

Permit Application Review

Permit No. 2018-52  
Received complete: August 23, 2018

Applicant: Michael Goerger: DIGI International  
Consultant: Sam Trebesch; Loucks, Inc.  
Project: Three Building Apartment Complex  
Location: 11001 Bren Road East: Minnetonka  
Rule(s): 3,4,5,11,12  
Reviewer: BCO

### **General Background & Comments**

The project proposes the construction of a 3 building apartment complex to be located at 11001 Bren Road East within the Opus 2 development in Minnetonka. The existing site consists of a single – story approximate 80,500 square foot building with associated surface parking.

For the proposed development, Building A is to be a 134,000 square foot, 4 stories of residential over one story of parking, 83 unit building. Building B is proposed to be 5 stories of residential over one story of parking, 205,000 square feet with 137 units. Building C is 6-stories of residential over 2 levels of parking, 370,000 square feet with 262 units.

There is a wetland area on the site as identified and delineated by the permit applicant's wetland consultant. The City of Minnetonka is the LGU administering the requirements of the Wetland Conservation Act. The City of Minnetonka has issued a Notice of Decision, dated September 12, 2017, approving the wetland boundary. The wetland has been identified as a medium value wetland requiring a minimum 20 foot and 40 foot average buffer in accordance with section 3.4.1b of the District rules. We have reviewed the July 24, 2018 MNRAM provide by the applicant (completed by Kjolhaug & Associates) and we concur with a medium value determination made for the wetland.

The project site information is:

- Total Site Area: 9.34 acres (406,850 square feet)
- Existing Total Site Impervious Area: 5.19 acres (226,076 square feet)
- New Total Site Impervious Area : 248,339 square feet
- Increase in the site impervious area: 22,263 square feet
- 9.8% increase in the Site Impervious Area

- 100% of the existing impervious area is to be disturbed
- Total Area to be Disturbed: 350,658 square feet

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 parcel or will increase the imperviousness of the parcel by more than 50%, storm water management will apply to the entire project parcel. Otherwise, the storm water requirements will apply only to the disturbed areas and additional impervious area on the parcel. Since the entire site impervious area is to be disturbed, storm water management is required for the 350,658 square feet of disturbed area that includes 248,339 square feet of new and reconstructed impervious area.

The District's requirements for both storm water management and 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 surface area disturbed, Rules 4.2.1a and b and 5.2.1a and b.

The soils information submitted indicates the underlying on site soil as lean clay (CL) and clayey sand (SC). These soils are typically not conducive for volume retention through infiltration and typically precludes retention to the standard in District Rule 4.3.1a. The engineer concurs that the site qualifies as a Restricted Site (Rule 4.3.2) under the District's Revised Rules, approved April 10, 2018. Rule 4.3.2 requires retention of at least 0.55 inches of runoff from the regulated impervious surface and rate control and water quality management complying with the requirements of section 4.3.1b and c of the revised rules.

Storm water management is to be provided through reuse of stormwater runoff to comply with the District's volume retention requirement since volume retention through infiltration is not a practicable or feasible option. Rate control and water quality management will be provided through the detention of stormwater within the proposed underground storm water management facility (UGSWMF).

Silt fence is to be constructed at the limits of construction and a rock construction entrance will be provided for erosion control.

#### Exhibits

1. Permit Application dated April 28, 2018, received May 1, 2018.
2. Plans dated April 8, 2018, revised April 27<sup>th</sup>, July 6<sup>th</sup>, July 25<sup>th</sup> and August 3, 2018, prepared by Loucks, Inc.
3. Storm Water Management calculations dated April 6, 2018 and revise August 3, 2018 prepared by Loucks, Inc.
4. Geotechnical Report dated June 22, 2018 prepared by Braun Intertec.
5. Notice of Decision issue by the City of Minnetonka dated September 12, 2017 approving the on-site wetlands boundary determination.
6. MnRAM Assessment dated July 24, 2018 prepared by Kjolhaug and Associates.
7. E-mail correspondence dated May 24, 2018 outlining 5 items requiring information for the submittal to be considered complete by the District. Additional e-mails dated July 23<sup>rd</sup> and 27<sup>th</sup> as follow-ups to the additional information provided by the project agent.

