

## SECTION 17316

### PROCESS CONTROL SOFTWARE SYSTEMS

#### PART 1--GENERAL

##### 1.01 DESCRIPTION

###### A. SCOPE:

This section specifies software systems for the process control system real-time human-machine interface (HMI) and historical data management system. The programming and configuration of these software systems shall be performed in accordance with Specification 17990.

Provide software for SCADA system workstation and viewnodes shown on project drawing E-040. Workstations shall include full featured, development-type software allowing for full use and modifications of the SCADA system for control and monitoring purposes, and allows modification to the HMI programming including changes to screens or development of new HMI screens. Viewnodes shall have software that as a minimum allows monitoring of SCADA system status, review of alarms, etc., but will not be required to have capability to change programming or develop new HMI screens.

Where workstations or viewnodes are noted as existing, Contractor shall provide software for the City/District furnished computer. Contractor shall provide City/District with minimum requirements for the workstations and viewnodes to be furnished by the City/District and shall install the specified software on them when they are furnished.

Provide all software systems in accordance with software manufacture's recommendations unless specifically specified otherwise.

Contractor shall provide computer workstations with software.

Contractor shall install software on City/District furnished viewnodes. City/District viewnodes will be Intel Core 2 duo, 2.8GHz, 2GB Memory with Windows 7 operating system, or equivalent.

The products described in this specification will be provided by the Contractor.

##### 1.02 SUBMITTALS

The following information shall be provided in accordance with Section 01300:

1. Manufacturer's product literature for all software systems.

2. Manufacturer's recommended hardware requirements for optimum operation of each software system.

3. A copy of this specification section, with addendum updates included, and all referenced and applicable sections, with addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. Check marks (✓) shall denote full compliance with a paragraph as a whole. If deviations from the specifications are indicated and, therefore requested by the Contractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications. The submittal shall be accompanied by a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

4. Computer workstations.

Computer workstations are specified in Section 17318.

## PART 2--PRODUCTS

### 2.01 ACCEPTABLE PRODUCTS

This specification is based on Wonderware INTOUCH products and, by virtue of this reference, establishes the level of performance, functionality, and quality for any products offered in lieu of the referenced products including the named manufacturers. The City/District has chosen these products to be used in their modified SCADA system. No other products will be accepted.

Software products shall be the most recent version.

The acceptable products of manufacturers of process control software systems are as follows:

#### A. Real-time Human-Machine Interface

1. WonderWare Intouch HMI
2. Wonderware Historian
3. Wonderware HMI Reports
4. SCADAAlarm paging utility
5. InTouch for Terminal Services or approved equal

#### B. Process Database System

1. City/District shall furnish Microsoft SQL Server or compatible

## 2.02 SOFTWARE LICENSING

All process control system software products shall be licensed in the City/District's name. The number of licenses for each process control system server application including communication drivers shall be as required to implement the process control system as specified herein and detailed on the Drawings. The number of licenses for process control system client applications shall be as specified in Table 2.02:

Table 2.02

<u>Software Application</u>	<u>Number of Licensed Copies</u>	<u>Notes</u>
Process Control System Real-time HMI Data Server, Client and Trending	3	2000 tag count minimum includes PLC communications drivers, Ethernet driver, and configuration Utilities (Furnish one full-featured development license)
Process Control System Real-time HMI Data Server, Client and Trending Or InTouch for Terminal Services	6 6	2000 tag count minimum, Runtime license
Historical Data Management System	1	

## PART 3--EXECUTION

### 3.01 PROCESS CONTROL SOFTWARE SYSTEM PROGRAMMING

Process control system software shall be programmed and configured in accordance with the requirements of Specification 17315.

### 3.02 TRAINING

Contractor shall include as work of this specification the cost of all enrollment fees, round trip air travel, local ground transportation, and lodging for five (5) of the City/District's personnel to attend a 5 day training course addressing the programming and development of the process control software systems.

The Contractor shall provide the services of the systems integrator for the purpose of training the City/District's personnel in the proper operation of the process control system graphical operator interface.

Training shall address the use of each graphical interface display and the underlying control logic associated with each control and monitoring function as well as the use of all system utilities.

Training shall consist of 40 hours of classroom training conducted in two 4-hour sessions per day. The same material shall be presented in each session.

Training shall comply with Section 01664 and shall be certified on form 11000-B specified in Section 01999.

**\*\*END OF SECTION\*\***