Metro Region Pump Stations
MITA Meeting
May 25, 2017
Notes from MITA Meeting
Notes from discussion after the MITA Meeting

The Purpose of this Project is to expand the existing Pump Station Monitoring System (PSMS) throughout the Metro Region (140 Stations) to serve a number of purposes, including (but not limited to) the ability to conduct remote operations, provide alarm notifications, provide real-time sensor data, perform data archiving and allow MDOT to more effectively manage the overall operation and maintenance of the pump station systems.

Typical PSMS installations are expected to construct the following main components:

- Installation and configuration of PSMS field equipment, including but not limited to, equipment that integrates the existing pump station systems/sensors to the PSMS
- Installation and configuration of PSMS software/hardware at MDOT facilities such as the MDOT Southeast Michigan Transportation Operations Center (SEMTOC) to support the operation of the PSMS
- Installation of conduit, handholes, fiber optic cabling and other equipment to support the connection of the PSMS to MDOT ITS infrastructure
- Installation, configuration and integration of communications equipment to support communication to the PSMS field equipment

Traffic is anticipated to be controlled under shoulder closures or lane closures. Depending on the location of the facility, lane closures may be restricted to off peak hours of the day.

The following goals are being considered for the Project:

A. Operational goals for the PSMS include supporting MDOT by providing, compiling or processing information such as the following:
    i. Pump run times
    ii. Pump on/off
    iii. Power status
        i. Pump amperage rating
        ii. Overcurrent/phase imbalance
    iv. Faults & Alarms
    v. Water level
    vi. Historical log (sample data stored)
        i. Faults & Alarms
        ii. Water level

B. Safety goals for the PSMS include supporting MDOT by decreasing response time to equipment failures and improved operational stability of the system reducing the changes for roadway flooding.

Quality goals for this project are to deliver a reliable and effective PSMS that allows MDOT to better monitor and manage the pump station system operations and maintenance.

Budget and schedule goals are focused upon a timely completion of the project at the lowest cost, meeting the requirements that will be established in the RFP.

Compatibility goals for the project are focused upon the deployment of a PSMS that will allow MDOT to expand the system in the future without being confined to a vendor specific software/solution/platform.

Installation of alternate power supply connections (i.e.: generator transfer switches, secondary lines, etc.)

- Will need amperage and voltage for each station in order to design and install these items.

Communications goals for this project are to provide backhaul connectivity for the PSMS through MDOT's ITS communication network where available or through cellular, fiber, radio or other communication options.

Training goals for this project are to include quarterly sessions and other as-needed support based on MDOT request

Data sharing goals for the PSMS include providing an Extensible Markup Language (XML) data dump feature with the ability to interface with other software platforms through a File Transfer Protocol (FTP) script.

Anticipated Prequalification Requirements:

Design-Builder Prequalification Requirements

- Comb/Jt. 4500 Fd, ITS

Lead Engineering Design Firms Prequalification Requirements are anticipated to be:

- Design Traffic: Work Zone Maintenance of Traffic and
- Design – Utilities: Pump Stations or
- Design – Traffic: ITS – Design & System Manager

The overall design-build team must identify their design team, which includes all three design prequalification requirements stated above, in their Submittal of Qualifications.

- We noted the change in the design prequalifications.
- One team asked why we didn't include the electrical prequalification, but didn't seem overly concerned.

Anticipated Schedule:

Phase 1 – Request for Qualifications

Issue RFQ	Early June
Deadline for submitting RFQ questions	Early July
SOQ due date	Mid July
Anticipated Notification of short-listed Submitters (Proposers)	Late July

Phase 2 – Request for Proposals – *Tentative Schedule (subject to change)*

Issue RFP	September 2017
Technical and Price Proposals due	Early December 2017
Anticipated Contract Award	January 2018
Anticipated Substantial Completion	December 2018

ITEMS FOR DISCUSSION:

- What information will be needed in the RID to ensure the bidders have enough information on the different site locations?
  - Will want to provide ITS/fiber map and list of which ones have access to fiber.
  - Any information on condition.
  - Kinds of controls, condition of conduits, as-builts at each station.
  - They noted not all of this would be required at the RFQ release.
  - Do we have a log of what modifications have been made by the County or other forces performing maintenance work.
  - The noted it would be helpful if all of this information was placed in a spreadsheet that can be sorted easily.

- What risks do the bidders envision throughout the project and are there any suggestions for mitigation?
    - Industry didn't note any additional risks when asked.
- MDOT is currently considering requiring Multi-Smart/Multitrode controllers for each of the stations. Does industry have any concerns with this requirement?
    - They didn't seem to have any issues with this.
    - Maybe allow for alternates to keep the supplier honest.
    - Possibly consider an advanced purchase.
- Due to budgetary concerns,
    - MDOT is evaluating installing a "Lite" version of the PSMS. This would include all functions of the normal system, but would not have the capability to remotely start/stop the pumps. It is our understanding that electrical upgrades would be needed to include this function.
    - MDOT is evaluating the potential use of Fixed-Price/Best Design. This would require the bidders to bid on the number of sites they could complete with the "Full" PSMS and the "Lite" PSMS.
    - Does industry have any thoughts on this construction/bidding approach?
        - Dan's – noted that we should really analyze whether or not we use FPVS. He felt this could cause concerns with developing bids and didn't want any protests. Also noted, this would cause additional work for the bidders to develop different scenarios.
        - Possibly look at an allowance that everyone would need to bid on to accomplish additional work.
            - Kelby and Team were going to discuss this potential option with FHWA
        - One team noted, maybe the variable scope component could be the installation of the alternate power supply connections since this would be a more known cost on a per location basis.
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- Does industry believe there are any issues with the proposed schedule?
    - Several teams noted they were worried about the schedule. (6-8 months for design and procurement, 12-14 months construction)
    - Need time for burn-in and consider when this takes place (ie: after substantial completion)

- Are there any other thoughts that MDOT should consider while preparing the RFP?
    - Would we want to have a 5.8ghz hop to get into the network.
    - Will need to verify if everything can meet Buy America.

After the MITA meeting notes:

AECOM will update the estimate and distribute. The plan would be to install the SCADA "lite" version at all locations with the full system controller. This would allow upgrades to the SCADA system to be implemented easily with any future work. The SCADA "full" would be installed at any location that has been upgraded in the last 10 years. Some of these locations already have SCADA and would only require minimal work (installation of new cell modem or hook up to existing ITS fiber). The estimate will be updated using this approach.

The Books will need to be updated to reflect the required burn-in period of 60 days. Dayo noted we could consider 30 days if we receive pushback from industry. Language will also need to be revised in the payment/SOV section to include holdback for the burn-in period. We discussed 10%.

Dayo noted he liked the idea of an advanced procurement of the SCADA systems. This would allow cost certainty from suppliers. Dina was going to discuss this with the bridge unit to help determine what the process is for an advanced procurement contract.