SECTION 14420

WHEELCHAIR LIFTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes inclined wheelchair lifts.

B. Related Sections include the following:
1. Division 3 Section "Cast-in-Place Concrete" for setting sleeves, inserts, and anchoring devices in concrete.
2. Division 4 Section "Unit Masonry Assemblies" for setting sleeves, inserts, and anchoring devices in masonry.
3. Division 14 Section "Hydraulic Passenger Elevators."
4. Division 16 Sections for electrical service to lifts, including fused disconnect switches.

1.03 SUBMITTALS

A. General: Submit in accordance with Section 01300.

B. Product Data: For each type of lift indicated. Include rated capacities, dimensions, performances, operations, safety features, controls, and finishes.

C. Shop Drawings: For each lift. Include plans, elevations, sections, details, and attachments to other Work. Indicate loading on structure and required clearances.

D. Certificates and Permits: Provide Owner with inspection and acceptance certificates and operating permits, as required by authorities having jurisdiction, for normal, unrestricted use of lifts.

E. Maintenance Data: For each type of lift to include in maintenance manuals. In addition to items specified in Division 1 Section "Contract Closeout," include parts list with sources indicated and recommended parts inventory list.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Engage a qualified Installer approved by lift manufacturer who has completed lift installations similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Regulatory Requirements: In addition to requirements of authorities having jurisdiction, comply with ASME A18.1, "Safety Standard for Platform Lifts and Stairway Chairlifts Fittings."

1.05 WARRANTY

A. General: Special warranty specified in this Section shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair, restore, or replace defective work within specified warranty period.
   1. Warranty Period: 12 months from date of Substantial Completion.

1.06 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months' full maintenance by skilled employees of lift Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper lift operation at rated speed and capacity. Provide parts and supplies same as those used in the manufacture and installation of original equipment.
   1. Maintenance Proximity: Not more than 2 hours normal travel time from the Installer's place of business to the Project site.

B. Continuing Maintenance Service: Provide a continuing maintenance proposal from Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Product: Stair-Lift Model Xpress II, "1220 Platform"; Garaventa (Canada) Ltd.

2.02 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Tubing: ASTM A 500.

C. Steel Pipe: ASTM A 53/A 53M; standard weight (Schedule 40), unless otherwise indicated or required by structural loads.

D. Carbon-Steel Sheet: Either cold-rolled steel sheet, ASTM A 366/A 366M, or hot-rolled steel sheet, ASTM A 569/A 569M.

E. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 (Z275) zinc coating,

F. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.
   1. Extruded Aluminum: ASTM B 221 (ASTM B 221M), alloy 6063-T6.
   2. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy 5005-H15.

G. 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.

H. Expansion Anchors: Anchor-bolt-and-sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 10 times the load imposed as determined by testing per ASTM E 488 conducted by a qualified independent testing agency:
   1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

I. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107.

2.03 INCLINED WHEELCHAIR LIFTS

A. Systems and Machinery: Manufacturer's standard preengineered lift systems as indicated in published product literature and as follows:
1. Platform Size: 31.5 by 48 inches (800 by 1220 mm).
2. Rated Speed: 13 fpm in up direction; 16 fpm in down direction.

B. Power Supply: 208 V, 60 Hz, 1 phase .

C. Drive System: Line-voltage drive system.

D. Control System: Provide key-operated control complying with ASME A18.1.
1. System Control Voltage: 24-V ac.
2. Control system shall have an attendant call button and an emergency stop button.

E. Concealed Wiring: Enclose wiring within housings of units. Do not use conduit exposed to view.

F. Automatic Folding Platforms: When not in use, platforms and passenger restraining arms shall automatically fold up against wall to minimize projection into stairway.
1. Control wiring shall allow platform to be folded into storage position from either call station.

G. Platform: 0.123-inch- (3.1-mm-) thick, galvanized steel sheet with black rubber flooring.

H. Automatic Ramps: Provide ramps matching platforms to provide transition from floor to lift platform. Ramps lower to floor automatically when lifts reach landing and unit stops. Ramps raise automatically when lift control is activated for lift to leave landing.

I. Supporting Structure: Provide framing to support vertical loads from floor or stair treads and only lateral loads from walls. Fabricate framing from steel rectangular tubing, plates, shapes, and bars.

J. Guide Rails: Fabricate from extruded aluminum tubing.

K. Accessories: Provide units with the following accessories:
1. Power operated safety arms, fabricated from steel tubing, designed to prevent wheelchair from rolling off platform and to provide grab bar for occupant.

2.04 FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Steel and Iron Finishes: Prepare and finish iron and steel, including galvanized steel, as follows:
1. Powder-Coated Finish: Immediately after cleaning and pretreating, apply manufacturer's standard, thermosetting polyester or acrylic urethane powder coating with a cured film thickness not less than 1.5 mils (0.04 mm).
a. Color and Gloss: Manufacturer's standard.

C. Aluminum Finishes: Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
1. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
a. Color: Manufacturer's standard champagne color.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine installation areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
   1. If unacceptable conditions are encountered, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
   2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
   1. Enclose wiring within housings of units or building construction. Do not use conduit exposed to view in finished spaces.

B. Adjust stops for accurate leveling at each landing, within specified tolerances.
   1. Leveling Tolerance: 1/4 inch (6 mm) up or down, regardless of load and direction of travel.

C. Lubricate operating parts of lift, including drive mechanism, guide rails, gates, safety devices, and hardware.

3.03 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 governing regulations and agencies.

B. Operating Test: In addition to above testing, load lifts to rated capacity and operate continuously for 30 minutes between lowest and highest landings served. Readjust stops and other devices and signal equipment for accurate landings and operation of system.

C. Advise Owner, Architect, and authorities having jurisdiction in advance of dates and times tests are to be performed on lifts.

3.04 DEMONSTRATION

A. Instruct Owner's personnel in proper use, operation, and daily maintenance of lifts. Review emergency provisions, including emergency access and procedures to be followed at time of operational failure and other building emergencies. Train Owner's personnel in procedures to follow in identifying sources of operational failures or malfunctions. Confer with Owner on requirements for a complete lift maintenance program.

B. Make a final check of each lift operation with Owner's personnel present and before date of Substantial Completion. Determine that operation systems and devices are functioning properly.

END OF SECTION