

Date: Monday, September 28, 2020

To: NICK HEISER
OLSSON, PROJECT MANAGER

From: Sue Pyles, P.E.
Senior Staff Engineer

Application Number: PL2020269

Application Type: Engineering Plan Review

Application Name: ARIA OFFSITE STORMWATER DETENTION

The Development Services Department received plans for this project on September 09, 2020. We have completed our review and offer the following comments listed below.

- Resubmit one (1) comment response letter and one (1) digital copy following the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within ten (10) business days of the date received.

Engineering Review - Corrections

1. These comments are for the following:
 - o PL2020269 Aria OffSite Detention – Comments 2-5
 - o PL2020250 Aria FDP – Comments 6-31
 - o The Stormwater Report (Same report submitted for both projects) – Comment 32

Due to the nature of these comments, additional comments may be forthcoming and both projects will require a 10-day review period.

2. Please add a sheet to the Detention Basin plan set clearly indicating the various drainage areas shown in the plans.
3. Where is the underdrain located in the detention basin? How is it to be constructed? Are there special grading requirements in the basin?
4. Is the basin to be seeded on the bottom?
5. What lifespan Biodegradable Turf Mat is required?

6. Include spot grades as needed to ensure the future building pad sites will not pond water.
7. Storm sewers are to be designed to keep the design HGL within the storm sewer system. Please revise as needed.
8. Junction Box, Area Inlet and Field Inlet designations are all used in the storm sewer plans. It appears that field inlets have openings and area inlets do not, and area inlets seem to be in paved areas. Are the area inlets actually junction boxes? Please clarify.
9. When identifying the number of openings in a Field Inlet, please also indicate which sides those openings are on.
10. Please verify that there are standard details for every type of structure used, even the various Nyloplast structures.
11. Include lid types of Nyloplast structures in the Structure Tables.
12. Please review and verify that where the domestic and fire water lines are shown crossing the storm sewer, pipe graphics and inverts for both lines are shown in the storm profiles.
13. Structures greater than 7' deep require a special design. Please add to the plan set.
14. Are the drainage easements shown at the end sections public or private? Please clarify with a note.
15. Please review and verify that compacted fill hatching is shown all the way downstream to end sections in Profile views where needed.
16. Sheet C505 Profile: Please add the 15" Inv. In at Str. 1-1.
17. Sheet C511 Profile: Please extend the compacted fill hatching to Str. 9-1 and upstream to Str. 9-9.
18. Sheet C512 Profile: Move the SW Inv. Out (15" HDPE) label to the downstream side of the structure.
19. Sheet C513 Profile: Remove the labels for a water line crossing that isn't there upstream of Str. 10-10.
20. Sheet C514: Please verify the size (15" vs 18") of Str. 12-5.

21. Sheet C515 Line 14 Plan: Please label the retaining wall.
22. Sheet C515 Line 14 Profile:
 - Please include the sanitary sewer crossing.
 - Please revise the Proposed Ground line to terminate at the Existing Ground line.
23. Sheet C516 Plan: There appear to be 2 lines connecting to Line 15 with tees downstream of Str. 15-6. Please verify.
24. Sheet C516 Profile:
 - Please add the 15" Inv. In at Str. 15-1.
 - Please darken the Proposed Ground label.
 - Please verify the proposed ground profile between Str. 15-4 & 15-4.
25. Sheet C518 Profile: Remove the labels for a 6" water line crossing that isn't there upstream of Str. 15-3.
26. Sheet C519 Profile: Complete the water line crossing information just downstream of Str. 19-1.
27. Sheet C526 Profile:
 - Please include the sanitary crossing.
 - Relocate overlapping text for clarity.
28. Deleted comment
29. Sheet C528 Profile:
 - Please include the sanitary crossing.
 - The size of ES-01 appears incorrect in the Structure Table. Please revise.
30. Sheet C529 Profile: Please include the sanitary crossings upstream and downstream of Str. YD-P1.
31. Sheet C531 Profile: Please label Str. YD-S2.
32. Please address the following comments in the submitted Stormwater Report:
 - Please provide design input and calculations and for the proposed infiltration basins.
 - Please provide additional information on the proposed use of Snouts. How are they accounted for in runoff modeling? What design parameters are appropriate for them, and are installation requirements provided?

- Is the difference between the “Peak Q In” for the detention basin between the Aria micro and Overall macro scenarios due to the additional development in the macro scenario directing additional drainage to the basin?
- Design and Construction Manual Design Modifications Requests, or “waivers”, are required for several items. When submitting, please be sure to include a complete narrative why the waiver is being requested and provide justification for approval. Waivers are required for the following:
 - o Not providing 40-hour extended detention for the Water Quality event as required by the City.
 - o Exceeding the allowed release rate.

Traffic Review - Not Required

In order to calculate the Engineering Plan Review and Inspection Fee, a sealed Engineer’s Opinion of Probable Construction Costs shall accompany your final submittal copies. The itemized estimate (material and installation) shall be sufficiently broken down and shall include the following items, as applicable.

- Public infrastructure, both onsite and offsite.
- Private street construction, including parking lots and driveways.
- Sidewalks located within the right-of-way.
- ADA accessible ramps.
- Sanitary sewer manholes and piping between manholes, including private mains.
- Connection of the building sanitary sewer stub to the public main.
- Waterlines larger than 2 inches in diameter, valves, hydrants, and backflow preventer with vault, if outside the building.
- Stormwater piping greater than 6 inches in diameter, structures, and detention / retention facilities - public or private.
- Water quality features installed to meet the 40-hour extended duration detention requirements.
- Grading for detention / retention ponds.
- Grading to establish proper site drainage.
- Utility infrastructure adjustments to finished grade (i.e. manhole lids, water valves, etc.).
- Erosion and sediment control devices required for construction.
- Re-vegetation and other post-construction erosion and sediment control activities.

Electronic Plans for Resubmittal

All Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

Electronic copies shall be provided in the following formats

- Plats – All plats shall be provided in multi-page Portable Document Format (PDF).
- Engineered Civil Plans – All engineered civil plans shall be provided in multi-page Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact me if you have any questions or comments.

Sincerely,

Sue Pyles, P.E.
Senior Staff Engineer
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cc: Development Engineering Project File