Permit Application Review

Applicant:	Dave Hanson; City of Bloomington
Consultant:	Kendra Fallon; WSB
Project:	Normandale Lake Park Restroom Facility Reconstruction and Site Improvements
Location:	Normandale Lake Park Parking Lot near 6251 West 84 <sup>th</sup> Street, Bloomington, MN
Applicable Rule(s):	4 and 5
Reviewer(s):	Azeemuddin Ahmed and Louise Heffernan; Barr Engineering Co.

# General Background & Comments

The City of Bloomington (City) is proposing the reconstruction of a restroom facility located at Normandale Lake Park along Chalet Road. The project also proposes site improvements including bituminous and concrete pavement improvements, landscaping, utility improvements, and the removal of an existing garage facility. The project is a redevelopment project, as defined by the NMCWD rules. The project limits are directly west of Chalet Road along the southern portion of the Normandale Lake Park parking lot.

The district's requirements for both stormwater management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b and 5.2.1a and b.

The project will not include land-altering activities or alteration of surface water flows below the NMCWD Atlas 14 model 100-year frequency flood management elevation of the water basin located south of the project area, 820.8 M.S.L. Because grading and land-altering activities are not proposed below the 100-year flood management elevation, NMCWD Rule 2.0 Floodplain Management and Drainage Alterations does not apply to the project.

Permit #2014-012 has previously been issued by the NMCWD for reconstruction and expansion of the Normandale Lake Park parking lot. The project work under the previous permit included the construction of several stormwater management facilities for compliance with stormwater management criteria. The constructed facilities provide stormwater management in excess of the capacity required as part of Permit #2014-012, and are proposed to be utilized to meet the district's stormwater requirements under the current application for the newly regulated areas. Relevant project site information is provided in the table below.

Site Information	Permit 2023-068 (Current)
Total Disturbed Area (ac) <sup>1</sup>	0.2
Existing Site Impervious Area (ac)	0.1
Change (increase or decrease) in Impervious Area (ac)	0.0
Percent Change in Impervious Area (%)	0%
Disturbed/Reconstructed Impervious Area (ac)	0.1

<sup>1</sup>The City of Bloomington property includes several parcels under common or related ownership at Normandale Lake. Information compiled or received under previously permitted activities, including #2014-012, identify a total site area of approximately 61 acres. The description of property subdivisions and permits issued is based on the information in NMCWD's files. Adjustment in the context of an overall stormwater management plan for the City of Bloomington may be necessary, but any minor discrepancy that could be discovered through detailed analysis of the redevelopment projects undertaken in the last 10 years would not affect the outcome of the analysis of the present application.

Exhibits Reviewed:

- 1. Signed Permit application dated May 26, 2023.
- 2. Permit Application Narrative dated May 25, 2023, (received May 26, 2023), prepared by WSB.
- 3. Electronic HydroCAD modeling received on May 30, 2023, prepared by WSB.
- 4. Electronic MIDS Calculator files received on May 30, 2023, prepared by WSB.
- 5. Plans dated May 10, 2023, (received May 26, 2023), with revisions received June 8, 2023, prepared by WSB.
- 6. Email correspondence dated June 7, 2023, outlining review comments and items required to complete the application.

The application with the submittal items is complete.

### 4.0 Stormwater Management

NMCWD's requirements for stormwater management apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b.

The NMCWD's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on the site or will increase the imperviousness of the site by more than 50%, stormwater management will apply to the entire project site. Otherwise, the stormwater requirements will apply only to the disturbed, replaced and net additional impervious surface on the project site. The proposed work under the current application is considered in aggregate with activities subject to Rule 4.2.5 Common Scheme of Development at the Normandale Lake Park property.

The project activities under the current application (Permit #2023-068), considered in aggregate with the previous project permitted at the site, will not increase the imperviousness at the site by more than 50% (the current project results in a decrease of 3 square feet of impervious surface area). The stormwater management is required only for the net new impervious area (0 acres) and 0.1 acres of newly disturbed and reconstructed areas under the current permit application, 4,212 square feet of regulated impervious surface.

Stormwater management for compliance with subsection 4.3.1a-c criteria for the newly regulated areas will be provided by the existing stormwater management facilities constructed to provide rate control, volume retention and water quality management under Permit #2014-012. The locations of the constructed infiltrations basins are shown in Figure 1 below.



Figure 1. Existing infiltrations basins.

A retention volume of 386 cubic feet is required from the 4,212 square feet of regulated site impervious area for the current project. The district's records indicate the existing surface infiltration basins provide a volume retention of 24,848 cubic feet. The following table provides a tabulation of required and provided volume under the current application and Permit #2014-012, for the purpose of assessing the capacity of the basins.

	Permit #2014-012	Permit #2023-068 (Current)	Total
Regulated Impervious Area (square feet)	148,104	4,212	152,316
Required Volume Retention (cubic feet)	12,342*	386**	12,728
Provided Volume Retention (cubic feet)	24,848	0	24,848

\*The volume retention is based on the required retention of 1.0 inch of runoff from the regulated impervious surface in accordance with the 2014 NMCWD rules.

\*\*The volume retention is based on the required retention of 1.1 inches of runoff from the regulated impervious surface in accordance with the NMCWD rules.

The newly regulated 4,212 square feet of impervious surface under the current project is conveyed to the existing infiltration basins. As identified in the table above, the existing infiltration basins have adequate capacity to accommodate the newly regulated areas. Rule 4.3.1a (i-ii) requires pretreatment of runoff prior to discharge to an infiltration facility and drawdown of water levels within 48 hours. Compliance with these requirements for the existing basins was provided with the Permit #2014-012. The proposed project is in conformance with Rule 4.3.1.

