



## Memorandum

**To:** Bassett Creek Watershed Management Commission (BCWMC)  
**From:** Barr Engineering Co. (Barr)  
**Subject:** Item 4F: Ridgedale Mall Sears Redevelopment – Minnetonka, MN  
BCWMC February 16, 2022 Meeting Agenda  
**Date:** February 9, 2022  
**Project:** 23270051 2022 2270

### 4F Ridgedale Mall Sears Redevelopment – Minnetonka, MN BCWMC 2021-30

#### Summary:

**Proposed Work:** Redevelopment/remodel of Ridgedale Sears and parking lot improvements

**Project Proposer:** Brookfield Properties

**Project Schedule:** Starting construction March 2022 and construction completion end of 2022

**Basis for Review at Commission Meeting:** Use of alternative BMP

**Impervious Surface Area:** Decrease 0.28 acres

**Recommendation for Commission Action:** Approval

#### General Project Information

The proposed project is in the Crane Lake subwatershed within the Ridgedale Mall complex in Minnetonka. The proposed project includes redevelopment of the existing Sears retail store, the structure of which is to remain, and parking lot improvements, resulting in 6.91 acres of grading (disturbance). The proposed project creates 3.51 acres of fully reconstructed impervious surfaces and results in a decrease of 0.28 acres of impervious surfaces, from 6.81 acres (existing) to 6.53 acres (proposed).

The initial submittal was received November 23, 2021. The BCWMC engineer reviewed the submittal and provided comments to the City and applicant on November 29, 2021. The applicant addressed the comments and submitted revised plans and supporting documentation on January 28, 2022 and on February 2, 2022 for review.

#### Floodplain

The proposed project does not involve work in the Bassett Creek 1% (base flood elevation, 100-year) floodplain; therefore, BCWMC floodplain review is not required.

#### Wetlands

The proposed project does not involve work in or adjacent to wetlands.

## Rate Control

The February 2021 BCWMC Requirements document states that projects that create more than one (1) acre of new or fully reconstructed impervious area *must manage stormwater such that peak flow rates leaving the site are equal to or less than the existing rate leaving the site for the 2-, 10-, and 100-year events, based on Atlas 14 precipitation amounts and using a nested 24-hour rainfall distribution.*

In both existing and proposed conditions, stormwater runoff is collected by a storm sewer system and discharges to a pond located south of the Ridgedale Mall facility.

In proposed conditions, the underground stormwater detention system and reduction of impervious surfaces results in reduced overall peak discharge rates. Table 1 summarizes the existing and proposed peak discharge rates for the proposed project as provided by the applicant and shows that the proposed stormwater management system meets the BCWMC rate control requirements.

**Table 1: Existing and Proposed Peak Discharge Rates**

	<b>2-Year Peak (cfs)</b>	<b>10-Year Peak (cfs)</b>	<b>100-Year Peak (cfs)</b>
Existing	26.5	39.8	69.1
Proposed	11.5	21.3	44.0

## Water Quality

The February 2021 BCWMC Requirements document states that projects on sites without restrictions *that create one or more acres of new and/or fully reconstructed impervious surfaces shall capture and retain on-site 1.1 inches of runoff from the new and/or fully reconstructed impervious surfaces.* If the applicant is unable to achieve the performance goals due to site restrictions, the BCWMC Flexible Treatment Options approach shall be used following the BCWMC Design Sequence Flow Chart.

As noted, the proposed project creates 3.51 acres of fully reconstructed impervious area. The proposed site is constrained due to the presence of clay and organic subsoils, which are not conducive to infiltration. The applicant is unable to meet the BCWMC performance goal or Flexible Treatment Option (FTO) #1. FTO #1 requires a volume reduction of 0.55 inches and removing 75% of the annual total phosphorus (TP) load from new and/or fully reconstructed impervious surfaces. The applicant followed the BCWMC Design Sequence Flow Chart and determined that the proposed project must meet FTO #2. FTO #2 requires that the proposed project remove 60% of the annual TP load from the new and/or fully reconstructed impervious surfaces. The applicant proposed an underground detention system and Up-Flo Filter, a proprietary manufactured treatment device (MTD) to provide rate control and water quality treatment. The Up-Flo Filter MTD is certified with a General Use Level Designation (GULD) from the Washington Department of Ecology's Technology Assessment Protocol – Ecology (TAPE) program. The BCWMC Requirements document allows the use of stormwater MTDs to meet flexible treatment options, if the applicant provides verification that the MTDs have achieved GULD designation (the applicant provided this verification). The BCWMC Requirements document states that the applicant *may then apply 50% total phosphorus (TP) and 80% total suspended solids (TSS) removals for stormwater MTDs, as long as the stormwater MTDs are designed in accordance with the manufacturer's and TAPE's recommendations and guidelines.* The underground detention and filtration system will collect runoff from reconstructed impervious surfaces as well as a portion of the parking lot designated for mill and overlay, that does not require treatment. Table 2 summarizes the annual TP loading, annual TP removals, and overall percent TP

removal for the proposed project and shows that the proposed stormwater treatment system meets the BCWMC water quality requirements.

This is the first MTD the BCWMC has reviewed since the Minnesota Pollution Control Agency (MPCA) published "TP and TSS credits and Guidance for Manufactured Treatment Devices (MTDs)." The Up-Flo Filter is included as a MTD option under the guidelines for MTDs and is documented as removing 50% of TP, which aligns with the BCWMC Requirements document.

**Table 2: Summary of TP Loading and TP Removals**

	<b>Impervious Area (acres)</b>	<b>Total Phosphorus Loading (lbs/year)</b>	<b>Percent Removal (%)</b>	<b>Total Phosphorus Removal (lbs/year)</b>
TP loading and required removal from new and reconstructed imp. surfaces	3.51 <sup>1</sup>	6.2	60% <sup>2</sup>	3.7 (required)
TP loading and proposed removal from MTD drainage area	4.27 <sup>3</sup>	7.6	50% <sup>4</sup>	3.8 (proposed)
<b>Overall Percent TP Removal for BCWMC Requirement</b>			<b>61%</b>	

<sup>1</sup> Area of fully reconstructed impervious surface.

<sup>2</sup> Per BCWMC guidelines for FTO #2

<sup>3</sup> Impervious area to be treated by MTD

<sup>4</sup> Per BCWMC guidelines for assumed TP Removal for Manufactured Treatment Devices (MTD) with General Use Level Designation from Washington Department of Ecology's TAPE program.

## Erosion and Sediment Control

The proposed project results in more than 10,000 square feet of land disturbance; therefore, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include a rock construction entrance, biologs, and inlet protection. Permanent erosion and sediment control features include erosion control blanket and stabilization with sod or seed and mulch.






## Recommendation

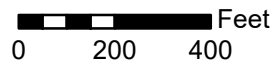
We recommend that the Commission approve the project plans as submitted on January 28, 2022 and Sheet C703 submitted on February 2, 2022. The following two notes will be included in the approval letter:

- A maintenance agreement must be established between the owner and the City of Minnetonka for the manufactured treatment device (MTD).
- The BCWMC encourages the owners and/or managers of this property to develop and implement a winter deicer and chloride management plan to reduce environmental, structural, and landscaping degradation caused by the overuse of salt. More information is available at <https://www.bassettcreekwmo.org/developer/winter-maintenance>.





-  Project Location
-  Municipality
-  BCWMC Legal Boundary
-  Major Subwatershed
-  Bassett Creek



BCWMC #2021-30  
 RIDGEDALE SEARS  
 REDEVELOPMENT  
 12401 Wayzata Blvd  
 Minnetonka, MN  
 LOCATION MAP