8. July 6, 2018 and August 3, 2018 response by the project agent to the District's e-mails  
The submittal is complete.

**3.0 Wetlands Management**

As previously stated, the wetland area on the site has been identified and boundary determined by the permit applicant's wetland consultant. The City of Minnetonka, being the LGU administering the requirements of the Wetland Conservation Act, has issued a Notice of Decision dated September 12, 2017 approving of the wetland boundary determination. The wetland has been identified as a medium value wetland requiring a minimum 20 foot and 40 foot average buffer in accordance with section 3.4.1b of the District rules. We are in agreement with the medium value determination for the wetland.

An area of 24,498 square feet is required for the 40 foot average buffer and the plans show a buffer area of 24,498 square feet will be provided. The closest point between the proposed trail and the wetland boundary is 20 feet, a minimum of 20 feet is required. The maximum buffer width is 80 feet complying with section 3.4.1 of the District rules allowing a buffer width calculation not to exceed 200% of the average buffer width. Sections 3.4.5 and 3.4.6 will apply for the placement of buffer markers and establishment of buffer areas created on the property.

**4.0 Stormwater Management**

As previously stated, volume retention is to be provided through reuse of storm water that will irrigate approximately 115,000 square feet of pervious area on the site at a rate of 1.2 inches/week. The UGSWMF (storage tank, isolation row and water quality treatment manholes) will provided the detention of storm water to comply with the District's water quality management and rate control requirements.

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

<b>Frequency</b>	<b>Existing Discharge to Bren Rd East c.f.s.</b>	<b>Proposed Discharge to Bren Rd East c.f.s.</b>
2 year	16.9	14.5
10 year	25.8	22.9
100 year	48.6	46.5

<b>Frequency</b>	<b>Existing Discharge from Drainage Area E c.f.s.</b>	<b>Proposed Discharge from Drainage Area E c.f.s.</b>
2-year	7.1	4.6
10 year	12.0	8.4
100 year	22.9	17.2

There are two discharge points from the site.

The applicant has submitted information in support of a finding that the site qualifies as restricted under subsection 4.3.2 of the NMCWD rules. Given the subsurface conditions, as summarized above, the NMCWD engineer concurs that the site qualifies as restricted. An infiltration volume of 11,382 cubic feet would be required from the 248,339 square feet of new and reconstructed site impervious area using a runoff of 0.55-inches from the impervious area (Rule 4.3.2a). The pervious area available for irrigation is 115,000 square feet. Irrigating the green space at a rate of 1.2inches/week, a maximum volume of 11,500 cubic feet can be reasonably utilized for irrigation. The UGSWMF storage tank volume will provide a volume of 11,531 cubic feet prior to an outflow from the system. The irrigation system proposed provides 1.2-inches/week of irrigation volume complying with the required 0.55-inches volume retention required by Rule 4.3.2a.

The District's water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. Water quality management is to be provided through a combination of the storage tank to be used for the stormwater reuse, sump manholes with SAFL baffles and a proprietary Contech Stormfilter structure.

The results from the MIDS calculator show the system proposed will provide an annual removal efficiency of 93% for total suspended solids (1,998 lbs.) and 64% annual removal efficiency for total phosphorous (7.6 lbs.). The stormwater management system proposed complies with Rule 4.3.1b, rate control, Rule 4.3.1c, water quality management.

Since infiltration is not proposed on the site, the 3 foot separation between groundwater and an infiltration facility, Rule 4.5.4d (i) and the pretreatment requirement in 4.3.1a (i) do not apply.

Rule 4.3.3 states, no structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above a 100-year flood elevation. The HydroCAD model provided indicates the calculated 100-year flood elevation of the on-site wetland is 885 M.S.L. The proposed ground floor of the buildings (garages) is shown to be 894.9 M.S.L - a 9.9 foot separation. Rule 4.3.3a is met.

