

SECTION 14215 [14 41 00]

INCLINED ELEVATOR

Display hidden notes to Specifier by using "Tools"/"Options"/"View"/"Hidden Text".

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Commercial incline elevator.
 - B. Residential incline elevator.

1.2 RELATED SECTIONS

- A. Section 03300 Cast-In-Place Concrete: Anchor placement in concrete.
- B. Section 02465 Helical Screw Piles.
- C. Section 04800 Masonry Assemblies: Anchor placement in masonry.
- D. Section 05500 Metal Fabrications: Miscellaneous supports.
- E. Section 06100 Rough Carpentry: Platform and blocking in framed construction for lift attachment.
- F. Division 16 Electrical: Concealed low voltage control wiring.
- G. Division 16 Electrical for electrical service and disconnects, wire routing and connections, telephone service.
- H. Division 16 Electronic Safety and Security: Access control.

1.3 REFERENCES

1.

- A. American Society of Mechanical Engineers (ASME):
 - ASME A17.1 Safety Code for Elevators and Escalators.
 - a. 5.4 Private Residence Inclined Elevators (Residential).
 - b. 5.1 Inclined Elevators (Commercial).
 - 2. ASME A17.5 Elevator and Escalator Electrical Equipment.

- B. Canadian Standards Association / National Standard of Canada:
 - CSA B44/ASME A17.1 Safety Code for Elevators and Escalators.
 - a. 5.4 Private Residence Inclined Elevators (Residential).
 - b. 5.1 Inclined Elevators (Commercial).
 - 2. CSA National Electric Code.
- C. International Code Council / American National Standards Institute:
 - 1. ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities.
- D. National Fire Protection Association (NFPA):
 - 1. NFPA 70 National Electric Code.
- E. ASTM International (ASTM):

1.

- 1. ASTM C 387 Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar.
- 1.4 DESIGN / PERFORMANCE REQUIREMENTS
 - A. Provide inclined elevators in compliance with:
 - ASME A17.1 Safety Code for Elevators and Escalators.
 - a. 5.4 Private Residence Inclined Elevators (Residential).
 - b. 5.1 Inclined Elevators (Commercial).
 - 2. NFPA 70 National Electric Code.
 - B. Provide inclined elevators in compliance with:
 - CSA B44/ASME A17.1 Safety Code for Elevators and Escalators.
 - a. 5.4 Private Residence Inclined Elevators (Residential).
 - b. 5.1 Inclined Elevators (Commercial).
 - 2. CSA National Electric Code.
- 1.5 SUBMITTALS

1.

1.

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's product data on each product to be used, including:
 - 1. Materials, components, profiles, fabrication, and finishes.
 - 2. Weight capacities and operational data.
 - 3. Accessories and features.
 - 4. Electrical service requirements.
 - 5. Preparation instructions.
 - 6. Storage and handling requirements.
 - 7. Installation methods.
 - 8. Operations and routine maintenance procedures.
- C. Shop Drawings:
 - 1. Submit engineering drawings, specs, calculations, and analysis data signed and stamped by a professional engineer licensed in the jurisdiction of the project, and responsible for shop drawing preparations.
 - 2. Show complete layout and location of equipment, including required clearances, landing station elevations and relationship with site conditions and adjacent construction.
 - 3. Show product details including layout, dimensions, hardware type, material gage, connections and finishes for car, rail, support structure, gates, drive system (power pack), control panel enclosure and spring buffer.
 - 4. Include electrical schematic including wiring diagrams.

