



City of Pflugerville

Legislation Text

File #: 2020-8467, **Version:** 1

Approving an agreement with Kimley-Horn and Associates, Inc. in the amount of \$99,987.00 for professional engineering services associated with Phase 1 of the Signal System Improvements Plan Implementation and authorize the City Manager to execute the same.

This item has been included on the agenda to allow for a presentation and discussion about the City's Traffic Signal System Assessment and Improvements Plan and Texas Department of Transportation (TxDOT) Signal System Field Assessment Report developed by Kimley-Horn and Associates (K-H). In accordance with Texas Administrative Code: Title 43, Section 25.5, after the City of Pflugerville population exceeds 50,000 in the next federal census, installation, operation, and maintenance of signals on state highway systems are the responsibility of the City. The City currently has two state-maintained Farm-to-Market highways (FM 1825 and FM 685) and will take over maintenance and operations (M&O) responsibilities for the traffic signals on these corridors after the 2020 census is published. After the City Council meeting, the Traffic Signal Assessment and Improvements Plan will be finalized and staff will kick off the first Phase of the implementation process as part of FY2020.

The City's initial efforts began in September 2018 with the intent of the project scope to complete a Traffic Signal Inventory and Assessment prior to the City's takeover of operations and maintenance of Texas Department of Transportation (TxDOT) signals within the City Limits. The inventory evaluation was to determine the functionality of each traffic signal, assess the capabilities of the existing traffic signal system and provide a transition period between TxDOT and the City for full operations and maintenance.

City Council approved a professional engineering services agreement for Kimley-Horn and Associates, Inc. (K-H) in October 2018 to assist with TxDOT Signals Transition and Takeover process as the City's population is expected to exceed 50,000 in the 2020 Census. There are currently 20 TxDOT signals within City limits out of which the 10 along the SH 45 and SH 130 Toll Road will remain with TxDOT. The City will be responsible for taking over maintenance and operations at the remaining 10 signals. The City currently operates and maintains 19 signals on City streets with four (4) additional locations identified for new signals (under various design stages). After takeover of TxDOT signals, the City will maintain 33 signals within their limits. There are two (2) signals on FM 1825 (Pecan St) at Central Commerce Dr and at Vision Dr that are outside city limits but maybe considered for takeover to allow better traffic signal timing coordination with rest of FM 1825 signals.

K-H conducted a field inventory and assessment of the signals and inside the signal cabinets at all intersections to make a list of items that needed repair and upgrade to stay compliant with current standards. Quarterly meetings were conducted with TxDOT discuss project findings and repairs and improvements to be made by TxDOT before transitioning signals over to the City. The main improvements by TxDOT include:

- Upgrade span-wire signal to a mast-arm at Pecan St / Swenson Farms Blvd.

- Repair all malfunctioning pedestrian push-buttons and ped-heads.
- Replace all 5-section signal displays for left-turns with 4-section displays with flashing yellow arrow (FYA) to stay compliant with TxMUTCD.
- Provide appropriate Malfunction Management Unit (MMU) compliant with FYA operations.
- Replace all high-pressure sodium lights (on top of poles) with LED lights.
- Provide battery back-up units at select signals
- Replace obsolete video monitors inside signal cabinets
- Develop and implement signal timing plans along FM 1825 and FM 685

The projected schedule for City to take over operations and maintenance of TxDOT signals is anticipated to be March 2021.

K-H also conducted a detailed inventory and assessment of signals currently operated & maintained by the City. A similar list of repairs and improvements was developed for the City signals. These were categorized as Repairs, Upgrades for Compliance with current standards, and System Improvements. As part of this project, K-H also developed a framework for Signal System Improvements as the traffic and number of signals increase. K-H discussed various traffic signal components (such as signal controllers, vehicle detection, signal communication, battery back-up) with Staff to adopt and standardize technology for all signals in the City. The project report identifies all the improvements required to migrate the City to an Advanced Transportation Management System (ATMS) and lists planning level cost estimates for proposed improvements.

Prior City Council Action

A professional services agreement with Kimley-Horn and Associates, Inc. in the amount of \$99,924 for professional engineering services associated with coordination and preparation for the City to assume responsibility for traffic signals currently managed by TxDOT on state-maintained roadways was approved by City Council at the September 11, 2018.

Deadline for City Council Action

None.

Funding Expected: Revenue Expenditure N/A

Budgeted Item: Yes No N/A

Amount: N/A

1295 Form Required? Yes No

Legal Review Required: N/A Required Date Completed: _____

Supporting documents attached:

- Pflugerville Traffic Signal System Assessment Report
- Traffic Signal Exhibit
- TxDOT Improvements
- City Improvements

Recommended Action

No action is being requested of City Council.