Given the low-floor elevation of the proposed garages (again, 894.9 M.S.L.), and the calculated high-water elevation within the storm sewer system of 899.7 M.S.L., the project does not comply with the low-floor requirement in section 4.3.3. However that section allows applicants to demonstrate adequate flood-risk mitigation by showing that the facilities to be constructed will be at such a location as to effectively minimize the risk. Here, the UGSWMF and infrastructure constitute a "closed system" meaning that there is no direct connection between the building low floor drainage systems and the adjacent storm sewer system(s) because the 100-year high water elevation in the system is below surface level – i.e. does not create flow that can escape the system. Nor is there seepage from the system such as could result in mounding of ground water that could affect the structure. (In addition, consistent with state building code the floor drains of the below-surface parking structure are connected to the sanitary sewer rather the storm sewer. So stormwater cannot backflow into the garage either.) As such, a compliant distance between the underground parking and the stormwater

facility/system in accordance with Appendix 4a cannot be calculated, but the engineer finds that an effective separation consistent with the methodology in Appendix 4a is achieved by the closed system under these circumstances. The elevation that surface water can enter the garages and buildings is 906 M.S.L. The high-water condition within the storm sewer system is 6.3 feet lower (i.e. well more than the 2-foot requirement). The engineer recommends that the managers adopt this interpretive application of the Appendix 4a framework to find that the low-floor requirement in section 4.4.3 is met.

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 at the limits of construction and a gravel construction entrance. The project contact is Samuel Trebesch, Loucks, Inc.

**11.0 Fees**

Fees for the project are:

Rules 2.0-6.0	\$1,000
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**12.0 Financial Assurances**

Financial Assurances for the project are:

Rule 4.0 Volume Retention: 47,426 sq. ft. x \$12/sq. ft. = \$569,112	\$569,112
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Chloride Management:	\$5000
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Rule 5: Silt fence: 2000 L.F. x \$2.50/L.F.= \$5,000	
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Inlet Control: 25 x \$100/each = \$2,500	
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Site restoration: 8.1 acres x \$2500/acre = \$20,250	\$27,750
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Contingency and Administration	\$257,138
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- The Performance Surety Amounts shown on Schedule B – Financial Assurance Rates of the District Rules allows for the applicant to submit a cost of 125 percent of construction and maintenance costs for compliance with the volume retention amount, if this amount is lower than the amount of \$569,112 plus contingencies (10%) and administration (30%).

**Findings**

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

1. Rules 3, 4 and 5 are met.

**Recommendation**

Approval, contingent upon:

1. General Conditions

2. Financial Assurance in the amount of \$859,000 - \$854,000 for stormwater management, erosion control and site restoration and \$5,000 for compliance with the chloride management requirements.
3. Submission of documentation that a drainage easement over the stormwater-management facilities has been submitted to Minnetonka (4.5.4i), if such easement is required by the city, and a receipt showing recordation of a maintenance declaration for the on-site storm water management facilities and wetland buffer area. A draft of the declaration must be approved by the District prior to recordation.
4. In accordance with Rule 4.5.4k(iv), a detailed irrigation or usage plan showing compliance with the District volume retention requirement must be provided and incorporated into the maintenance declaration.

