

## SECTION 144200 - WHEELCHAIR LIFTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Vertical platform lifts.

##### B. Related Sections

1. Section 031000 – Concrete Forming and Accessories.
2. Section 032000 – Concrete Reinforcing.
3. Section 033000 – Cast-in-Place Concrete.
4. Section 042000 – Unit Masonry.

##### C. Reference and Industry Standards

1. The following reference standards shall be applicable to this Section:
  - a. New York City Building Code, **current** edition, as amended, inclusive of:
    - Chapter 11 Accessibility
    - Chapter 30 Elevators and Conveying Systems
    - Appendix K: Modified Industry Standards for Elevators and Conveying Systems.
2. Industry Standards
  - ASME (American Society of Mechanical Engineers)
  - ASTM (American Society for Testing and Materials)
  - ICC (International Code Council, Inc.)

#### 1.2 ACTION SUBMITTALS

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

##### B. Shop Drawings: For each lift.

1. Include plans, elevations, sections, attachment details, and required clearances.
2. Indicate dimensions, weights, loads, and points of load to building structure.
3. Include diagrams for power, signal, and control wiring.

##### C. Wheelchair lift *Contractor* shall file the necessary plans and applications with the New York City Department of Buildings to obtain the required permits and approvals. All work shall be done in a neat and workmanlike manner and in accordance with the rules and regulations of any city agency having jurisdiction.

- D. The wheelchair lift *Contractor* shall obtain (if any) all wheelchair lift violation dismissals from the Department of Buildings pertaining to violations on file. Any additional violations must be brought to the attention of the Design-Professional-of-Record.

### 1.3 INFORMATIONAL SUBMITTALS

- A. Product certificates.
- B. Sample warranty.

### 1.4 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.
- B. Inspection and acceptance certificates and operating permits.

### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

### 1.6 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of lifts that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: [**Two**] [**Three**] [**Five**] years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Comply with applicable provisions in:
  - a. ICC A117.1, current edition.
  - b. An approved waiver to certain specific requirement of **Section 410 Platform Lifts** of ICC A117.1 (if applicable) must be filed with the Department of Buildings.
  - c. BC §28-101.4.3 Optional Use of the 1968 Building Code for work on Prior Code Buildings; exception 5. Accessibility.
- B. Regulatory Requirements: Comply with ASME A18.1, Safety Standard for Platform Lifts and Stairway Chairlifts.

### 2.2 VERTICAL PLATFORM LIFT

- A. Vertical Platform Lift, General: Pre-engineered lift system.
- B. Platform Size: 36 by 56 inches.

- C. Door Operation and Clear Opening Width: Low-energy, power-operated doors that remain open for 20 seconds minimum; end door with minimum 32-inch clear opening width.
  - D. Rated Speed: [8 fpm] [10 fpm] [17 fpm] [20 fpm] [30 fpm] <Insert value>.
  - E. Power Supply: Electric.
    - 1. Electrical Characteristics:
      - a. Horsepower: [1/2] [1] [2] [3] <Insert value>.
      - b. Voltage: [115-V ac] [230-V ac], single phase, 60 Hz.
      - c. Voltage: [208-V ac] <Insert value>, three phase, 60 Hz.
      - d. Voltage: [24-V dc battery with 115-V ac, 60-Hz, single-phase charger] <Insert requirement>.
  - F. Emergency Operation: Provide manual operation and battery power system to raise or lower unit to a landing in case of malfunction or power loss.
  - G. Self-Supporting Unit: Support vertical loads of unit only at base, with lateral support only at landing levels.
  - H. Runway Enclosure: Manufacturer's standard enclosure assembly.
    - 1. Runway Enclosure: Rectangular steel-tube frame with flush steel-sheet panels.
    - 2. Runway-Enclosure Doors: Rectangular steel-tube frame with flush steel-sheet panels.
- Note: Design-Professional-of-Record to Choose from I, J or K for Platform Enclosure and Door Construction.**
- I. Platform: Steel sheet or galvanized-steel sheet with manufacturer's standard black rubber flooring.
  - J. Platform Enclosure and Door: Rectangular steel-tube frame with flush steel-sheet panels.
  - K. Platform Enclosure and Door: Extruded-aluminum frame with flush galvanized-steel-sheet panels.
  - L. Ramp: Retractable ramp matching platform to provide transition from lower floor to lift platform. Ramp lowers to floor automatically when lifts reach lower landing and door opens. Ramp rises automatically when lift control is activated for lift to leave lower landing.
    - 1. Ramp Size: End ramps a minimum of 32 inches wide; length as required for slope.
    - 2. Ramp Slope: Maximum 1:12 subject to field conditions.
    - 3. Ramp Finish: Finish ramps to match lift platform.
  - M. Accessories: Provide units with the following accessories:
    - 1. Fold-down seat with seatbelt.
    - 2. Lighting system within lift enclosures as selected by Design-Professional-of-Record from manufacturer's available products.

