged, it shall be repaired immediately unless adverse conditions preclude access to the relevant area of the site. In which case the repair must be completed as soon as conditions allow. When active land-disturbing activities are not under way, the permittee must perform these responsibilities at least weekly until vegetation is established.
 - The permittee will maintain a log of activities under this section for inspection by the District on request.
 - Erosion during construction shall be repaired by the Contractor within 24 hours of discovery.
 - Accumulated sediment shall be removed from sediment control devices when 3 of device height has been reached.
 - Once completed during construction and remaining pervious upon completion of construction must be decompacted to achieve:
 - a soil compaction testing pressure of less than 1,400 kilopascals or 200 pounds per square inch in the upper 12 inches of soil or
 - a bulk density of less than 1.4 grams per cubic centimeter or 87 pounds per cubic foot in the upper 12 inches of soil.
 - In addition, utilities, tree roots and other existing vegetation must be protected until final revegetation or other stabilization of the site.
 - After rough grading is completed, and topsoil spread, areas shall be seeded and blanketed (or sodded) within 7 days. Areas not being actively worked must be covered with temporary seed within 14 days.
 - Per MnDOT 3891 shall be of class and quantity as indicated, and shall include geotextile fabric (3723).
 - Seed in mowed areas shall be MnDOT Mix 25-151 (8716) residential turf or approved equal. All other areas to be seeded with Mix 35-241 (native prairie).
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 - All other seeded areas, including infiltration basins shall be seeded (or planted) and covered with hydraulic mulch matrix (3864.B2), blanket (Cat. 0), or straw mulch, Type 1 (no straw in basins).
 - At least six inches of topsoil or organic matter must be spread and incorporated into the underlying soil during final site treatment whenever topsoil has been removed.
 - Perimeter sediment controls shall remain in place until vegetation is growing / established in the edition, at rates indicated in the manual.
 - Perimeter sediment controls shall remain in place until vegetation is growing / established in all disturbed areas.
 - All temporary erosion and sediment control BMPs must be removed upon final stabilization.



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PRELIMINARY PRELIMINARY PRELIMINARY
 NOT FOR CONSTRUCTION
 DATE REVISION
 01-18-2022
 01-18-2022
 01-18-2022

OWNER:
POST DEVELOPMENT, LLC
 12420 Sunnybrook Road
 Eden Prairie, MN 55347

TITLE:
EROSION & SEDIMENT CONTROL
 PURGATORY CREEK ESTATES 2ND ADDITION
 EDEN PRAIRIE, MN

SHEET NO.:
C02