- D. Selection Samples: For each finish product specified, two complete sets of colors representing manufacturer's full range of available colors and finishes.
- E. Verification Samples: For each finish product specified, two samples, minimum size 3 inches (75 mm) square, representing actual product, color, and patterns.
- F. Closeout Submittals:
 - 1. Manufacturer's operation and maintenance instructions that includes a Maintenance Control Program in accordance with ASME A17.1.
 - 2. Properly executed Manufacturer's Warranty.
 - 3. Certified test reports indicating inclined elevators comply with the local building authority and specified performance requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm with minimum 10 years documented experience in manufacturing of inclined elevators of installations of type specified.
- B. Installer Qualifications: Firm authorized by the manufacturer and properly licensed to install equipment of this scope, with evidence of experience with specified equipment. Installer shall maintain an adequate stock of replacement parts and have qualified people available to ensure timely maintenance and callback service at the project site.
- C. Single Source Responsibility: All car, chassis, drive system, electrical and operational components shall be provided by the same Manufacturer. Accessories and components by other manufacturers shall be in accordance with the Manufacturer's requirements.
- D. Pre-Installation Meeting:
 - 1. Timing: Convene at the project site a minimum of two weeks prior to starting foundation work.
 - Attendance: Architect, Owner, Contractor and related trades including foundation, electrical, elevator manufacturer, elevator installer, major suppliers and all other trades directly affected by the Inclined Elevator Work.
 - 3. Purpose: Review site-specific requirements, layout, schedule, field quality control, shipping plan, staging plan, install plan, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Receive and inspect all products for damage or defects and immediately report deficiencies to the Contractor and Manufacturer for instructions.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store and dispose of solvent-based materials, and materials used with solventbased materials, in accordance with requirements of local authorities having jurisdiction.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

A. Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Hill Hiker, Inc.; 3565 County Road 6, Orono, MN 55356. Tel: 952-476-2422. Toll Free: 866-476-2422. Fax: 952-449-4912. Web: www.hillhiker.com. Email: info@hillhiker.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 INCLINE ELEVATORS

- A. Inclined Elevator: Hill Hiker incline Elevator lift as indicated on the Drawings and conforming to the following design requirements:
 - 1. Application:
 - a. Commercial.
 - b. Residential.
 - 2. Number of Stops / Landing Stations:
 - a. 2 stops: Top and Bottom only.
 - b. 3 stops.
 - c. 4 stops.
 - d. 5 stops.
 - e. Custom: As indicated on the Drawings.
- B. Materials General: Rail, supports, car, chassis, spring buffer and gates.
 - Type:
 - a. Steel
 - b. Stainless Steel 304L.
 - c. Stainless Steel 316L.
- C. System Model:

1.

- 1. Hill Hiker Hillside Elevator System Small 3x3:
 - a. Car:
 - 1) Interior Floor Space: 36 inches wide by 36 inches long (914.4 mm wide by 914.4 mm long).
 - 2) Outer Dimensions: 40-9/16 inches wide by 55-1/2 inches long (1030.3 mm wide by 1409.7 inches long).
 - 3) Door Opening: 19-3/4 inch (501.7 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 428 lbs (194 kg)
 - c. Motor: 3-5 hp
- 2. Hill Hiker Hillside Elevator System Small 3x3 Commercial:
 - a. Car:

- 1) Interior Floor Space: 36 inches wide by 36 inches long (914.4 mm wide by 914.4 mm long).
- 2) Outer Dimensions: 40-9/16 inches wide by 55-1/2 inches long (1030.3 mm wide by 1409.7 inches long).
- 3) Door Opening: 19-3/4 inch (501.7 mm) wide door(s).
- 4) Frame Type: Tubular, welded.
- 5) Seat Type: One fixed seat and one folding seat.
- 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
- Capacity: 789 lbs (358 kg)
- c. Motor: 5 hp
- 3. Hill Hiker Hillside Elevator System Medium 3x4:
 - a. Car:

b.

- 1) Interior Floor Space: 36 inches wide by 48 inches long (914.4 mm wide by 1219.2 mm long).
- 2) Outer Dimensions: 40-9/16 inches wide by 67-1/2 inches long (1030.3 mm wide by 1714.5 mm long).
- 3) Door Opening: 31-3/4 inch (806.5 mm) wide door(s).
- 4) Frame Type: Tubular, welded.
- 5) Seat Type: One fixed seat and one folding seat.
- 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
- b. Capacity: 855 lbs (388 kg)
- c. Motor: 5-7.5 hp
- 4. Hill Hiker Hillside Elevator System Medium 3x4 Commercial:
 - a. Car:
 - 1) Interior Floor Space: 36 inches wide by 48 inches long (914.4 mm wide by 1219.2 mm long).
 - 2) Outer Dimensions: 40-9/16 inches wide by 67-1/2 inches long (1030.3 mm wide by 1714.5 mm long).
 - 3) Door Opening: 31-3/4 inch (806.5 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 1038 lbs (471 kg)
 - c. Motor: 5-7.5 hp
- 5. Hill Hiker Hillside Elevator System Large 4x4:
 - a. Car:
 - 1) Interior Floor Space: 48 inches wide by 48 inches long (1219.2 mm wide by 1219.2 mm long).
 - 2) Outer Dimensions: 52-9/16 inches wide by 67-1/2 inches long (1335.1 mm wide by 1714.5 mm long).
 - 3) Door Opening: 31-3/4 inch (806.5 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 1141 lbs (518 kg)
 - c. Motor: 5-7.5 hp
- 6. Hill Hiker Hillside Elevator System Large 4x4 Commercial:
 - a. Car:
 - 1) Interior Floor Space: 48 inches wide by 48 inches long (1219.2 mm wide by 1219.2 mm long).
 - 2) Outer Dimensions: 52-9/16 inches wide by 67-1/2 inches long (1335.1 mm wide by 1714.5 mm long).

