

Permit Application Review

Permit No. 2022-77
Received complete: June 15, 2022

Applicant: Eric Hamilton, Edina Public Schools
Consultant: Anthony Adderley, Bolton & Menk, Inc.
Project: Valley View Middle School Parking Lot Reconstruction
Location: 6750 Valley View Road: Edina
Rule(s): 4, 5
Reviewer(s): BCO

General Background & Comments

The applicant is proposing to reconstruct the south parking lot at Valley View Middle School. The project will disturb and reconstruct 3.37 acres of existing impervious area and will create 0.11 acres of new impervious area.

The 73.2-acre site (Campus) includes adjoining parcels under common ownership with three schools on the property, Valley View Middle School (VVMS), Edina High School (EHS) and Creek Valley Elementary School (CVES). Six previous projects have been permitted on the Campus since Redevelopment Rule 4.2.3 became applicable - NMCWD Permits 2016-05, 2016-21, 2017-120, 2020-18, 2020-45, and 2021-144. The 2016 project completed at Edina High School, 6754 Valley View Road included the construction of a stormwater management facility for activities on the VVMS and EHS sites. Stormwater management for projects at CVES have been provided on the school site.

Updated site information based on the proposed 2022 Valley View Middle School Parking Lot Reconstruction project is summarized below in conjunction with previous permit applications for the Campus. The site information includes the following:

Permits	Project	New Impervious Area	Disturbed and reconstructed Impervious Area (acres)
#2016-05	EHS Building Addition and Parking Lot Improvements	6.58	10.0
#2016-21	Tennis Courts CVE	1.573	0.0
#2017-120	Building Addition CVE	0.027	0.029
#2020-18	Renovations at VVMS	0.0	0.134

#2020-45	Athletic Field Improvements VVMS	0.12	0.24
#2021-144	Bus Loop CVES	0.731	0.247
Summary of Previously Approved Projects		9.028	10.673
#2022-77	Parking Lot Improvements at VVMS	0.11	3.374
Total including Current Permit (#2022-77)		9.138	14.047

As previously stated, stormwater management for the EHS and VVMS projects was proposed and constructed as part of the 2016 EHS Renovations project that included an underground infiltration system at the east side of the site beneath the constructed athletic fields. The constructed underground stormwater management facility (UGSWMF) provides rate control, volume retention and water quality management for activities on the two school (EHS and VVMS) sites.

The Nine Mile Creek Watershed District's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on a site or will increase the imperviousness of the entire site by more than 50%, stormwater management criteria of Rule 4.3 will apply to the entire project site. Otherwise, the stormwater requirements will apply only to the disturbed and reconstructed and net additional impervious surface on the project site. For the Campus (including Permit 2022-77), an increase in impervious area of 29.19% (9.138 acres) is proposed and 44.88% (14.047 acres) of the exiting on-site impervious area is disturbed and reconstructed. Stormwater management for EHS and VVMS is therefore required for the aggregate increase in impervious area of 6.81 acres and 13.748 acres of disturbed and reconstructed impervious surface on the two school sites.

The district's requirements for both stormwater management and erosion and sediment control apply to the project because more than 5,000 square feet or more surface area will be disturbed, Rules 4.2.1a and b and 5.2.1a and b.

The project does not propose to fill or impact the 100-year floodplain of the creek, 853 M.S.L. - Atlas 14 management elevation.

A wetland boundary determination and MnRAM Assessment for the wetland areas on the school property was completed for the Three Rivers Regional Trail project. This information was provided to the School District by Three Rivers Park District. The district approved the boundary determination, July 2014, and accepted the MnRAM Assessment in August 2014. The onsite wetlands were determined to be high value wetlands requiring a minimum buffer of 30 feet and an average buffer of 60 feet, Rule 3.4.1a. In conjunction with the 2016 EHS Renovations project, the district approved the wetland boundary determination and accepted the high value wetland determination for the wetland on the School District property. Wetland buffer requirements were approved and met as part of the 2016 EHS Renovation project, and the wetland buffer was constructed thereafter. No wetland fill or impacts within the onsite wetlands are proposed for the VVMS Parking Lot Reconstruction Project, Permit 2022-77.

Silt fence and inlet protection will be required for erosion control.

Exhibits

1. Signed Permit Application dated May 24, 2022.
2. Stormwater Management Report and project narrative dated May 23, 2022, revised June 15, 2022, prepared by Bolton & Menk, Inc.

The submittal is complete with the revised submittal.

