Applicant: Tim Prigge; Goodmanson Construction
Consultant: Brian Mundstock: Sunde Engineering
Project: Parking Lot Expansion at Bloomington Care Center
Location: 9889 Penn Avenue: Bloomington
Rule(s): 4,5,11,12
Reviewer: BCO

General Background & Comments
The project proposes the construction of a 32 stall, 10,400 square foot parking lot and drive entrance for Bloomington Care Center located at 9889 Penn Avenue in Bloomington. A permit for this project has been approved, #2017-104, however work on the site has not commenced. In accordance with section 1.4 of the District rules, since more than one year has lapsed and the approval of Permit #2017-104 has expired, a new application, fee, plans and stormwater management plan have been submitted for the project.

The project site information is:
- Total Site Area: 4.2 acres (183,059 square feet)
- Existing Site Impervious Area: 74,923 square feet
- New Impervious area proposed: 9,867 square feet
- % increase in Site Impervious Area: 13.1%
- Impervious Area Disturbed and Reconstructed: 544 square feet
- % of Existing Site Impervious Area Disturbed and Reconstructed: 0.7%
- New and Disturbed and Reconstructed Site Impervious Area: 10,411 square feet

Since less than 50% of the existing site impervious area will be disturbed and the proposed increase in site impervious area is less than 50%, in accordance with Rule 4.2.3, Redevelopment, the storm water requirements of Rule 4.3 apply to the new and disturbed and reconstructed impervious area.
The District’s requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more of surface area will be disturbed, Rule 5.2.1a and b.

The plans show that a surface basin (rainwater garden) will be constructed to provide storm water management as required in section 4.3.1 of the District Rules.

Silt fence encircling the site and a rock construction entrance are to be constructed for erosion control.

Exhibits

1. Permit Application dated April 1, 2020.

4.0 Stormwater Management

Storm water management is proposed within a surface basin construction on the site to provide for volume retention, rate control and water quality management.

Rule 4.3.1b requires the peak flow rates must be maintained at existing conditions for the 2, 10 and 100-year storm events for all points where storm water discharge leaves the parcel.

There is one discharge points from the site.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Existing Discharge Point c.f.s.</th>
<th>Proposed Discharge Point c.f.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 year</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>10 year</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>100 year</td>
<td>2.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Section 4.3.1b of the District Rules is met.

For volume retention, a volume of 954 cubic feet is required from the 10,411 square feet of new and disturbed imperviousness created by the project. The geotechnical report indicated a boring was taken in the location of the proposed infiltration basin and the underlying on-site soils are poorly graded sand (SP). An infiltration rate of 0.8 inches/hour was used which is typical for a SP soil type material using the Minnesota Storm Water Manual. (The submittal used an infiltration rate of 0.3 inches/hour based on an assumed underlying soil). An area of 298 square feet is required for volume retention using an infiltration rate of 0.8 inches/hour. The basin provide a volume of 969 cubic feet (954 cubic feet required) and an area of 1,337 square feet (298 square feet required.) Section 4.3.1a of the District Rules is met.
The District’s water quality criteria (Rule 4.3.1c) requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. A P8 model has been provided showing the on-site basin will provide an annual removal efficiency of 97.1% for phosphorus (0.5 lbs.) and 100% annual removal efficiency for total suspended solids (168 lbs.). We are in agreement with the model results. The requirements of section 4.3.1c of the District rules are met.

The boring in the infiltration area ended at a depth of 11.5 feet, approximately elevation 814.5 M.S.L. Groundwater was not encountered to the bottom of the boring. The bottom of the proposed infiltration basin is shown to be 824.1 M.S.L. providing a minimum separation of 9.6 feet between the basin bottom and the elevation of the bottom of the boring. A minimum 3 foot separation is required to be provided between the bottom of an infiltration area and groundwater.

There are no structures in the area of the storm water basin, therefore the requirements of section 4.3.2, low floor elevation, of the District Rules are applicable.

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.

**5.0 Erosion and Sediment Control**

The submitted erosion and sediment control plan includes silt fence and bio-logs at the limits of construction and a gravel construction entrance. The project contact is Tim Prigge, Goodmanson Construction.

**11.0 Fees**

Fees for the project are:

Rules 2.0-6.0 $1,500

**12.0 Financial Assurances**

Financial Assurances for the project are:

Rule 4.0 Infiltration: 298 sq. ft. x $12/sq. ft. = $3,576

Chloride Management $5,000

Rule 5: Silt fence: 650 L.F. x $2.50/L.F. = $1,625

Sediment log: 150 L.F. x $5/L.F. = $750

Site restoration: 0.5 acres x $2500/acre = $1,250 $3,625

Contingency and Administration $3,099

**Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan, for review.
2. Rules 4 and 5 are met.
**Recommendation**

Approval, contingent upon:

1. **General Conditions**

2. Submittal of written documentation from Presbyterian Homes stating that Tim Prigge, Goodmanson Construction, is an authorized representative of the property owner for compliance with the requirements of the Nine Mile Creek Watershed District

3. Financial Assurance in the amount of $15,300, $10,300 for stormwater management, erosion control, and site restoration, and $5,000 for compliance with the chloride management requirements.

4. Submittal of documentation that a drainage easement over hydrologic features has been submitted to the City of Bloomington (Rule 4.5.4i), if such easement is required by the City.

5. A receipt showing recordation of a maintenance declaration for the on-site stormwater management facility. A draft of the declaration must be approved by the District prior to recordation.

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

1. Per Rule 4.5.8, an as-built drawing of the stormwater facility conforming to the design specifications, including a stage volume relationship in tabular form for the infiltration basin.

2. Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site. The release of the $5,000 of the financial assurance required for the chloride-management plan requires that chloride-management plan has been provided and approved by the District's Administrator.

3. For the release of the $10,300 financial assurance required, Rule 12.4.1b requires demonstration and confirmation that the stormwater management facility has been constructed or installed and is functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the stormwater facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SITE DATA:
- PARKING STALLS ADDED = 32 STALLS
- IMPERVIOUS AREA ADDED = 9,867 SF

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL