

Date: Tuesday, April 09, 2019

To:

SCHLAGEL & ASSOCIATES
Email: SCHLAGEL & ASSOCIATES
Fax #: (913) 492-8400

From: Gene Williams, P.E.
Senior Staff Engineer

Application Number: PL2019079

Application Type: Engineering Plan Review

Application Name: Winterset Valley 13th Plat - Water Line

The Development Services Department received plans for this project on Mar. 19, 2019. We have completed our review and offer the following comments listed below.

- Resubmit three (3) full size sets of plans (no larger than 24"x36") folded to 8-½"x11", 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 five (5) business days of the date received.

Engineering Review

1. Off-site easements for the water main will be required prior to issuance of a Certificate of Substantial Completion. In addition, a temporary fire hydrant is shown on the end of Line 2 and Line 3 on the profile views. Was this meant to be an offset fire hydrant assembly, as shown on the plan view? What sort of plug are you specifying at the end of Lines 2 and 3, for the offset fire hydrants? Finally, don't you need a reducer for the temporary fire hydrant at station 3+47 on Line 1?
2. It appears that no consideration was given towards installing the water lines above the storm lines. It appears the storm lines were designed first, with no regard to the placement of water mains. Water mains are usually the first item requiring maintenance, and installing them beneath storm structures is not preferred, and costly. While looking at the storm design, we would like to see efforts made to install these lines above the storm lines.
3. Regarding the above comment, there still appear to be at least two (2) instances where the water main is greater than the allowable 7 feet depth, which is not allowed.
4. Water mains must be installed around cul-de-sac bulbs so that no single service is installed beneath the cul-de-sac. As shown, At least two (2) of the lots in each cul-de-sac will require service beneath the

cul-de-sac bulb. This is not allowed. Extension of the line around the bulb is required.

5. Only two (2) valves are required, and desired, at a tee. There are two (2) locations where three (3) valves are shown. This presents additional maintenance costs to the City. Please delete one (1) of the valves at each location.

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,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer
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cc: Development Engineering Project File