- 3) Door Opening: 31-3/4 inch (806.5 mm) wide door(s).
- 4) Frame Type: Tubular, welded.
- 5) Seat Type: One fixed seat and one folding seat.
- 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
- b. Capacity: 1439 lbs (653 kg)
- c. Motor: 7.5-10 hp
- 7. Hill Hiker Hillside Elevator System Extra Large 4x5:
 - a. Car:
 - 1) Interior Floor Space: 48 inches wide by 60 inches long (1219.2 mm wide by 1524 mm long).
 - 2) Outer Dimensions: 52-9/16 inches wide by 79-1/2 inches long (1335.1 mm wide by 2019.3 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 1391 lbs (631 kg)
 - c. Motor: 7.5-10 hp
- 8. Hill Hiker Hillside Elevator System Extra Large 4x5 Commercial:
 - a. Car:
 - 1) Interior Floor Space: 48 inches wide by 60 inches long (1219.2 mm wide by 1524 mm long).
 - 2) Outer Dimensions: 52-9/16 inches wide by 79-1/2 inches long (1335.1 mm wide by 2019.3 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 1814 lbs (823 kg)
 - c. Motor: 7.5-10 hp
- 9. Hill Hiker Hillside Elevator System ADA / XXL 5x5:
 - a. Car:
 - 1) Interior Floor Space: 60 inches wide by 60 inches long (1524 mm wide by 1524 mm long).
 - 2) Outer Dimensions: 64-9/16 inches wide by 79-1/2 inches long (1639.9 mm wide by 2019.3 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 1738 lbs (788 kg)
 - c. Motor: 7.5-10 hp
- 10. Hill Hiker Hillside Elevator System ADA / XXL 5x5 Commercial:
 - a. Car:
 - 1) Interior Floor Space: 60 inches wide by 60 inches long (1524 mm wide by 1524 mm long).
 - 2) Outer Dimensions: 64-9/16 inches wide by 79-1/2 inches long (1639.9 mm wide by 2019.3 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.

- 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
- b. Capacity: 2371 lbs (1075 kg)
- c. Motor: 10-15 hp
- 11. Hill Hiker Hillside Elevator System Heavy Duty / Commercial 5x6:
 - a. Car:
 - 1) Interior Floor Space: 60 inches wide by 72 inches long (1524 mm wide by 1828.8 mm long).
 - 2) Outer Dimensions: 64-9/16 inches wide by 91-1/2 inches long (1639.9 mm wide by 2324.1 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 2907 lbs (1319 kg)
 - c. Motor: 10-15 hp
- 12. Hill Hiker Hillside Elevator System Heavy Duty X / Commercial 5x7:
 - a. Car:
 - 1) Interior Floor Space: 60 inches wide by 72 inches long (1524 mm wide by 2133.6 mm long).
 - 2) Outer Dimensions: 64-9/16 inches wide by 103-1/2 inches long (1639.9 mm wide by 2628.9 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 3476 lbs (1577 kg)
 - c. Motor: 15-20 hp
- 13. Hill Hiker Hillside Elevator System Heavy Duty XL / Commercial 5x8:
 - a. Car:
 - 1) Interior Floor Space: 60 inches wide by 84 inches long (1524 mm wide by 2438.4 mm long).
 - 2) Outer Dimensions: 64-9/16 inches wide by 115-1/2 inches long (1639.9 mm wide by 2933.7 mm long).
 - 3) Door Opening: 36 inch (914.4 mm) wide door(s).
 - 4) Frame Type: Tubular, welded.
 - 5) Seat Type: One fixed seat and one folding seat.
 - 6) Flooring Material: ADA acceptable slip resistant marine grade fiberglass grate.
 - b. Capacity: 4078 lbs (1850 kg)
 - c. Motor: 15-20 hp
- 14. Custom Car:
 - a. Car:
 - b. Capacity:
 - c. Motor:
- D. Car Details:
 - 1. Wall Height:
 - a. Open Car: 42 inches (1066.8 mm) high walls:
 - 1) Railing Type: Curved inward safety side rails.
 - b. Fully enclosed: 75 inches (1905 mm) high walls:
 - 1) Straight panel walls with matching roof.
 - c. Custom: As indicated on the Drawings.
 - 2. Door(s) Exit:

