

**Date:** Wednesday, May 29, 2019

**To:**

ENGINEERING SOLUTIONS

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**From:** Sue Pyles, P.E.

Senior Staff Engineer

**Application Number:** PL2019176

**Application Type:** Engineering Plan Review

**Application Name:** THE RESERVE AT STONEY CREEK 4TH PLAT - PRYOR ROAD IMPROVEMENTS

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The Development Services Department received plans for this project on May 13, 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. Please address the Traffic Review comments.
2. Submit an Engineer's Estimate of Probable Construction Costs.

**Traffic Review**

1. Construction Notes, Design Notes, and Typical Sections should be on a separate plan sheet than the Title/Cover Sheet.
2. Typical Sections need to be included for the various proposed work on Pryor Road; e.g. widening and full depth work.
3. The residential street section shown is not referenced anywhere in the plans?
4. The typical sections should identify proposed and existing pavement separately.
5. The typical sections should identify the saw cut location for areas of widening (e.g. 10' from centerline). Widening to provide 24 feet of pavement from Napa Valley Drive to County Line Road. Since the existing pavement width ranges from about 20 feet to 22 feet, no more than a typical existing 20' pavement

section should be referenced for the widening areas.

6. The typical section shall require 12' lanes, not 11' lanes and a 4:1 Max. Grading except where the proposed turf (or paved shoulder alternate) requires design and construction of relocated ditch section that may be 3:1.
7. Typical section shall refer to Pryor Road as Major Arterial and pavement sections revised accordingly (2" Type 5 over 6" Type 6 with 9" MoDOT Type 1 and 95% Compacted Subgrade for Pavement and 2" Type 5 over 4" Type 5 with 9" MoDOT Type 1 95% Compacted Subgrade for Shoulder minimums recommended).
8. Demo sheets should either show removal of Pryor Road where full depth removal is proposed and removal of pavement outside the sawcut in widening areas or delete the Demo sheets and call out specific driveway removals on the other plans.
9. Pryor Road turn lane widening shall have transitional tapers of 245' based on the 35 mph speed limit and 12' lane shift ( $WS^2/60$ ). This will extend the taper on the north and south ends of the widening.
10. The introductory taper for the left-turn lane on Pryor shall use reverse curve (300' R) over 150' in lieu of the straight taper.
11. The plan sheets generally lack construction detail (e.g. alignment, stations, offsets, benchmarks, spacing dimensions, notes, etc.).
12. Note that all longitudinal lines shall be high-build paint and symbols/diagonals are preformed thermo material.
13. Pavement markings need to include edge lines.
14. The profiles show new pavement alignment where there's only widening (no new centerline). These sections should only show existing profile/pavement.
15. The profile of Pryor Road at SW Georgetown Drive does not meet minimum Intersection Sight Distance for 35 mph considering the proposed intersection location on Pryor Road south of the vertical crest. Either the crest should be lowered or the VPI needs to move to the intersection of Georgetown Drive.
16. Include a table of quantities for all bid items and separate the items related to the alternate bid (paved shoulder).
17. The Temporary Traffic Control Standard Details are okay for the pavement widening and shoulder work,

but a detour plan will be needed for the reconstruction of Pryor Road near Georgetown.

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**

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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

