LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION

Date: Thursday, May 17, 2018

To:
PHOENIX ENGINEERING & SURVEYING LLC
Brian Glenn, P.E.
Email: BRIAN@PHOENIX-LLC.COM
Fax #: (660) 429-1801

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

Application Number:	PL2017193
Application Type:	Engineering Plan Review
Application Name:	Whispering Woods 1st Plat - On-Site Water Line Plans

The Development Services Department received plans for this project on May 2, 2018. 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. Please refer to comment #2 of the previous applicant letter dated Oct. 6, 2017 (hereinafter referred to as the applicant letter). We had requested that additional consideration be given to a different geometry for the water line which would not require future relocation of the water main. This relocation would be necessary because the City will not allow a water main to be installed beneath a box culvert. Since no consideration was given to other routes, we are assuming that the applicant is accepting of the fact that the water line must be relocated in the future. This will become a condition of approval of the plans.

2. Please refer to comment #14 contained in the previous applicant letter. Concrete encasement is required for stream crossings, and the valves should be placed 20 feet from the top of bank on either side. As shown, concrete encasement is missing, and the valves should be shown further away from the top of bank. Approximate stationing should be sta 6+70 to sta 7+80?

3. The encasement for the stream crossing discussed above should show the proposed stationing.

4. The flowline of the creek discussed in the above comment was ill-defined. Please see the profile view at the stream crossing. The linework is vague in terms of the stream bottom at this location. In accordance with the Design and Construction Manual, the top of water mains at stream crossings should be a minimum of 42 inches below the bottom of the stream bed.

5. Please refer to comment #15 contained in the previous applicant letter. A trenching and backfill detail was not provided. Please be aware that a "Trench Check" is not a trenching and backfill detail. These are only used on sanitary sewer laterals (i.e., the private sewer stubs), and not on water lines or sanitary sewer mains.

6. Please refer to comment #17 contained in the previous applicant letter. The nearest in-line valve is shown, but our records indicate this is a valve which cannot be located. It appears a new butterfly valve is required.

7. A note is provided on Sheet 2 (i.e., note 18) indicating that open-cut across Pryor Rd. may be necessary to install the water main. This connection must be bored across Pryor Rd. unless there are extenuating circumstances. Is the water line beneath pavement? Our records indicate the water line is not beneath pavement, and hence, boring will be required to make the connection. Provide sufficient notes on the plans indicating that the water line will be bored, but not cased.

8. Please refer to comment #19 of the previous applicant letter. The locations of valves should be shown in graphic format, as well as noted on the plans. A note on the plans is not sufficient. Please show the location of all valves on the plan view.

9. Please be aware that no further review of this project will take place until the off-site water line plans and the off-site sanitary sewer plans have been submitted.

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

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 on CD in the following formats

- Plats – All plats shall be provided in Tagged Image Format File (TIFF) Group 4 compression.
- Engineered Civil Plans – All engineered civil plans shall be provided in Tagged Image Format File (TIFF) Group 4 compression. All sheets shall be individually saved and titled with the sheet title.
- Architectural and other plan drawings – Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).
- It is requested that each plan sheet be a maximum of 2MB.

Please contact me if you have any questions or comments.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer
(816) 969-1223
Gene.Williams@cityofls.net

cc: Development Engineering Project File