

## **1.00 ELEVATED STORAGE TANK CONTROL PANEL (EST)**

### **a) GENERAL**

#### **1) SCOPE**

The scope of this section of the specifications includes the furnishing and installation of an Elevated Storage Tank Control Panel, as called for on the plans, complete as described herein, as manufactured by TEI Controls, Cedar Park, Texas (512) 259-2977. The Control Panel is to provide level sensing, digital indication, 2-stage level control and alarm output for the elevated storage tank.

#### **2) ENCLOSURE**

The Control Panel electrical devices, components and wiring shall be housed in a Nema 4X fiberglass enclosure with stainless steel hardware. The enclosure shall have a hasp or other attachment to enable the Owner to lock the enclosure with a padlock. No devices or components are to be mounted on the enclosure door or the side, top or back enclosure walls.

#### **3) INTERIOR DEADFRONT**

The Control Panel shall have an interior deadfront panel of non-conducting plastic materials in the enclosure to limit direct access to the electrical devices, components, and wiring on a separate backplate. The interior deadfront will have a graphic representation and the following devices will be installed:

- i) Digital Level Indicator/Controller
- ii) HOA Switch for stage 1 level control
- iii) HOA Switch for stage 2 level control
- iv) HOA Switch for level alarm control
- v) Fuseholder for the Level Indicator/Controller fuse
- vi) Fuseholder for the 24Vdc loop power supply fuse
- vii) Fuseholder for the 4-20mA instrumentation loop fuse

#### **4) BACKPLATE**

The Control Panel shall have an aluminum backplate inside the enclosure behind the deadfront. The backplate shall be raised off the back wall of the enclosure. The backplate shall hold the bulk of the electrical devices, components, and wiring. The backplate shall have terminals for all connections external to the Control Panel.

#### **5) DOCUMENTATION**

Documentation shall be provided on the Control Panel for:

- i) Installation, configuration, and operating instructions
- ii) Wiring schematic showing all devices and components
- iii) Description of Control Panel functions

#### **6) INSTALLATION**

The installation of the Control Panel and its external connection to the source of power, solenoid and alarms shall comply with the National Electrical Code, local supplemental codes, and the recommendations of the Control Panel manufacturer.

#### **7) ACCEPTABLE MANUFACTURERS**

- i) TEI Controls, 212 Industrial Blvd., Cedar Park, TX 78613 (512) 259-2977
- ii) Or pre-approved equal

**b) MAJOR ELECTRICAL DEVICES AND COMPONENTS**

**1) LEVEL INDICATOR/CONTROLLER**

The Level Indicator/Controller shall be a model CN76133 as manufactured by Omega, or an approved equal, and provide the following functions:

- i) Digital indications of the level of water in the tank in feet
- ii) Digital indication of the setpoint value
- iii) Adjustable setpoints for 2-stage level control
- iv) Independent deadband settings for each stage adjustable in feet
- v) Adjustable setpoints for low and high level alarm

**2) LEVEL TRANSMITTER**

The Level Transmitter shall be a model PX605 thin-filmed type of stainless steel construction with the range of 0-60 psi/138.6ft (other ratings are available) as manufactured by Omega or an approved equal.

END OF SECTION