POSITION 08: SIGNALS AND ITS ASSET MANAGEMENT ANALYTICS

Description
The signals and ITS maintenance teams are seeking an intern to assist with improving the asset management of the groups’ assets. Projects include:

- Conduct analysis on the Traffic Infrastructure Maintenance Management Software (TIMMS) database and related databases (i.e. Uninterrupted Power Supply [UPS] database, Transportation Online Permitting System [TOPS] database) to identify where recurring similar problems are occurring with signal equipment and identify possible causes and solutions to address those.

- Assist with revision of various ITS and connectivity documentation that supports DDOT’s city wide ITS communications network.

- Evaluate the performance measures being used to monitor contractors and how that data aligns with activities on the ground. Provide recommendations on how to streamline performance management of contractors.

- Create a GIS-linked inventory of all the communications devices located on the signal and streetlight poles for asset management purposes.
  - Collect attribute data on signal and streetlight equipment.
  - Draft metadata for GIS inventory.
  - Draft streamlined standard operating procedures that allow signals and streetlight staff to easily maintain their GIS inventory.

- Automate and simplify data collection and analytic processes to improve system monitoring.

- Conduct similar efforts around streetlights.
2016 Research Internship Summer Program
Research, Development, and Technology Transfer Program

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Intern Skills:

• Strong data analysis and technical writing skills and a background in GIS
• An interest in technology, data analytics, and asset management is recommended.
• Civil engineering, logistics, or urban planning background would fit well, though other backgrounds welcome.

There will be field data collection as part of this project, so the intern must be willing to work at various ITS locations located at curbside around the City. The intern should be able detect the presence of a 1KHZ audible tone that is modulated along communications wiring for identification purposes and be able to distinguish and identify color schemes used to identify standard telephone wiring (training will be provided for both of these tasks, but hearing and ability to distinguish colors needed).