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates to be equal to or less than the existing discharge rates for all points where stormwater leaves the site. A decrease in impervious surface area is proposed, therefore, Rule 4.3.1b is met for the project.

The district's water quality criteria require a 60% annual removal efficiency for total phosphorus (TP) and 90% annual removal efficiency for total suspended solids (TSS), Rule 4.3.1c. The results from the modeling provided under Permit #2014-012 demonstrate compliance with Rule 4.3.1c. The NMCWD engineer agrees with the modeling results. Rule 4.3.1c is met.

Rule 4.5.4d (i) requires at least three feet of separation between the bottom of an infiltration facility and groundwater. Compliance with this requirement for the existing basins was provided with the Permit #2014-012.

Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that the low floor elevation is:

- At least two feet above the 100-year high water elevation or one foot above the natural overflow of a waterbody;
- At least two feet above the 100-year high water elevation or one foot above the emergency overflow of a constructed facility.

Rule 4.3.3 also states that a stormwater management facility must be constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance with a standard in subsection 4.3.3. Furthermore, any new or reconstructed structures within a landlocked basin must be constructed with its low floor elevation at least one foot above the surface overflow elevation of the landlocked basin or two feet above the elevation resulting from two concurrent 100-year single rainfall events in a 24-hour period or a 100-year, 10-day snowmelt, whichever is higher, Rule 4.3.3.

Compliance with Rule 4.3.3 low floor criteria is summarized as follows:

- The low floor elevation, 824.3 M.S.L., of the proposed structure provides 3.5 feet of separation above the 820.8 M.S.L. 100-year flood management elevation of the water basin located south of the project area, in compliance with subsection 4.3.3 criteria.
- The low floor elevation, 824.3 M.S.L., of the proposed structure provides least two feet of separation above the 100-year high water elevation of the existing stormwater management facilities, in compliance with subsection 4.3.3 criteria:
  - Basin 3 HWL 816.0 M.S.L. (8.3 feet of separation)
  - Basin 4 HWL 815.4 M.S.L. (8.9 feet of separation)
  - o Basin 5 HWL 815.4 M.S.L. (8.9 feet of separation)
- The proposed building is within the landlocked basin to the south of the project area. The landlocked basin has a surface overflow elevation of 821.9 M.S.L. The low floor elevation of the proposed building (824.3 M.S.L) provides 2.4 feet of separation above the surface overflow elevation of the landlocked basin, in compliance with Rule 4.3.3e criteria.
- The NMCWD engineer finds that the existing stormwater basins under the previously approved permit (Permit #2014-012) are constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance under subsection 4.3.3.

The NMCWD engineer finds the project is in conformance with Rule 4.3.3 criteria.

If not previously submitted in the calendar year of closeout, 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 district's requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion and sediment control plan prepared WSB includes installation of a stabilized rock construction entrance, sediment control logs, hydraulic mulch matrix for temporary stabilization, and seed mix for permanent stabilization. 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. NMCWD must be notified if the responsible individual changes during the permit term.

### 11.0 Fees

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

Rules 4.0 and 5.0

#### 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:

**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 4 and 5 with the fulfilment of the conditions identified below.
- 3. The existing stormwater management facilities will provide volume, rate control, and water quality management in conformance with Rules 4.3.1a-c.

### **Recommendation**

Approval, contingent upon:

Compliance with the General Provisions (attached).

The applicant provides a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

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

The work for the Normandale Restroom Facility Reconstruction project under the terms of Permit 2023-068 must have an impervious surface area and grading plans consistent with the approved plans. Design that differs materially from the approved plans 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.

If not previously submitted in the calendar year of closeout, submission of a plan for postproject 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.

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LEGEND

CONSTRUCTION LIMITS X 

EXISTING DECIDUOUS TREE EXISTING CONIFER TREE BITUMINOUS PAVEMENT BITUMINOUS DRIVE PAVEMENT 4" THICK CONCRETE WALK

CONCRETE DRIVE PAVEMENT

SHEET L1.0





# OVERALL GRADING PLAN

NORMANDALE RESTROOM BUILDING CITY OF BLOOMINGTON, MN

WSB PROJECT NO. 019816-000







SCALE: AS SHOWN PLAN BY: BPM		DE BP CH RA	SIGN M IECK	I BY: BY:	
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EROSION & SEDIMENT CONTROL PLAN					
		NORMANDALE RESTROOM BUILDING	CITY OF BLOOMINGTON, MN		
WSB PROJECT NO. 019816-000 SHFFT					
WSB PROJECT NO. 019816-000 SHEET L3.0					

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	CONSTRUCTION LIMITS
$\odot$	EXISTING DECIDUOUS TREE
$\times$	EXISTING CONIFER TREE
+	DRAINAGE ARROW (PRE & POST-CONSTRUCTION)
	SEDIMENT CONTROL LOG WOOD FIBER
et de	STABILIZED CONSTRUCTION EXIT
	TEMP: HYDRAULIC MULCH MATRIX @ 3000 LBS/ACRE PERM: SEED MIXTURE 25-131 @ 220 LBS/ACRE WITH FERTILIZER TYPE 3 @ 200 LBS/ACRE









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CONSTRUCTION LIMITS

EXISTING DECIDUOUS TREE

EXISTING CONIFER TREE

SANITARY PIPE

WATER PIPE

HYDRANT W/ VALVE

DUCTILE IRON FITTINGS