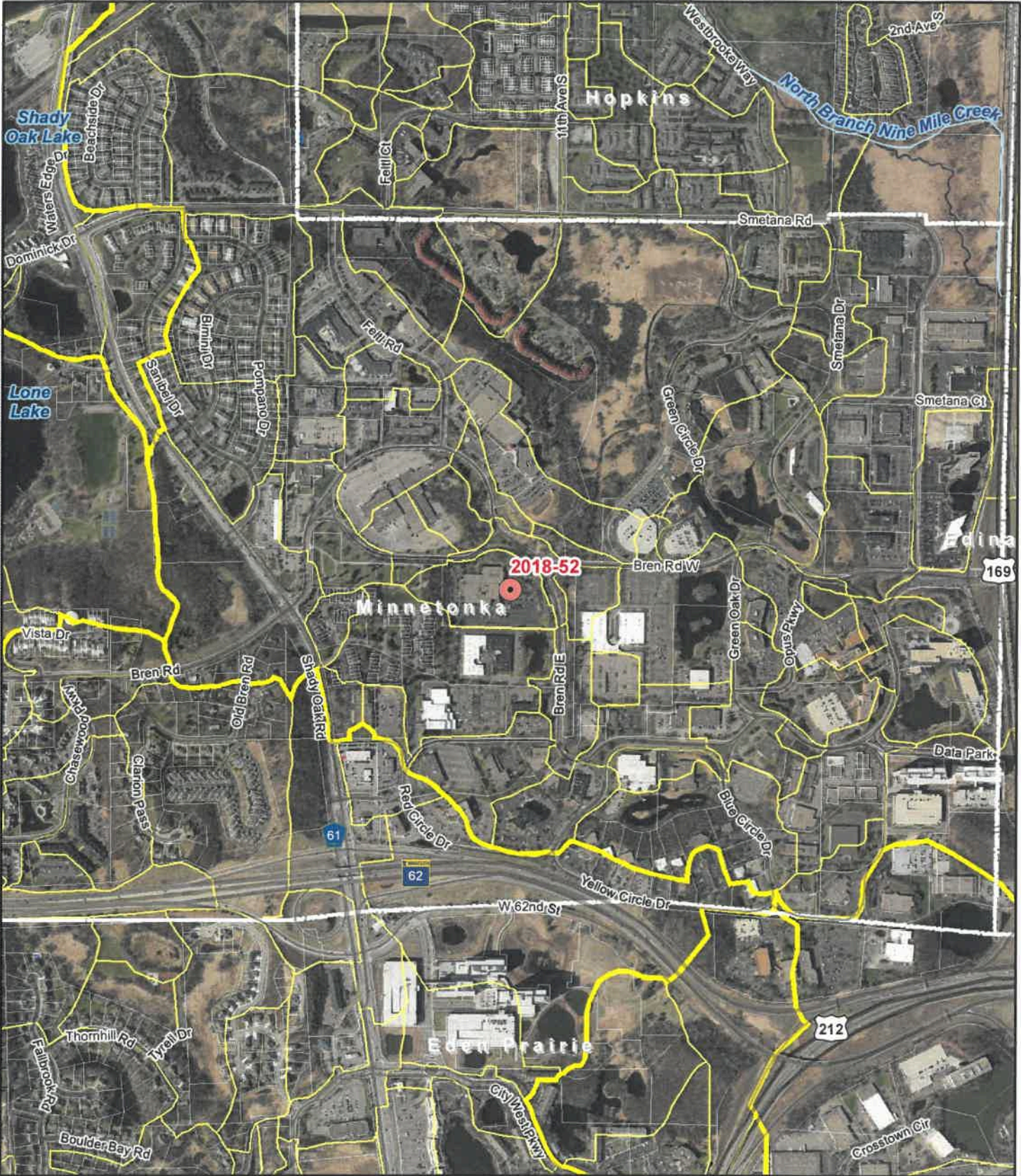
By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule 4.5.6, an as-built drawing of the storm water facilities conforming to the design specifications as approved by the District must be submitted.
2. Buffer markers, in accordance with the requirements of District Rule 3.4.5, must be installed. Restoration of wetland buffer areas created in accordance with the requirements of District Rule 3.4.6.
3. 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.
4. For the release of the \$854,000 financial assurance required in Recommendation #2, Rule 12.4.1b requires demonstration and confirmation that the storm water management facilities have been constructed or installed and are functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the storm water facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.

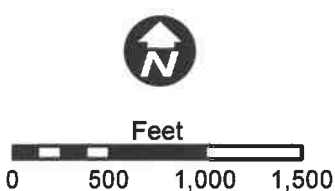
#### Board Action

It was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_ to approve permit application No. 2018-52 with the conditions recommended by staff.

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- Permit Location
- District Legal Boundary
- Nine Mile Creek Watershed
- Major Watersheds
- Small Watersheds
- Parcels



# PERMIT LOCATION MAP

## PERMIT 2018-52

### Nine Mile Creek Watershed District

Imagery Source: Met Council Spring 2016 (MnGeo WMS)