4.0 Stormwater Management

The underground stormwater management facility (UGSWMF) constructed in 2016, following issuance of Permit 2016-05, includes 20 rows of 60-inch perforated CMP with each row being 442 feet in length. The underground infiltration system was installed beneath the two artificial turf athletic fields on the east side of EHS. Stormwater modeling for existing pre-2016 project conditions was provided. Stormwater modeling for proposed conditions was updated and provided to reflect the post-2020 projects' conditions.

The constructed UGSWMF was designed to meet stormwater management criteria for the 2016 project and as constructed has sufficient capacity for the four projects at the site under NMCWD Permits 2016-05, 2020-18, 2020-45 and 2022-77. The system will provide the rate control, volume retention and water quality management required to meet District Rule 4.3.1.

In order to meet the rate control criteria listed in Rule 4.3.1b, 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.

The existing and proposed 2-,10- and 100-year frequency discharges from the site are:

Modeled Discharge Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop
To NMC Total	48.9	48.9	94.3	94.3	192.7	192.7

Proposed discharge rates for the NMC Total modeled discharge location are based on 6.81 acres of net additional impervious surface and 13.748 acres of disturbed and reconstructed impervious surface as a result of the four projects identified above. Rule 4.3.1b is met.

The table below summarizes the volume retention for the site. The proposed project is in conformance with Rule 4.3.1a.

Site Information	Required Volume Retention Depth (inches)	Disturbed, Replaced and Net Additional Impervious Area (acres)	Required Abstraction Volume (cubic-feet)	Provided Abstraction Volume (cubic- feet)
Permit 2016-05	1.0	16.57	60,172	81,382
Permit 2020-18	1.1	0.134	535	-

Permit 2020-45	1.1	0.36	1,438	-
Current Permit 2022-77	1.1	3.484	13,912	
Site Aggregate Total	-	17.06	76,057	81,382

Based on volume retention depth criteria outlined in the Nine Mile Creek Watershed District Rules in 2016 and 2020, the site aggregate volume required from the disturbed and replaced and net additional impervious surface as a result of the 2016, the two 2020 projects and Permit 2022-77 is 76,057 cubic feet. The constructed UGSWMF provides an available volume of 81,382 cubic feet (76,057 cubic feet required) to be drawn down within 48 hours over an area of 79,118 square feet for volume retention. We reviewed the submitted UGSWMF as-built dated April 28, 2016, and concur with the revised HydroCAD model identifying a system outlet invert, 854 M.S.L. and footprint, 79,118 square feet. Rule 4.3.1a (ii) is met.

In accordance with Rule 4.3.1a (i), where infiltration facilities, practices or systems are proposed, pretreatment of runoff must be provided. To comply with Rule 4.3.1a (i), 450 lineal feet of 84-inch CMP was constructed as a “clean-out” chamber (sump) for runoff prior to discharging to the infiltration area. This system was constructed as part of the 2016 EHS Renovation project. Rule 4.3.1a (i) is met.

The total disturbed area on the EHS and VVMS sites, the disturbed and reconstructed and net additional impervious surface as a result of the 2016 project, the two 2020 projects and Permit 2022-77 is 30.34 acres including 13.748 acres of disturbed and reconstructed impervious area and 6.81 acres of net additional impervious surface. The district’s water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. A MIDS Calculator has been submitted with the submittal for Permit 2022-77 showing that the constructed UGSWMF provides 91% (6,901 lbs.) annual removal for total suspended solids (TSS) and 91% (38 lbs.) annual removal efficiency of total phosphorus (TP) for water quality treatment. Water quality requirements identified in Rule 4.3.1c are met.

Rule 4.3.3.a states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high water elevation or one foot above the natural overflow of a waterbody. No new buildings will be constructed as part of the VVMS Parking Lot Reconstruction project. In addition, no new stormwater management facilities will be constructed; therefore, no adjacent habitable building will be brought into noncompliance with standards in Rule 4.3.3.

In accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site. This requirement was a condition of and has been complied with previous district permit approvals.

Rule 4.5.4d (i) requires no evidence of groundwater or redoximorphic soil conditions within three (3) feet of the bottom of a stormwater management facility. The previously submitted soil borings dated November 15, 2015, indicate that groundwater was encountered at a depth of 15 feet in boring ST 51-15, elevation 847.4 M.S.L. This boring (of the approximate 20 borings taken in the area) appears to have the highest elevation that groundwater was encountered.

The bottom of the constructed UGSWMF is 852 M.S.L., providing 4.6 feet of separation. Rule 4.5.4d (i) is met.

