SECTION 14 2100 – ELECTRIC TRACTION ELEVATORS

1.1 SUMMARY

A. This Section includes electric traction passenger and service elevators.

B. See Chapter 5, Division 01, Section 017700.1.1.B.1.i Closeout Procedures - Project Record Documents for equipment list requirements for all equipment provided in this section.

1.2 DEFINITIONS

A. Definitions in ASME A17.1 apply to work of this Section.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with ASME A17.1.

B. Seismic Performance: Provide elevators capable of withstanding the effects of earthquake motions determined according to the requirements of the Building Code of New Hampshire.

C. Accessibility Requirements: Comply with Section 407 in ICC A117.1.

D. Fire-Rated Hoistway Entrance Assemblies: Door and frame assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252.

1.4 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, provide one year's full maintenance service by skilled employees of elevator Installer. Include periodic preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper elevator operation at rated speed and capacity. Provide parts and supplies same as those used in the manufacture and installation of original equipment.

B. Perform maintenance, including emergency callback service, during normal working hours.

C. Include 24-hour-per-day, 7-day-per-week emergency callback service.

D. Continuing Maintenance Proposal: Provide a continuing maintenance proposal from Installer to Owner, in the form of a standard five-year maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.
CHAPTER 5 – TECHNICAL CONSTRUCTION AND RENOVATION STANDARDS

ELECTRIC TRACTION ELEVATORS

1.5 MANUFACTURERS

A. Product Elevators: Subject to compliance with requirements, provide gearless traction elevators as manufactured by Otis Elevator Co., as specified in Elevator Schedule at the end of this Section, or comparable by one of the following:

1. Kone Ecospace
2. ThyssenKrupp Elevator.
3. Otis Gen II Elevator
4. Or owner considered and approved comparable.

B. Signal Fixtures and Equipment shall be manufactured by PTL Equipment Mfg. Co.

C. Controllers shall be manufactured by Elevator Equipment Corporation, Motion Control Engineering, Inc., or G.A.L. Manufacturing Corporation.

1.6 DESCRIPTION OF EQUIPMENT

A. Car Top Inspection Station: Yes.

B. Emergency Car Lighting: Yes.

C. Emergency Operation: Fireman’s Service – Phase I and II, with Barrel-Key FE 01.

D. Floor Designations: Enter per UNH Scheme (e.g. B1, B, G, 1, 2, 3, . . .).

E. Independent Service: Key switch by elevator contractor; ASSA 6000 high security cylinder, provided and keyed by Owner.

F. Keyed Lockout:

1. In-car for Levels: All Attic and mechanical rooms shall include In-Car lock out, cylinder by ASSA 6000, keyed per UNH Hardware Services. {Indicate In-Car Lock-out Levels (e.g. None, Level B, etc.).}
2. Key switches by elevator contractor; ASSA 6000 high security cylinder, provided and keyed by Owner.

G. Sills: Extruded Aluminum.

H. Isolation: Yes.

I. Rail Backing: Comply with seismic code requirements.

J. Casing: Yes.

K. Cylinder: Yes, with PVC protection.

L. Plunger: Yes.

M. Wiring Diagrams: Provide with O&M Manuals.
N. Mechanical Drawings and Cuts: Provide with submittals; include with O&M manuals.

O. Documentation: Provide three (3) complete bound sets of O&M Documentation for all materials and products incorporated into the elevator construction. Refer to Chapter 5, Division 01, Section 011000, if applicable, for more information.

P. Special Features:
   1. Disabilities Act (ADA); comply with current guidelines.
   2. Car Door Full Length Detection Device.
   3. Two-Way Communication, one touch auto dial, built-in; EMS brand preferred.
   5. Tank Heater to maintain temperature of oil at minimum of 100 degrees.
   6. Battery backup for controlled descent to lowest level of egress in event of power loss; with relay(s) as needed to allow interruption by shunt trip when initiated by heat detector activation.
   7. Key switches for in-cab light, fan, hold-open features – cylinders by ASSA.

1.7 FINISH MATERIALS

A. General: Provide the following materials for exposed parts of elevator car enclosures, car doors, hoistway entrance doors and frames, and signal equipment as indicated.

