



**CITY OF LODI  
COUNCIL COMMUNICATION**

**AGENDA TITLE:** Adopt Resolution Authorizing City Manager to Execute a Professional Services Agreement with ATEEM Electrical Engineering, Inc., of Sacramento, for a Supervisory Control and Data Acquisition (SCADA) System at the White Slough Water Pollution Control Facility (WSWPCF) **(\$310,000)**

**MEETING DATE:** February **16,2005**

**PREPARED BY:** PublicWorks Director

**RECOMMENDED ACTION:** That the City Council adopt a resolution authorizing the City Manager to execute a professional services agreement with ATEEM Electrical Engineering, Inc., of Sacramento, for a Supervisory Control and Data Acquisition (SCADA) System at the White Slough Water Pollution Control Facility (WSWPCF).

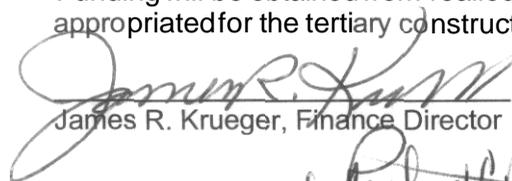
**BACKGROUND INFORMATION:** In the 2003-04 Capital Improvement Budget, funds were budgeted for the Phase 2 improvements at WSWPCF. During the development of the Wastewater Master Plan and the preliminary facility design, the need to include a SCADA system in the current construction phasing was identified.

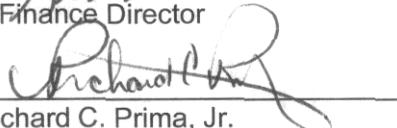
A SCADA system gives the user full access to the plant's information, which allows better decision making for process control. The information is reliable and accurate, so it is a better source than manually-collected data for regulatory reports and historical monitoring for design and process planning. This SCADA system will address deficiencies in the current control system, as well as combine the new tertiary facility controls at one location. The work includes provisions to expand the system to add facilities planned in the next construction phase.

ATEEM Electrical Engineering has been doing work for the City as a subcontractor to our current consultant, West Yost and Associates. As the entire project consists of the type of work in which ATEEM is highly proficient, it is appropriate to contract with them directly for this work. The attached proposal from ATEEM outlines the work to be done and will result in a complete and operable system for the City's use. The ATEEM proposal is for \$284,065. A contingency amount is included in the appropriation request of \$310,000.

**FUNDING:** Budgeted Fund: Funding will be obtained from reallocation of funds currently appropriated for the tertiary construction project.

Funding Available:

  
James R. Krueger, Finance Director

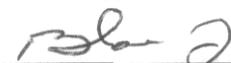
  
Richard C. Prima, Jr.  
Public Works Director

Prepared by Dei Kerlin, Assistant Wastewater Treatment Superintendent

RCP/DK/pmf

Attachment

cc: D. Steven Schwabauer, City Attorney  
Oci Kerlin, Assistant Wastewater Treatment Superintendent  
Rich Vogler, ATEEM Electrical Engineering

**APPROVED:**   
Blair King, City Manager



January 4, 2005

Mr. Del Kerlin  
City of Lodi  
1331 South Ham Lane  
Lodi, CA 95242-3995  
E-mail: [danderson@westyost.com](mailto:danderson@westyost.com)  
[dkerlin@lodi.gov](mailto:dkerlin@lodi.gov)

Location: City of Lodi, White Slough WPCF  
Subject: SCADA Construction Services Quotation & Scope of Work  
Project: Plant SCADA System

The following outline describes *A T.E.E.M.*'s Construction Services proposal for City of Lodi, White Slough WPCF SCADA improvements:

#### Phase 1

1. Replace existing Allen-Bradley hot standby PLC-5/40s with new hot standby PLC-5/80E Ethernet processors.
  - a. A TEEM will provide and install new PLC-5/80E processors to replace existing PLC-5/40 processors. A TEEM will thoroughly test system to ensure proper operation of the new hot standby PLC-processors. Involvement of Plant staff will be crucial in successful implementation and testing of the new 5/80E Hot Standby System.
2. Install RS View SCADA graphics on three new PCs to monitor existing plant PLC-5 RIO system.
  - a. A TEEM will install new Ethernet network to connect new PLC-5/80Es with three new RS View SCADA PCs.
  - b. Table 1 shows all existing PLC I/O that will be displayed on SCADA PCs.
  - c. Table 2 shows operator settable PLC registers that will be displayed.
3. Setup SCADA Graphics for PLC-5s with RIO which includes the following:
  - a. Plant overview Graphics Screen to display major plant systems with level and flow values where available.
  - b. Graphic Screens to reflect individual system process flow with items such as pump ready, run, failures etc.
  - c. Summary screens for process values and control setpoints.
  - d. Analog trends. (see table 3 for available values)

- e. Alarm history and summary. (see table 4 for available alarms)
  - f. SCADAalarm auto-dialer callout.
4. A TEEM will provide all training required to selected plant operation and maintenance staff so that they may in turn train other plant personnel.

#### Phase 2

1. Add SCADA graphics with autodialer callout for the Blower System (4 each SLC-5/05s and 1 each power monitor with Ethernet) to match those configured for Phase 1. Provide new Royce Dissolved Oxygen (DO) Analyzer to be installed by City Staff and PLC programming for DO control.:
  - a. A TEEM will provide and install network cabling to connect Blower 1–4 SLC-5/05s and utility power monitor to Ethernet hub located near PLC-5/80.
  - b. A TEEM will provide four (4) new Royce DO Analyzers. Analyzers to be installed by City Staff, one in each aeration basin (4 total).
  - c. A TEEM will add additional PLC programming for Blower fail to run alarms and blower remote set point functions. PLC programming will also be developed for DO control based on inputs from new DO analyzers.

#### Phase 3

1. Add SCADA graphics and autodialer alarm callout for the UV, Disk Filters and blower flow control (4 each SLC 5/05s with Ethernet) to match those created under Phase 1 & 2.

#### Phase 4

1. Configure automatic reports identified by City staff during Phases 1~3.

#### Phase 5

1. Provide PLC programming improvements. During Phases 1–3, a complete list of recommended PLC programming and hardware improvements will be generated and provided to the City with cost breakdown for approval. (see table 5 for preliminary list)

#### Notes:

1. Scope and Quotes for Phases 4 & 5 work will be re-evaluated at the completion of Phase 3. (Preliminary cost figures listed for Phase 4 & 5 are budgetary and ATEEM does not expect to exceed the amounts).

A ***T.E.E.M.*** SCADA Construction Services Phase 1–5 cost proposals as well as total cost breakdowns are on the attached spreadsheets.

All prices include overhead, profit, insurance, and travel expenses for site visits to the jobsite. Currently A T.E.E.M. has \$3,000,000 general liability and \$2,000,000 professional liability insurance in force.

*A T.E.E.M.* is dedicated to meet your needs by providing specialized design, consultant and management services. Please give us a call if you have any questions or require further information.

Sincerely,

Sharon M. Kimizuka, P.E  
A T.E.E.M. Electrical Engineer

**PLANT SCADA SYSTEM TOTAL**  
**A TEEM Electrical Engineering**  
**1/4/2005**

Type of Service: SCADA Services  
 Customer Name: City of Lodi  
 Project Name: Plant SCADA System  
 Location: City of Lodi, White Slough WPCF

Project No.: \_\_\_\_\_ Work Order No.: \_\_\_\_\_ Task No.: \_\_\_\_\_

		Hourly Rate:			
		\$100	\$90	\$60	
Phase	Description	FE	OE	TA	
1	PLC-5 RIO System	176	308	196	= 57,080
2	Blower System SCADA	202	164	112	= 41,680
3	UV & Disk Filter SCADA	56	188	128	= 30,200
4	Automatic Forms	40	24	16	= 7,120
5	PLC Programming Improvements	200	252	52	= 45,800
5	Materials				= 5,000
	Material Purchased by A TEEM				= 97,185
		<b>674</b>	<b>936</b>	<b>504</b>	<b>\$284,065</b>

