SECTION 221429 - SUMP PUMPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sump pumps.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Wiring Diagrams: For power, signal, and control wiring.

C. Operation and maintenance data.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. UL Compliance: Comply with UL 778 for motor-operated water pumps.

PART 2 - PRODUCTS

2.1 ELEVATOR SUMP PUMP

A. Submersible, Fixed-Position, Single-Seal Sump Pump:

1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

a. Stancor, Inc.
b. Weil Pump Co.
c. Zoeller Company.

2. Provide pump and control systems capable of pumping water while containing oil. The system shall function automatically and shall provide for an alarm and separate LED lights in the event of (a) the presence of oil in the sump, (b) high liquid in the sump, or (c) high amps or a locked rotor condition. In addition, LED lights shall be provided for (1) power and (2) pump run function. An alarm that sounds only in the event of a high liquid condition or does not separately identify the above five functions shall not be acceptable.

3. The pump shall be a submersible type and shall be approved to UL 778 standards and shall include thermal and overload protection. The motor housing shall be constructed of #304 stainless steel and mechanical seats shall be housed in a separate oil-filled compartment.

4. The main control shall be approved to UL 508 standards and housed in a gasketed NEMA 4X enclosure with a see-through window for observation of operating functions. The control shall be equipped with an 8-pin twist lock receptacle, dual solid state Oil-Minder relays with variable sensitivity settings, an over current relay, self-cleaning stainless steel sensor probe, high decibel warning horn with alarm silencing switch, dual floats, clearly marked terminal board and remote monitoring contact. A NEMA 4X junction box with 8-pin twist-lock electrical receptacle and 25' (additional lengths if required shall be provided) of mating 8 conductor cable shall be provided. All cables between the pump and junction box shall be 16' long and the cable and plug from the control unit shall be 8' long. The control unit, junction box, pump, floats and sensor shall be factory assembled as a complete, ready-to-use system and shall be tested and approved as a complete system by a nationally recognized testing laboratory such as ENTELA. The system shall allow for the main control to be located outside of the elevator hoistway to be monitored for all functions without having to enter the elevator shaft.

2.2 SUMP PUMP CAPACITIES AND CHARACTERISTICS

A. For capacities and electrical characteristics see schedule on drawings.

B. Number of Pumps: See schedule on drawings.

2.3 MOTORS

A. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 22 Section "Common Motor Requirements for Plumbing Equipment."

1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
2. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.

B. Motors for submersible pumps shall be hermetically sealed.

2.4 SUMP-PUMP BASINS AND BASIN COVERS

A. Basins: See detail on drawings.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavation and filling are specified in Division 31 Section "Earth Moving."

3.2 INSTALLATION

A. Pump Installation Standard: Comply with HI 1.4 for installation of sump pumps.

END OF SECTION 221429

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