   1. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, commercial steel, Type B, exposed, matte finish.
   2. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, commercial steel, Type B, pickled.
   3. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304.
   4. Stainless-Steel Bars: ASTM A 276, Type 304.
   5. Stainless-Steel Tubing: ASTM A 554, Grade MT 304.
   8. Plastic Laminate: High-pressure type complying with NEMA LD 3, Type HGS for flat applications and Type BKV for panel backing.

1.8 CAR ENCLOSURES

A. General: Provide steel-framed car enclosures with nonremovable wall panels, with removable car roof, access doors, power door operators, and ventilation.

   1. Provide standard railings complying with ASME A17.1 on car tops where required by ASME A17.1.

B. Materials and Finishes: Provide manufacturer’s standards, but not less than the following:

2. Capacity: Minimum 4000 lbs, but must meet stretcher dimensions requirements of IBC 2006 or current code.
3. Floor Finish: Specified in Chapter 5, Division 09 Sections.
4. Enameled-Steel Wall Panels: Flush, hollow-metal construction; fabricated from cold-rolled steel sheet. Provide with factory-applied enamel finish; colors as selected by Architect from manufacturer's full range.
5. Stainless-Steel Wall Panels: Flush, hollow-metal construction; fabricated from stainless-steel sheet.
6. Plastic-Laminate Wall Panels: Plastic laminate with manufacturer's standard protective edge trim. Panels have a flame-spread index of 25 or less, when tested according to ASTM E 84. Plastic-laminate color, texture, and pattern as selected by Architect from plastic-laminate manufacturer's full range.
7. Fabricate car with recesses and cutouts for signal equipment.
8. Fabricate car door frame integrally with front wall of car.
10. Sight Guards: Provide sight guards on car doors.
11. Sills: Extruded metal, with grooved surface, 1/4 inch (6.4 mm) thick.
12. Luminous Ceiling: Fluorescent light fixtures, T-% lamps program start ballast, 3500 Kelvin temp lamps 80% CRI or better and ceiling panels of translucent acrylic or other permanent rigid plastic.
13. Handrails: Manufacturer's standard handrails, of shape, metal, and finish indicated.

1.9 HOISTWAY ENTRANCES

A. General: Provide manufacturer's standard horizontal-sliding, door-and-frame hoistway entrances complete with track systems, hardware, sills, and accessories. Provide frame size and profile to coordinate with hoistway wall construction.

B. Materials and Fabrication: Provide manufacturer’s standards, but not less than the following:

2. Stainless-Steel Doors: Flush, hollow-metal construction; fabricated from stainless-steel sheet.
4. Sills: Extruded metal, with grooved surface, 1/4 inch (6.4 mm) thick.

1.10 ELEVATOR SCHEDULE

A. Model: GEN2®; as manufactured by Otis Elevator.

1. Type: Gearless traction.
2. Machine Location: Hoistway; no machine room is provided.
3. Rated Load: 2,500 lb (1135 kg).
4. Rated Speed: 350 fpm (1.8 m/s).
5. Operation System: Selective collective automatic operation or Group automatic operation.

B. Car Enclosures:

1. Front Walls (Return Panels): Satin stainless steel, No. 4 finish.
2. Car Fixtures: Satin stainless steel, No. 4 finish.
4. Reveals: Satin stainless steel, No. 4 finish.
6. Door Sills: Aluminum, mill finish.
7. Ceiling: Luminous ceiling.
8. Handrails: 1/2 by 2 inches (13 by 50 mm) rectangular satin stainless steel, No. 4 finish, at sides and rear of car.

C. Hoistway Entrances: As follows:

1. Type: Single-speed side sliding.
2. Frames: Satin stainless steel, No. 4 finish.
3. Doors: Satin stainless steel, No. 4 finish.
5. Hall Fixtures: Satin stainless steel, No. 4 finish.
6. Additional Requirements:
   a. Provide inspection certificate in each car, mounted under acrylic cover with frame made from satin stainless steel, No. 4 finish.

END OF SECTION 14 2100