

SECTION 14245

HYDRAULIC ELEVATORS

1 PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract including General and Supplementary Conditions and Division 1 sections, apply to work of this section.

1.2 SECTION INCLUDES

- A. Passenger elevator systems.
- B. Motor and pump, controllers, equipment and fittings.

1.3 SYSTEM DESCRIPTION

- A. Hydraulic Elevator Systems: One unit, buried cylinder and casing, with motor and pump adjacent approximately 8 feet distant from the hoistway.
- B. Characteristics of each elevator are as follows:
 - 1. Rated Net Capacity: 2500 lbs.
 - 2. Rated Speed: 150 ft/min.
 - 3. Nominal Platform Size: 84x62 inches.
 - 4. Clear Net Platform Size: 80x52 inches.
 - 5. Cab Ceiling Height: 90 inches.
 - 6. Hoistway and Cab Entrance Frame Opening Sizes: 42x84 inches.
 - 7. Door Type: Single leaf.
 - 8. Door Operation: Side opening.
 - 9. Number of Stops: 4
 - 10. Number of Openings: 4
- C. Controls System: Conform to the following criteria:
 - 1. Single Car Automatic Collective Operation elevator control system.
- D. Special Operational Features:
 - 1. Key operated Fire Department Service
 - 2. Interconnect with building fire and smoke alarm system, with automatic recall to first floor.
 - 3. Door Edge Protective Device: Infrared multi-beam door reversal device.
 - 4. Emergency Telephone: Single push button operation with automatic dialer.
 - 5. Seismic Design: In accordance with applicable BOCA code.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate the following minimum information on shop drawings:
 - 1. Motor and hydraulic pump, valves, and other component locations.
 - 2. Car, supporting beams, guide rails, and other components in hoistway.
 - 3. Loads on hoisting beams.

- E. Stainless Steel: ASTM A167 Type 304 #4 finish.
- F. Aluminum: ASTM B221 ASTM B221M, extruded.
- G. Plastic Laminate: General Purpose type, fire retardant finish, matte surface finish, color/pattern as selected.
- H. Motors, Pumps, Valves, Regulators, Fluid Tank, Hydraulic Fluid, Controller, Controls, Buttons, Wiring and Devices, Indicators: UL approved.
- I. Spring Buffers, Attachment Brackets and Anchors: Purpose designed, sized according to code with safety factors.
- J. Guides: T-shaped steel cab guide rails with 4" roller guides.
- K. Pump Housing: Sheet steel, acoustically insulated, removable.

2.2 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Electrical Characteristics:
 - 1. 208 volts, three phase, 60 Hz.
 - 2. Starter Characteristics: Reduced voltage.
- B. Motor: NEMA MG1.
- C. Disconnect Switch: Factory mount disconnect switch in control panel.
- D. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

2.3 CAB FABRICATION

- A. Flooring: Carpet, of type specified in Section 09680
- B. Walls: Plastic laminate on plywood
- C. Front Return Panel: Stainless steel.
- D. Base: Resilient vinyl cove , of type specified in Section 09650
- E. Ceiling: Plastic eggcrate diffuser
- F. Light Fixtures: Fluorescent
- G. Ventilation: Fan , grille above ceiling;
- H. Control Panel and Face Plate: Stainless steel with illuminating call buttons.
- I. Indicator Panel: above control panel with illuminating position indicators.
- J. Hand Rail: Stainless steel flat bar stock, spaced from wall; placed at rear wall and side walls.

3.2 EXCAVATION AND BACKFILLING FOR CASING

- A. Excavation and Backfilling: Refer to Section 02200
- B. Place plunger casing full depth of shaft. Align within 1/4 inch from plumb. Cut top of casing at hoistway pit slab elevation.
- C. Backfill around plunger and hydraulic lines between plunger and remote machine room casing with structural type fill; placed in 24 inch lifts compacted to 95%

3.3 INSTALLATION

- A. Install in accordance with ASME A17.1.
- B. Install system components and connect to building utilities.
- C. Accommodate equipment in space indicated.
- D. Install elevator hydraulic equipment on vibration isolation pads.
- E. Coordinate installation of hoistway wall construction.
- F. Grout sills in place. Set entrances in vertical alignment with car openings and aligned with plumb hoistway lines.
- G. Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort.
- H. Adjust automatic floor leveling feature at each floor to achieve 1/4 inch from flush.

3.4 TESTS BY REGULATORY AGENCIES

- A. Obtain required permits to perform tests. Perform tests required by regulatory agencies.
- B. Schedule tests with agencies and Architect/Engineer, Owner, and Contractor present.

END OF SECTION