LEE'S SUMMIT
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DEVELOPMENT SERVICES

Date: Thursday, August 08, 2019

To: Emery Sapp & Son Construction Co.
140 Walnut Street
Kansas City, MO 64106-

From: Michael Park, P.E.
City Traffic Engineer

Application Number:	PL2019245
Application Type:	Engineering Plan Review
Application Name:	CHIPMAN & DONOVAN INTERSECTION - TRAFFIC SIGNAL IMPROVEMENTS

The Development Services Department received plans for this project on July 25, 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 - Corrections

1. Refer to Traffic Comments

Traffic Review - Corrections

1. R10-12 Signs Located on the Mast Arms should be positioned to the left of the outboard signal head (and five section head).

2. Show the Power Source and Power Supply Disconnect/Meter Cabinet (PUP Unit) on the plans.

3. Add Fiber Optic Pull Box to the Legend

4. Optional: The 3" Conduit between Pull Boxs and 4' Pedestals (Push Button) with 1-2c cable may be 2" Conduit.

5. Scale on Sheet 6 is incorrect. Verify Mast Arm Lengths shown on plans and quantity tables are correct.

6. Sheet 3 (C101). Existing Street Name Signs and Post at Donovan shall also be removed with Stop Sign (Upon Operational Traffic Signal). Street Name Signs will be on the signal mast arms.

7. Street Lighting: The street light system modifications and impacts have not been adequately addressed in the plans. The existing street light in the median along Chipman on the west side of the intersection appears in conflict (obstructs visibility) with the proposed signal mast arm/head for Pole 4. The proposed street lights on Signal Pole 8; street light replacements, 240V, 250W LED Fixture on 30' Pole for the existing street lights at the same location may not be equivalent to existing 480 high voltage, 250W HPS Fixture on 40' Pole (design documentation needed as noted below). Consider removing both existing street light poles and the installation of street light pull boxes (intercepting the existing conduit and cable/circuit) and reconnecting the existing system with new conduit and cable between these pull boxes to nearest adjacent street lights to keep the existing system connected with the installation of an independent lighting system on the signal for the intersection following City standards and specifications. Alternatively, the street light in conflict could be relocated west (behind the signal) with new concrete foundation, pull box, etc. and connection to the existing conduit and cable/circuit towards the east (with new pull box intercepting the system that is disconnected by removal of street light at location of Pole 8). However, this would not address the issue of one light in the corridor on separate circuit/power supply with the signal and the existing lighting system cannot be routed through the proposed signal due to 480V. Lighting calculations should be submitted for review in association with the plan in support of the plan and design criteria (as well as comparison to existing lighting levels).

8. Consider moving Head 31 to the pole (approximately 2' north of center lane) with R10-12 Sign on Pole. Head 31 would be changed to vertical 5-section head. Then move Street Name Sign on mast arm closer to the pole.

9. Signs D3-1 and D3-1B Should be NW Donovan Rd, not NW Ward Rd. Verify S.F. for these Mast Arm Street Names in the Sign Table.

10. Fiber Optic (FO) Plan and Interconnect: Plans need more detail for construction. Plan should include note(s) regarding FO Pull Box 6, intercept existing FO, splice enclosure, SFP, installation, splicing details, etc. Some of the FO wiring construction, splicing and installation information may be shown on the wiring plan. Include all necessary materials in the interconnect equipment table. Wireless Radio's shown for interconnect are not necessary at Chipiman & Donovan since interconnect will be FO. Interconnect will utilize the proposed FO and existing FO that runs along Chipman between Douglas and Ward (48 Count Single Mode FO).

11. Signal system should be InSync for coordination compatibility with existing system(s) along Chiopman and adjacent intersection at Ward/Chipman. Add applicable cabinet equipment, revise detection system and add processor. The proposed controller is still good, but needs to be noted NTCIP and firmware 4.57f (unless otherwise directed by City) for compatibility with TranSuite ATMS.

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 developmrnt 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 mulit-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,

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City Traffic Engineer
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cc: Development Engineering Project File