

Date: Monday, May 22, 2023

To: Doug Ubben
Phelps Engineering, 1270 N. Winchester St., Suite #5878
Olathe, KS 66061

From: Sue Pyles, P.E.
Development Engineering Manager

Application Number: PL2022325

Application Type: Engineering Plan Review

Application Name: Orchard Woods - Streets, Stormwater, and Master Drainage Plan

The Development Services Department received plans for this project on September 07, 2022. We have completed our review and offer the following comments listed below.

- See comments below to determine the required revisions and resubmit to the Development Services Department public portal located at devservices.cityofls.net. Digital documents shall follow the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within five (5) business days of the date received.

Engineering Review - Corrections

1. Sheet 2: Please revise General Note 7 to remove "upon request" from the last sentence.
2. The Grading Plan on Sheet 4 and the Master Drainage Plan on Sheet 20 each include portions of what the City requires for a "Master Drainage Plan." Please review Design and Construction Manual LS Section 5600. The City's added subparagraphs to APWA Section 5601.8.A provides a specific list of requirements. Sometimes we see all of the information placed on one sheet in a plan set, and sometimes we see it multiple sheet (e.g. Master Drainage Plan Sheets 1-3 within the overall plan set). Please revise the plans to provide a Master Drainage Plan (MDP) that meets City requirements.
3. Sheet 11: What is the "Driveway Asphalt Paving Section" detail specifically in reference to?
4. Sheets 13-15:
 - Please label the street names in Plan views.
 - The 10-year HGL must be contained within the pipe. If the 100-year HGL is not 6" or more from the opening of an inlet, an overflow path must be provided.
 - CMP end sections are not allowed Please revise Structures 10, 18, and 52 accordingly.
 - NE Apple Grove Court does not require RCP storm sewer pipe for the Structure 12-13 street crossing. It is allowed, just not required by the City.

5. Sheet 16: The Outlet Control Detail on this sheet doesn't match the Special Outlet Structure #60 shown on Sheet 17. Please revise as needed.
6. Sheet 18:
- How will the area shown on the drainage map all get into Structure 50? The grading doesn't indicate that it will be possible. Please clarify.
 - With the storm sewer alignment as shown, there are several areas of concern which are listed below. Please review and revise as necessary:
 - o Structure 30, as the upstream end of the storm sewer, has a large drainage area. The would better be handled by adding an additional inlet upstream.
 - o Bypass from inlets upstream of the sump at Structures 16 & 17 is likely to pond enough to be dangerous. Please revise the drainage directed to these inlets and provide calculations to show the extent of the maximum ponding. The calculations can be separate from the plan set.
 - o Structure 40 does not seem likely to capture all of the flow directed to it. Please address.
 - o Please review the swales shown with respect to 100-year flow depth. For swales that go between houses, please try to minimize depth of flow.

Traffic Review - No Comments

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.
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cc: Development Engineering Project File