5.0 Erosion and Sediment Control

Silt fence and inlet protection is required for erosion control.

The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District's Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e.

11.0 Fees

Because the property owner is a public entity, no fees are charged.

Rules 4.0 and 5.0 \$0

12.0 Financial Assurances

Because the property owner is a public entity, the District's financial assurance requirements do not apply.

Sureties for the project are: \$0

Findings

The proposed project includes the information necessary, plan sheets and erosion control plan for review. Rule 4 is met.

Rule 5 will be met with the submittal of an erosion and sediment control plan.

Recommendation

Approval, contingent upon:

General Provisions

Submittal of an erosion and sediment control plan, including: perimeter protection, prevention of sediment tracking to street, downgradient inlet protection, temporary stabilization method (if any needed, it must be compliant with rule 5.3.1b, and a name and contact information from the contractor responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

1. REFER TO SHEET 1.31, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.

2. REFER TO SWPPP NARRATIVE FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.

3. LANDSCAPE ARCHITECT MUST INSPECT AND APPROVE FINISH GRADING BEFORE CONTRACTOR PROCEEDS WITH SODDING.

4. ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SODDED.

5. WHERE NEW SOD MEETS EXISTING TURF, EXISTING TURF EDGE SHALL BE CUT TO ALLOW FOR A CONSISTENT, UNIFORM STRAIGHT EDGE. JAGGED OR UNEVEN EDGES WILL NOT BE ACCEPTABLE. REMOVE TOPSOIL AT JOINT BETWEEN EXISTING AND NEW AS REQUIRED TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING.

6. **FAILURE OF TURF DEVELOPMENT:** IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, THE CONTRACTOR SHALL RE-SOD ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER.

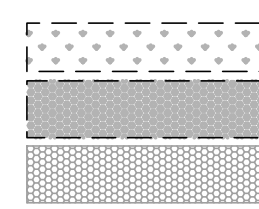
7. **BEGIN TURF ESTABLISHMENT IMMEDIATELY AFTER SODDING, REFER TO SPECIFICATION FOR PROCEDURE.**

8. ALL TREES TO BE BALLED AND BURLAPPED.

9. ALL TREES AND PERENNIALS SHALL RECEIVE 4" DEPTH OF CLEAN SHREDDED HARDWOOD MULCH, UNLESS OTHERWISE SPECIFIED.

10. ALL PLANT MATERIALS SHALL BE NO. 1 QUALITY, NURSERY GROWN AND SPECIMENS MUST BE MATCHED. ALL OVERSTORY TREES ADJACENT TO DRIVE AND IN PARKING LOT SHALL BEGIN BRANCHING NO LOWER THAN 6'.


REFERENCE KEY TO SITE DETAILS
DETAIL I.D NUMBER (TOP)
DETAIL SHEET NUMBER (BOTTOM)



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APPROXIMATE SOD LIMITS

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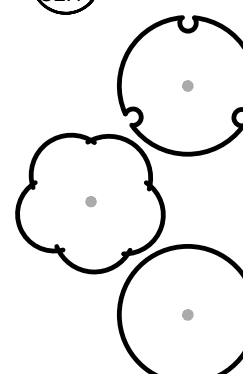
PROPOSED SHRUB / MULCH

PROPOSED LANDSCAPE ROCK BED

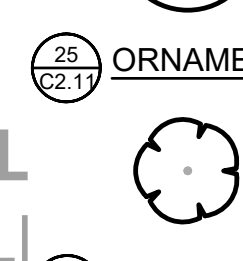
PROPOSED LIGHT POLE - REFER TO E

PROPERTY LINE

25
G2.11 TREES



<u>CODE</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>SIZE</u>	<u>CONTAINER</u>	<u>QTY</u>
CO	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2.5" CAL.	B&B	3
QM	QUERCUS MACROCARPA	BURR OAK	2.5" CAL.	B&B	2
TR	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	2.5" CAL.	B&B	2



<u>CODE</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>SIZE</u>	<u>SPREAD</u>	<u>QTY</u>
RG	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM'	GOLDSTURM CONEFLOWER	#1 CONT.		45
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1 CONT.		39

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed

LANDSCAPE ARCHITECT
of the State of **MINNESOTA**


Lawrence J. Petri

LAURA J. DETZLER
Alumnum: 52752 Date: 01/12/2022

Registration Number 93793 Date 01/13/2022

[illegible]

Comm: **212129**
Date: **01-13-2022**
Drawn: **LJD**
Check: **LJD**


North

LANDSCAPING PLAN

Scale: 1"=30'

L1.11