

FORM 7

TOWN OF MILLIS FISCAL YEAR 2014 BUDGET FALL TOWN MEETING	FORM #7 CAPITAL BUDGET AND MISCELLANEOUS REQUESTS
DEPARTMENT: Millis Department of Public Works DIVISION: Water Sewer REQUEST PRIORITY #: 1	
PROJECT TITLE: LOCATION: JUSTIFICATION FOR PROJECT (please attach copies of reports, master plans, or supporting documentation). Furnish temperature transmitters for 10 Water and Wastewater remote sites to the Scada system (please see attached scope of work).	
PROJECTED START DATE: ESTIMATED USEFUL LIFE: COST: <input checked="" type="checkbox"/> A. DESIGN B. LAND ACQUISITION C. CONSTRUCTION D. INSPECTION <input checked="" type="checkbox"/> E. EQUIPMENT TOTAL \$22,545.00	
ARE THERE ANY FORMS OF REIMBURSEMENT FOR THE PROJECT? NO	
IS THE PROJECT REVENUE PRODUCING, OR MAY OTHER FORMS OF REVENUE, OTHER THAN TAXATION, FUND THE PROJECT? NO	
EXPECTED ANNUAL OPERATION & MAINTENANCE COSTS No	
WILL THE PROJECT REMOVE PROPERTY FROM THE TAX LIST? NO	

MEMORANDUM



TO: James McKay
CC: Paul Couture
Sam Lacasse
FROM: Doug Tirrell
DATE: May 2, 2013
RE: Millis, Ma – Heater Modification Budgetary Estimate

Objective

The objective of this scope of services is to:

- Furnish temperature transmitters for installation by Owner's Electrician at ten (10) Water and Wastewater remote sites;
- Provide implementation, checkout and startup services to ensure proper operation of the temperature transmitters, PLC programming, HMI screens and OIT screens to control the unit heaters at the remote sites based on temperature set points entered into the SCADA system.

Scope of Services

Task 1 – Furnish Temperature Transmitters

Work under this task includes the following:

Woodard & Curran shall furnish analog temperature transmitters (Omega model number EWS-TX) to measure the ambient temperature inside the stations being modified. These transmitters shall be given to the Owner's Electrician for installation at locations designated in the Plans, and agreed upon with the Owner.

Task 2 – Installation and Termination of Cable, Conduit and Relays

Work under this task includes the following:

The Owner's Electrician (contracted by the Owner) shall install a remote 240VAC relay in the vicinity of each unit heater that requires the switching of the heater's supply voltage (208VAC or 240VAC), as indicated on the Plans. The Owner's Electrician shall provide cable and conduit between this relay and the unit heater.

The Owner's Electrician shall install cable and conduit for the following connections:

- #18AWG TSP between each temperature transmitter and the SCADA panel at each project location
- (2) #14AWG between the SCADA panel and (a) each unit heater, if there is no requirement to switch greater than 120VAC; or (b) the remote relay mounted in



the vicinity of each unit heater that requires switching of the heater's supply voltage, as indicated on the Plans.

The Owner's Electrician shall be responsible for termination of the cables at the remote relays and the unit heaters. The Owner's Electrician shall be responsible for termination of the cables within the SCADA panels, at the direction of Woodard & Curran staff.

Task 3 – Implementation, Checkout and Startup

Work under this task includes the following:

Woodard & Curran shall modify existing PLC programs and HMI screens to provide Owner's staff the ability to monitor the temperature at each station, select a temperature set point at which the unit heaters will be operated, alarm at low temperature conditions and trend the temperature measurements at each station.

Woodard & Curran and the Owner's Electrician shall perform checkout of the connections between the SCADA panels, the new temperature transmitters and the unit heaters to ensure correct wiring and terminations.

Woodard & Curran shall test the functionality of the equipment and the programming to ensure the system operates as intended by the Owner's staff.

Task 4 – Training

Work under this task includes the following:

Woodard & Curran shall hold two 1-hour training sessions for Owner's staff to instruct them on the use of the new temperature monitoring and control at the water/wastewater stations, including the set points, alarms and trends.

Task 5 – Project Closeout

Work under this task includes the following:

Woodard & Curran shall provide one (1) hard copy and one (1) electronic copy of each set of SCADA control panel drawings updated to reflect the addition of temperature monitoring and control.



Water Sites			
Site Name	# of Unit Heaters	# of Transmitters	# of Added Relays
D'Angelis WTF	3	2	0
Well #1	1	1	0
Well #2	1	1	0
Well #4	2	1	0
Corrosion Control	4	2	0
Well #5	2	1	1
Well #6	2	1	1
Wastewater Sites			
DPW Sewer Station	1	1	1
Norfolk Road	1	1	0
Timberline Road	2	2	2

Budgetary Estimate:

Electrical Sub (to be contracted by Owner)	\$13,450.00
Furnish Temperature Transmitters (13)	\$1,650.00
Implementation, Checkout and Startup	\$5,150.00
Training	\$300.00
Project Closeout	\$1,995.00

Total \$22,545.00