## 2.3 MATERIALS

- A. Steel Plates, Shapes, and Bars: ASTM A36.
- B. Steel Tubing: ASTM A500.
- C. Steel Pipe: ASTM A53; standard weight (Schedule 40) unless otherwise indicated or required by loads.
- D. Steel Sheet: ASTM A1008, cold-rolled commercial steel (CS) or ASTM A1011 hot-rolled, commercial steel (CS); as required for each use.
- E. Inserts: Furnish required concrete and masonry inserts and similar anchorage devices for installing structural members, guide rails, machines, and other lift components where installation of devices is specified in another Section.
- F. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

## 2.4 FASTENERS

- A. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on as appropriate for the substrate.
  - 1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B633 or ASTM F1941, Class Fe/Zn 5, unless otherwise indicated.
  - 2. Material for Exterior Locations: [**Alloy Group 1 (A1)**] [**Alloy Group 2 (A4)**] stainless-steel bolts, ASTM F593, and nuts, ASTM F59.

## 2.5 FINISHES

- A. Steel Factory Finish: Manufacturer's standard baked-enamel or powder-coat finish.
  - 1. Color and Gloss: As selected by Design-Professional-of-Record from manufacturer's full range.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Minimum Headroom Clearance: Verify that installed lift will have a minimum headroom of **80** inches above any point on platform floor at any point of travel.

### 3.2 INSTALLATION

- A. General: Comply with ASME A18.1 and manufacturer's written instructions for installation of lifts unless otherwise indicated.

- B. Wiring Method: Conceal conductors and cables within housings of units or building construction. Do not install conduit exposed to view in finished spaces.
- C. Coordinate runway doors with platform travel and positioning, for accurate alignment and minimum clearance between platforms, runway doors, sills, and door frames.
- D. Position sills accurately and fill space under sills solidly with non-shrink, non-metallic grout.
- E. Coordinate platform doors with platform travel and positioning.
- F. Adjust stops for accurate stopping at each landing.
- G. Adjust retractable ramps to meet maximum allowable slope and change-in-elevation requirements, and to lie fully against landing surfaces.
- H. Lubricate operating parts of lift, including drive mechanism, guide rails, hinges, safety devices, and hardware.

### 3.3 FIELD QUALITY CONTROL

- A. Acceptance Testing: On completion of lift installation and before permitting use of lifts, perform acceptance tests as required and recommended by ASME A18.1 and authorities having jurisdiction.
- B. Operating Test: In addition to acceptance testing, load lifts to rated capacity and operate continuously for 30 minutes between lowest and highest landings served. Readjust stops, signal equipment, and other devices for accurate stopping and operation of system.

### 3.4 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain lifts. Include a review of emergency systems and emergency procedures to be followed at time of operational failure and other building emergencies.
- B. Check operation of lifts with Owner's personnel present and before date of Substantial Completion. Determine that operating systems and devices are functioning properly.
- C. Check operation of lifts with Owner's personnel present not more than one month before end of warranty period. Determine that operating systems and devices are functioning properly.

### 3.5 MAINTENANCE SERVICE

- A. The installer shall furnish maintenance and call-back service on each wheelchair lift after it is completed and placed in operation for a period of one (1) year. This service shall consist of examinations of the equipment, adjustments, lubrication, cleaning, supplies and parts to keep the equipment in proper operation, except such adjustments, parts or repairs made necessary by abuse, misuse or any other causes beyond the control of the contractor. All work will be done by trained employees of the contractor during regular working hours of the trade

**END OF SECTION 144200**