- a. Single Door: Left side.
- b. Single Door: Right side.
- c. Double Door: Both sides.
- d. Custom: As indicated on the Drawings.
- 3. Wall / Door Paneling Material:
 - a. Polycarbonate.
 - b. Ipe wood.
 - c. Sheet metal.
 - d. Custom as indicated on Drawings.
 - e. Seat and Trim Material:
 - f. Azek composite wood.
 - g. Ipe wood.
 - h. Custom as indicated on Drawings.
- E. Drive System: Includes motor, brake, gearbox, sheaves or drum:
 - 1. Type:
 - a. WD, Winding Drum Drive System:
 - 1) Max Travel: 500 feet (152 meters).
 - 2) Max Capacity: 2000 lbs (907 kg).
 - 3) Machine Area: Can be located level or bellow elevation of rail. Can be located anywhere along hill under rail. Concrete slab required.
 - b. WDX, Winding Drum Drive X System:
 - 1) Max Travel: 155 feet (47 meters).
 - 2) Max Capacity: 1200 lbs (544 kg).
 - 3) Machine Area: Must be fixed to top end of rail. No concrete slab required.
 - c. CLX, Continuous Loop Traction Drive System:
 - 1) Max Travel: Unlimited.
 - 2) Max Capacity: 1200 lbs (544 kg).
 - 3) Machine Area: Must be fixed to top end of rails. No concrete slab required.
 - d. WDD, Double Cable Winding Drum Drive System:
 - 1) Max Travel: 500 feet (152 meters).
 - 2) Max Capacity: 3800 lbs (1724 kg).
 - 3) Machine Area: Can be located level or bellow elevation of rail. Can be located anywhere along hill under rail. Concrete slab required.
 - 2. Details:
 - a. Power Pack Size:
 - Motor, gearbox, shaft, drum/sheaves, frame to be sized according to model type, total capacity, weight/size of car, angle of incline and rated speed.
 - b. Motor:
 - 1) Outdoor rated.
 - 2) Integrated brake.
 - c. Gearbox:
 - 1) Through shaft only, no couplers.
 - 2) Double reduction.
 - 3) Industrial duty, outdoor rated.
 - d. Shaft:
 - 1) 2 inch (50.8 mm) minimum diameter solid stainless steel.
 - e. Drive Cable:
 - 1) 3/8 inch (9.55 mm) diameter galvanized aircraft cable.
 - 2) 14,400 pounds (6581 kg) minimum breaking strength.
 - f. Cable Components:

- 1) Provide shaft, deflection sheave with sheet metal cover for WD systems.
- 2) Provide adjustable lower sheave wheel for CLX systems.
- g. Power Pack frame:
 - 1) Plate, channel and tubular, welded steel.
 - 2) Galvanized or powder coat painted finish.
- h. Hood cover.
- F. Chassis:
 - 1. Wheels: Ride captured inside the rails for safety. Systems that ride on top of rails not accepted.
 - 2. Over-speed Governor: Mounted on chassis, operated by centrifugal force only. Controls dedicated over-speed brake.
 - 3. Over-speed Brake: Equipped with mechanical rail gripping style brake, dedicated purpose, instantaneous stop.
 - 4. Slack Cable Brake: Equipped with mechanical rail gripping style brake, dedicated purpose, instantaneous stop.
- G. Rails:
 - 1. Type:
 - a. Design: Captured rail style C-Channel guide rails. Rails designed for chassis that ride on top of the rails not accepted.
 - b. Dimension: 10 foot long by 3 or 4 foot wide (3048 mm long by 914.4 or 1219.2 mm wide) sections.
 - c. Cross Members: Welded tube spaced 12 inches (304.8 mm) o.c.
 - d. Couplers: Couplers on ends to mate each section to the next using 4 bolts per rail section.
 - 2. Hardware:
 - a. Material: Stainless Steel bolts and Nylock nuts only.
 - b. Grade: 18-8 Stainless Steel or greater.
 - c. Size: 3/8 inch (9.5 mm) diameter.
 - 3. Spring Buffer:
 - a. Provide a mechanical stop to prevent over-travel in the event of a switch failure.
 - 4. Quantity:
 - a. Rail sections supplied in 10 foot (3048 mm) sections.
 - b. Last section field cut to exact length as needed.
 - c. Total length as shown on the Drawings.
- H. Rail Supports:
 - 1. Flange Foot Posts:
 - a. Provide 2 inch (50.8 mm) square posts with 8 inch by 8 inch (203.2 mm by 203.2 mm) welded plates.
 - b. Mount to concrete footings with anchor bolts or all-thread and epoxy as indicated on Drawings and specified in Section 03300.
 - 2. Track-Mates:
 - a. Provide "U" shape mounting brackets, sandwich plates, all-thread, hardware and templates.
 - b. Concrete piers and all-thread installed as specified in Section 03300 and indicated on Drawings and with instructions from manufacturer.
 - 3. Driven Pin Piles:
 - a. Provide 2 inch (50.8 mm) square posts with swedged ends for piles.
 - b. Install using hydraulic post pounding unit to refusal or level indicated on Drawings.
 - 4. I-Beam:

- a. Provide brackets or special rail with cross members to direct mount rail to the top flange of Steel I-Beam(s) as indicated on the Drawings
- b. I-Beams and foundation design, material and installation as specified in Section 03300 and Section 05500.
- 5. Helical Screw Piles:
 - a. Provide special brackets and rail mounting components to attach rails to helical screws.
 - b. Provide Angle Iron cross and tie back bracing.
 - c. Helical design, material and installation as specified in Section 02465.
- I. Electronic Components:
 - 1. Required Power Supply, Disconnect and Fuses: As specified in Division 16.
 - a. Power:
 - 1) 220-240 VAC Single phase 60HZ.
 - 2) 208-230 VAC Three phase 60 HZ.
 - 3) 460 VAC Three phase 60 HZ.
 - 4) As indicated on Drawings.
 - b. Electrical Disconnect and Fuses:
 - 1) Sizing: Based manufactures requirements.
 - 2) Installation: Provided by an licensed electrician as specified in Division 16.
 - 3) Disconnect Type: Outdoor Fusible Safety Switch with lock out tag out.
 - 4) Fuse Type: Type T or CC.
 - 2. Main Electrical Control Panel:
 - a. Variable Frequency Drive (VFD) Variable speed soft start/stop motor control.
 - b. UL listed by approved panel shop.
 - c. NEMA 4X weather proof enclosure.
 - 3. Car Onboard Call Station:
 - a. Directional control buttons for each station.
 - b. Emergency stop button located within reach of passengers. Emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
 - c. Wireless Type.
 - d. NEMA 4X weather proof enclosures.
 - 4. Car Door(s) Safety Switch:
 - a. Shut-off limit switch type.
 - b. Commercial: Mechanical / electrical Interlock shut-off and lock type.
 - 5. Landing Call Stations:
 - a. Power: 24 VDC Low Voltage type.
 - b. Security Call Stations:
 - 1) Keyed.
 - 2) Keyless / keypad.
 - 3) Keyless / keypad with keyfob.
 - c. Emergency stop button: Emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
 - d. NEMA 4X weather proof enclosures.
 - 6. Landing Gate switches:
 - a. Shut-off limit switch type.
 - b. Commercial: Mechanical / electrical Interlock shut-off and lock type.
 - 7. Limit Switches:
 - a. Slack cable switch:
 - 1) Mounted near drum or pulleys.
 - 2) Mechanically re-settable type only.
 - 3) Minimum IP67 protection rating.