**Total not to exceed cost:** \$284,065

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 Signature : Sharon M. Kimizuka, P.E. Date \_\_\_\_\_

Approval \_\_\_\_\_  
 \_\_\_\_\_  
 Signature Date \_\_\_\_\_  
 CHARGE NO.:

RESOLUTION NO. 2005-32

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING  
THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES  
AGREEMENT WITH ATEEM ELECTRICAL ENGINEERING, INC.,  
FOR A SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM  
AT THE WHITE SLOUGH WATER POLLUTION CONTROL FACILITY

---

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby authorize the City Manager to execute a professional services agreement with ATEEM Electrical Engineering, Inc., of Sacramento, for a Supervisory Control and Data Acquisition System at the White Slough Water Pollution Control Facility in an amount of \$284,065; and

BE IT FURTHER RESOLVED that funding will be obtained from a reallocation of funds currently appropriated for the tertiary construction project plus a contingency in a total amount not to exceed \$310,000.

Dated: February 16, 2005

---

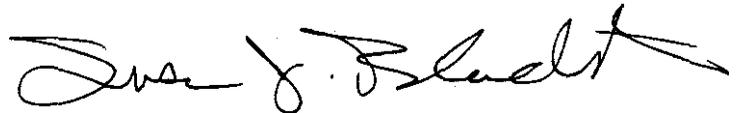
I hereby certify that Resolution No. 2005-32 was passed and adopted by the Lodi City Council in a regular meeting held February 16, 2005, by the following vote:

AYES: COUNCIL MEMBERS – Hansen, Hitchcock, Johnson, Mounce,  
and Mayor Beckman

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None



SUSAN J. BLACKSTON  
City Clerk

CITY COUNCIL

JOHN BECKMAN, Mayor  
SUSAN HITCHCOCK  
Mayor Pro Tempore  
LARRY D. HANSEN  
BOB JOHNSON  
JOANNE L. MOUNCE

CITY OF LODI  
PUBLIC WORKS DEPARTMENT

CITY HALL, 221 WEST PINE STREET  
P.O. BOX 3006  
LODI, CALIFORNIA 95241-1910  
(209) 333-6706  
FAX (209) 333-6710  
EMAIL pwdept@lodi.gov  
http://www.iodi.gov

BLAIR KING  
City Manager  
SUSAN J. BLACKSTON  
City Clerk  
O. STEVEN SCHWABAUER  
City Attorney  
RICHARD C. PRIMA, JR.  
Public Works Director

February 10, 2005

A T.E.E.M. Electrical Engineering  
Mr. Rich Vogler  
3123 Broadway  
Sacramento, CA 95817

SUBJECT: Adopt Resolution Authorizing City Manager to Execute a Professional Services Agreement with ATEEM Electrical Engineering, Inc., of Sacramento, for a Supervisory Control and Data Acquisition (SCADA) System at the White Slough Water Pollution Control Facility (WSWPCF) (\$310,000)

Enclosed is a copy of background information on an item on the City Council agenda of Wednesday, February 16, 2005. The meeting will be held at 7 p.m. in the City Council Chamber, Carnegie Forum, 305 West Pine Street.

This item is on the consent calendar and is usually not discussed unless a Council Member requests discussion. The public is given an opportunity to address items on the consent calendar at the appropriate time.

If you wish to write to the City Council, please address your letter to City Council, City of Lodi, P. O. Box 3006, Lodi, California, 95241-1910. Be sure to allow time for the mail. Or, you may hand-deliver the letter to City Hall, 221 West Pine Street.

If you wish to address the Council at the Council Meeting, be sure to fill out a speaker's card (available at the Carnegie Forum immediately prior to the start of the meeting) and give it to the City Clerk. If you have any questions about communicating with the Council, please contact Susan Blackston, City Clerk, at (209) 333-6702.

If you have any questions about the item itself, please call Del Kerlin, Assistant Wastewater Treatment Superintendent, at (209) 333-6749.



for:

Richard C. Prima, Jr.  
Public Works Director

RCP/pmf

Enclosure

cc: City Clerk