



MEMORANDUM

TO: Micah Heckman, Project Engineer, PE
FROM: Kirby Templin, Water Resources Engineer, PE
SUBJECT: Prairie Pointe – Stormwater Review Comments - 1
DATE: April 28, 2020

This memo summarizes the stormwater review comments for Prairie Pointe.

The following documents were submitted for review:

- Preliminary Site Plan Package City Submittal 320_Prairie Pointe, Dated No Date
- Stormwater Memo For Civil Package 320_Prairie Pointe, Dated 3/20/20

General

1. Provide a comment response memo.
2. For infiltration/filtration basins, label the proposed basin(s) with a basin ID, Outlet elevation, bottom elevation, and the HWL on the plans.
3. 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 AMC4, and frozen ground condition (no infiltration/filtration occurring during the model scenario).
4. The proposed rain garden is filtration instead of infiltration due to not meeting three feet of separation from the bottom of the rain garden to the bedrock elevation. Can the basin footprint be expanded and not be as deep to create more separation to accommodate infiltration?
5. If there are rain gardens proposed along the south side of the apartment building, there are separation concerns. Separation concerns include the separation between the HWL and FFE, and the separation between the EOF and the FFE. As needed, adjust grading and/or proposed structure elevations to meet these separation requirements. Label EOFs as needed. If there are no rain gardens proposed, there is still a concern regarding drainage from this area, see the following comment.
6. The proposed grading along the south and east side of the building is very flat and may not drain well, which could impact drainage on adjacent properties as well. These areas should be graded with swales to improve drainage. The minimum grade for drainage swales is 2%. Adjust grading as needed to meet this requirement.
7. The max allowable infiltration/filtration depth for surface BMP is limited to 1.5 ft. It is not clear what is proposed, it appears the depth is greater than 1.5 ft. Update as needed.
8. Include a typical detail for the proposed infiltration/filtration basins (Rain Gardens).
9. The outlet structures for the proposed basins should provide skimming capabilities.

10. Include pretreatment for the proposed Infiltration/filtration BMP. This could be a forebay or CB inlet with grit chamber, etc.
11. Include a callout for the curb cut. Include a detail with dimensions so it is clear what to construct. Curb cuts can be problematic and hold water in low areas on pavement. Add details as needed to ensure this is constructed as designed.
12. Grading below the HWL shall be 4 to 1 slopes.
13. Include drainage and utility easement encompassing the proposed BMPs.
14. Add to the Volume Control/Water Quality discussion in the stormwater management plan the specific volume that is required to meet the requirement, and the provided volume in the proposed BMP.

Modeling

15. Change the advanced calculation setting to calculate separate Pervious/Impervious runoff.
16. 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.
17. Include 2D hydrographs in the HydroCAD report.

Erosion Control

18. The disturbance area is greater than 1 acre. An NPDES Construction Stormwater permit is required. Submit documentation that this permit has been obtained.
19. The disturbance area is greater than 1 acre. A SWPPP is required. Include a SWPPP in the plan set.
20. There is no erosion control plan included with the plans. Include a separate erosion control plan instead of combining with other plan sheets.
21. Use the MNDOT Standard Erosion Control Plans for erosion control details.