

MEMORANDUM

TO: Micah Heckman, Project Engineer, PE

FROM: Kirby Templin, Water Resources Engineer, PE

SUBJECT: St Francis Emergency Department Renovation and Addition – Stormwater Review Comments - 1

DATE: March 31, 2020

This memo summarizes the stormwater review comments for St Francis Emergency Department Renovation and Addition.

The following documents were submitted for review:

- Allina SFRMD ED Renovation & Addition Hydrology Report, Dated 3-6-20
- Civil, Dated 3-6-20
- Landscape, Dated 3-6-20

General

1. Provide a comment response memo.
2. Include the geotechnical report as an appendix to the SWMP.
3. Add notes and/or Include a Label for the proposed filtration basin that specifies the minimum required water quality volume below the outlet elevation, and the minimum required live storage volume above the outlet elevation.
4. The HWL is the higher of
 - a. 100-year 24-hour precipitation event
 - b. 100-year 10-day snow melt condition. Snowmelt depth of 7.2 inches with watershed CN 100 or AMC 4, and frozen ground condition (no infiltration/filtration occurring during the model scenario).
5. The outlet structures for the proposed filtration basin should provide skimming capabilities.
6. Include pretreatment for the proposed filtration BMP.
7. A clay liner for the proposed BMP should be a minimum of 2-foot thickness, however for constructability of an underground BMP as proposed it is strongly recommended to consider a synthetic liner.
8. The weir wall in the outlet control structure as several orifices with minimal distance between them. Consider offsetting the orifices for constructability purposes.

Modeling

9. Change the advanced calculation setting to calculate separate Pervious/Impervious runoff.
10. Include HydroCAD report for the proposed condition 100-year 10-Day Snowmelt Condition. Adjust the model duration to ensure that full event is captured in model scenario.
11. Include the Node Listing information in the HydroCAD report.

12. Switch hydrographs to 2D in the HydroCAD report.

Erosion Control

- 13. The disturbance area is greater than 1 acre. An NPDES permit is required. Submit documentation that this permit has been obtained.
- 14. Include an antitracking BMP at the construction access (examples, rock construction entrance, mat, or other)
- 15. Use the MNDOT Standard Erosion Control Plans for erosion control details.