SECTION 43 21 17 – HOISTS AND CRANES

PART 1 - GENERAL

Furnish all labor, materials, equipment and incidentals required to install Davit crane (manufactured by Thern, Inc.), Series ENSIGN 1000 or approved equal.

Manufacturer shall have a minimum of 5 years' experience producing substantially similar equipment. Quality Assurance: manufacturer shall be registered ISO 9001:2000 compliant with an independent certification agency approved by the International Organization for Standardization.

PART 2 - PRODUCTS

2.1 CRANE DETAILS

Manufacturer: Crane shall be as manufactured by Davit (Thern, Inc.), ENSIGN 1000 (B-4) or approved equal with with flush mount base 5BF10.

Crane will be designed with an ultimate design factor greater than 3:1 for all components including the lifting winch and base. Crane shall be capable of lifting 650 pounds at a minimum reach (mast center to hook center) of 48 inches. Contractor to ascertain High Service Pump and associated motor weight before ordering crane.

Boom shall have a maximum hook height of at least 96 inches measured from floor. Hook height shall be adjustable by moving the boom up or down between horizontal and 45 degrees from vertical, with a minimum of 76 inches between the lowest position and the highest position. Boom angle shall be fixed or adjustable with a hand operated screw jack acting to raise or lower the boom between horizontal and 45 degrees from vertical.

Wire rope shall pass over a sheave at the end of the boom. Sheave shall have a needle bearing. Minimum height of the boom shall be 68 inches between mounting surface and the underside of the boom.

Mast and boom shall rotate 360 degrees in the base on roller and tapered roller bearings (316-SS electropolished finish), with a rotational handle attached to mast to facilitate rotation, and 316-SS series rotational lock. Crane components shall be fastened together using solid steel pins.

Lifting winches shall be located such that the center point of the drive shaft is no more than 18 inches in front of the centerline of the mast. Crane shall be labeled with a non-corrosive metal identification plate labeled or imprinted with the manufacturer's name, model number, serial number, capacity rating, and other essential information.

Finish: Crane shall have a 3-step epoxy finish consisting of a primer, an epoxy coat, and a topcoat of polyurethane.

2.2 LIFTING WINCH

Lifting Winch: Winch shall have machine cut gears, an adjustable handle that mounts securely to the drive shaft, bronze and radial ball bearings, and a positive load holding Weston style brake able to stop and hold the load automatically if the winch handle is released.

2.3 WIRE ROPE

Wire Rope: Wire rope construction shall be 7 x 19 type 304 stainless steel cable.

Hooks: Latch type hooks shall be used and shall be either non-rotating eye type or swivel type to allow 360-degree rotation under all load conditions. Hooks shall be heat treated drop forged type 304/316 stainless steel.

END OF SECTION