- 4) ASME A17.5 markings required.
- b. Primary Deceleration and Park switches:
 - 1) Mechanical, proximity or magnetic types only.
 - 2) Minimum IP67 protection rating.
- c. Final Switches:
 - 1) Provide upper and lower final limit switches to stop the lift in the event of a failure of the primary limit switch.
 - 2) Mechanical type only.
 - 3) Minimum IP67 protection rating.
 - 4) ASME A17.5 markings required.
- J. Landing Station Gates:
 - 1. Door Type: Single swinging door.
 - 2. Hinge Type: Spring loaded self-closing Stainless steel.
 - 3. Switch / Lock:
 - a. Bolt-on contact shut-off switch
 - b. Commercial: Built-in mechanical/electrical Interlock shut-off and lock type.
 - 4. Dimensions:
 - a. 36 inches wide by 42 inches high (914.4 mm wide by 1066.8 mm high).
 - b. ADA: 38 inches wide by 42 inches high (965.2 mm wide by 1066.8 mm high).
- K. Landings Platforms: Platforms are provided as specified in Section 06100. Coordinate with platforms indicated on the Drawings.
- L. Accessories:
 - 1. Car lighting.
 - 2. Car alarm.
 - 3. Polycarbonate canopy.
 - 4. Sunbrella fabric canopy.
 - 5. Dome style polycarbonate canopy.
 - 6. Cantilever car.
 - 7. Docking stations for battery charging.
 - 8. Solar panel system for battery charging.
 - 9. Door interlocks.
 - 10. Double-cable winding drum drive systems.
 - 11. Wired car with traveling cable.
 - 12. Phone / communication system.
 - 13. Electrical self-leveling system.
 - 14. Mechanical self-leveling system.
 - 15. ADA car doors and gates.
 - 16. Electrical bumper safety system.
 - 17. Construction platform.
 - 18. Curved rail for angle changes.
 - 19. Extra large span rail.
 - 20. SS button enclosures.
 - 21. WD power pack cover.
 - 22. Custom car design.
 - 23. Custom seat cushion material.
 - 24. Pit switches.
 - 25. Pit ladder.
- M. Finish Requirements:
 - 1. General: Design and fabricate to manufacturer's standard.

- a. Include all modifications recommended by manufacturer for reliable performance in outdoor climate of lift installation site.
- b. Provide an outdoor weatherproofing package including zinc rich primer on steel surfaces, weather-resistant sealant on the electrical components, stainless steel or plated fasteners and a weatherproofed stainless steel or zinc plated drive box.
- c. Inclined Elevator control covers shall be fabricated of a Silver Grey injection-molded polymer or stainless steel.
- 2. Painting: After pretreating paint with electrostatically applied and baked powder coat as follows:
 - a. Color as selected by Architect from manufacturers standard colors.
- 3. Car, Chassis and Other Components:
 - a. Standard: Powder coat paint.
 - b. Stainless Steel: Stainless steel mill finish.
- 4. Rail and Supports:
 - a. Standard: Hot Dipped Galvanized.
 - b. Upgrade: Powder coat paint.
 - c. Stainless Steel Standard: Stainless steel mill finish.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Do not begin installation until substructure has been properly prepared.
 - B. Verify site conditions are within the manufacture's requirements.
 - C. Verify electrical rough-in is at correct locations.
 - D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- 3.2 PREPARATION
 - A. Clean surfaces thoroughly prior to installation.
 - B. Verify required substrate/supports are secure and at correct locations.
 - C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install incline elevators in compliance with regulatory requirements specified and the manufacturer's instructions.
- B. Install system components and connect to building utilities.
- C. Accommodate equipment in space indicated.
- D. Startup equipment in accordance with manufacturer's instructions.
- E. Adjust for smooth operation.
- 3.4 FIELD QUALITY CONTROL

- A. Perform tests in compliance with regulatory requirements specified and as required by authorities having jurisdiction.
- B. Schedule tests with regulatory agencies with Architect, Owner, and Contractor present.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION