

**GOVERNING BODY AGENDA ITEM**

**Name/Department:** Public Works

**Meeting Month:** January 2010

**Meeting Week:**

**(Week 1) Board of Directors**

**(Week 2) Public Hearings & Presentations**

**(Week 3) Regular Meeting** **X**

**Time Sensitive?** Yes \_\_\_\_\_ No  X

**Topic:** Request for authorization to award installation of the Supervisory Control and Data Acquisition (SCADA) system for all the City's water and sewer infrastructure.

**Brief Summary of Topic:**

- Staff received bids for the SCADA system on December 28, 2010.
- The low bidder, Transdyn, Inc., has been found to be responsive and responsible.
- Staff will be requesting authorization from the Governing Body to enter into an Agreement with Transdyn for installation of the system beginning in the spring.

**Presentation to Governing Body  
January 19, 2010**

**Department:** Public Works Water/Sewer

**Author/Presenter:** Kathleen Gammell, 703-335-8840

**Subject:** Supervisory Control and Data Acquisition (SCADA) System

**Issue:** Authorize staff to enter into an agreement with Transdyn, Inc. to install a SCADA system at all City water and sewer facilities in the amount of \$466,798 with the option to extend the contract to fund the two Manassas vaults within a period of time acceptable to the City Attorney.

**Background:**

- In 2008 the phone signal to the telemetry panels in the old police dispatch room failed. In spite of numerous attempts by staff and Verizon to diagnose and restore the communication, there is still no signal to alert staff to low tank levels or sewer pump station pump malfunctions.
- When the telemetry system worked, it had minimal capability. There were major limitations as to what it could monitor i.e. tank levels and sewer station pump malfunctions. All communications went through the Blooms Quarry tank and when the Blooms Quarry tank was down, the whole telemetry system was down.
- Having to monitor and control the components of the water and sewer system at each individual location results in high risk of tank high levels (overflows) or low levels, sewer wet well overflows, and excessive overtime.

**Discussion:**

- Staff issued an Invitation for Bid (IFB) on November 12, 2009 for installation of a SCADA system for real-time remote monitoring, reporting and control of the City's water and sewer infrastructure.
- Bids were opened and read aloud on Monday, December 28, 2009 at 2:00 p.m. Three (3) companies submitted bids ranging from \$467,000 to \$640,000.
- The Bid Schedule required the bidder to break out prices for each existing location and also for each of the two (2) new vaults in Manassas that are not yet constructed. The two new vaults are still in design by Barnes and Johnson. They are included in the bid as future construction with the intention of adding them to the vault construction project by fall of 2010. The bids are as follows:

| <b>Bidder</b>  | <b>All Existing Locations</b> | <b>Future Manassas Vaults</b> |
|----------------|-------------------------------|-------------------------------|
| M.C. Dean      | \$639,707                     | \$84,600                      |
| Ennis Electric | \$533,900                     | \$68,000                      |
| Transdyn, Inc. | \$466,798                     | \$93,418                      |

"All Existing Locations" are as follows:

1. Master Unit at Public Works
2. Blooms Quarry tank, metering vault and pump station
3. Joshua Court tank and pump station
4. Mathis tank

5. Euclid Avenue metering vault
6. Rugby Road metering vault (owned by Prince William County Service Authority (PWCSA))
7. Conner Drive metering vault (owned by PWCSA)
8. Roseberry metering vault (owned by PWCSA)
9. Mathew Drive Wastewater pump station
10. Cynthia Drive Wastewater pump station
11. 20' and 30' antennae poles as needed for line-of-sight.

- Transdyn, Inc. is the apparent low bidder and has been found to be both responsive and responsible.
- Transdyn's bid for "All Existing Locations" (second column above) is higher than the FY10 SCADA approved budget of \$300,000. However, because the bid schedule required a breakdown of pricing for the master unit at the Public Works facility and at each individual location, the City has the flexibility of deferring work at some locations to FY11.
- Staff propose two options for funding the project:
  1. Fund the entire scope of work for existing locations in the amount of \$466,798; \$300,000 from approved FY10 SCADA funds; and \$166,798 from funding for the FY10 sewer and manhole relining project (\$171,250 budgeted). If this option is approved, staff will resubmit the sewer and manhole relining project in the FY11 budget.

Pros: Avoid potential price increases or additional mobilization costs.

Cons: Staff will have to defer another FY10 scheduled water/sewer project.
  2. Fund all locations except the PWCSA vaults (Conner, Roseberry, Rugby) and the Euclid vault, which total \$172,791. With deferral of the PWCSA vaults and Euclid vault to FY11, the total cost of the project in FY10 will be \$294,007 and within the FY10 SCADA budget.

Pros: The PWCSA vaults are not currently being used in routine operation of the system. They are redundant emergency metering vaults.

The Euclid Vault is active now but when the new vaults in Manassas are constructed and on-line it will be a redundant emergency source.

Cons: Potential for price increases or additional mobilization costs if postponed.

**Alternatives/Recommendations:**

- A. Authorize staff to enter into an agreement with Transdyn, Inc. to install SCADA at all "existing locations" in the amount of \$466,798 with the option to extend the contract to fund the two Manassas vaults within a period of time acceptable to the City Attorney. Make up the SCADA budget shortage by deferring the sewer and manhole project to FY11. **This is staff's recommended alternative.**
- B. Authorize staff to enter into an agreement with Transdyn, Inc. to install SCADA at all "existing locations" except the Euclid, Rugby Road, Roseberry, and Conner metering vaults (existing) in the amount of \$294,007 with the option to extend the contract to fund the remaining existing vaults and the two Manassas vaults within a period of time acceptable to the City Attorney.. **This alternative is not recommended by staff. However, it will address the most urgent need for SCADA installation and within FY10 budget.**
- C. Authorize either of Alternatives A or B without extension of the contract. **This alternative is not recommended by staff.**

D. Re-bid the project for the possibility of obtaining lower bids. **This alternative is not recommended by staff.**

E. Do nothing. **This alternative is not recommended by staff.**

**Recommendation:**

Authorize staff to enter into an agreement with Transdyn, Inc. to install SCADA at all "existing locations" in the amount of \$466,798 with the option to extend the contract to fund the two Manassas vaults within a period of time acceptable to the City Attorney. Make up the SCADA budget shortage by deferring the sewer and manhole project to FY11.

|                |   |                      |
|----------------|---|----------------------|
| <b>Review:</b> | City Business License: <u>Before starting project</u> | Date: <u>1/19/10</u> |
|                | Prepared by: <u>Kathleen R. Gammell</u>               | Date: _____          |
|                | Reviewed by: _____                                    | Date: _____          |
|                | Approved by City Attorney: _____                      | Date: _____          |
|                | Approved by City Manager: _____                       | Date: _____          |