



## **PART 1- General**

### **1.1 SCOPE**

To furnish all labor, materials and equipment necessary or required to fully complete the installation of the lift as indicated on the drawings and specifications. This suggested specification is intended to cover the complete installation of the Concord PROLIFT VOYAGER Commercial Wheelchair Lift design.

### **1.2 SYSTEM DESCRIPTION**

The lift assembly shall consist of a power unit, car, guide system, 1:2 cable hydraulic lifting device, hoistway doors, control system, signals and alarms, electrical wiring, and parts and accessories necessary to provide required performance, operation, code and safety requirements.

### **1.3 QUALITY ASSURANCE**

#### **1.3.1**

The lift shall meet or exceed the applicable regulations of all governing agencies and be in compliance with the applicable sections of the most current edition of the following codes and standards:

- a) ASME A18.1-2000 "Safety Standard for Platform Lifts and Stairway Chair Lifts"
- b) CSA B355-00 "Lifts for Persons with Physical Disabilities".
- c) ICC/ANSI A117.1-1998 "Accessible and Usable Buildings and Facilities".
- d) ANSI/NFPA 70-1999 "The National Electric Code" (NEC).
- e) ADAAG "Americans With Disabilities Act Accessibility Guidelines" (where applicable).
- f) CSA B44.1/ASME A17.5 "Elevator and Escalator Electrical Equipment"
- g) Local codes and regulations, as applicable.

#### **1.3.2**

Requirements of the Regulatory Agencies

- a) Fabricate and install Work in compliance with all applicable jurisdictional authorities.
- b) File shop drawings and submissions to local authorities as the information is made available. Company pre-inspection and jurisdictional authority inspections and permits are to be made on a timely basis as required. Work will include all inspections and re-inspections that are required to ensure licenses are issued.

**1.3.3**

## Subcontractor Qualifications

- a) Execute work of this specification only by a contractor/company who has adequate product and public liability insurance in excess of one million dollars.
- b) Skilled tradesmen must be employees of the contractor to perform the work on a timely basis. Employees must be trained by the manufacturer and be supervised by the lift contractor.

**1.3.4**

## Substitutions

No substitutions will be considered unless written request for approval has been submitted by the bidder and received by the architect at least 10 days before the date of receipt of bids. Each such request shall include a complete description of the proposed substitute including drawings, test data, photographs, and any other information needed for consideration.

**Part 2- Preparatory Work by Others****2.1**

The following preparatory work to accommodate/receive the lift is to be done by others:

**2.1.1**

Power unit machine room to meet applicable codes and standards.

**2.1.2**

Permanent power to operate the lift to be provided to a Lockable Fused/ Cartridge Type Disconnect switch with auxiliary contact/switch for emergency battery lowering. Provide 115-volt lighting supply and disconnect. Refer to architectural drawings for permanent power specifications and location of the disconnect.

**2.1.3**

Provide appropriate sleeves for both the electrical conduit and hydraulic line from the power unit enclosure to the hoistway (as shown on drawings). Trenching may be required if the machine room is not adjacent to hoistway.

**2.1.4**

Provide power unit enclosure light and light switch, located to comply with applicable codes and standards.

**2.1.5**

Provide an enclosed, plumb and square hoistway with smooth interior surfaces. Include for fascias or furring of hoistway interior where applicable.

**2.1.6**

Provide a framed and enclosed legal hoistway, including power unit enclosure, as required by the governing code or authority.

**2.1.7**

Provide landing entrances.

- a) Suitable lintels over landing entrances are to be provided.
- b) Provide rough openings as per lift contractors' shop drawings.

**2.1.8**

Provide substantially level pit floor slab to support loads indicated on the lift contractors' shop drawings.

**2.1.9**

Provide adequate support for guide rail fastenings.

**2.1.10**

Provide light, receptacle and switch in pit, located to comply with applicable Code.

**2.1.11**

Provide pit water proofing or sump pump, if required, as allowed by Code.

**2.1.12**

Provide pit ladder for pits 3' - 0" (914 mm) or more in depth.

**2.1.13**

Provide finish grouting and masonry around doorframes.

**2.1.14**

Provide finish painting of landing entrances.

## **Part 3 - Submittals**

### **3.1 SHOP DRAWINGS**

The shop drawings shall show a complete layout of the lift equipment detailing dimensions, clearances and location of machinery. Including, but not limited to, the following:

**3.1.1**

Drawings showing the dimensions including plans, elevations, and sections to show equipment locations.

### 3.1.2

Load and reaction drawings shall be provided by the lift manufacturer and detailed on drawings.

## Part 4 - Product Data

### 4.1 MANUFACTURER/ PRODUCT

Lift shall be the CONCORD PROLIFT VOYAGER Commercial Wheelchair Lift manufactured by Concord Elevator Inc. Toll Free Number 800 661-5112 and (905) 791-5555, Fax (905) 791-2222

<b>Rated Load:</b>	1,400 lbs. (635 kg.)
<b>Rated Speed:</b>	30 fpm (0.15 m/s)
<b>Car Dimension:</b>	47"W x 60"D (1194 W x 1524 D mm)
<b>Operation:</b>	Constant pressure or automatic (where permitted) floor selective
<b>Power Supply:</b>	220 Single Phase, 50 Amps or 208 Three Phase, 30 Amps
<b>Travel Distance:</b>	50 feet (15m) Maximum where permitted, (B355-approx 23 ft (7m) Maximum)
<b>Levels Served:</b>	Maximum 4
<b>Number of Openings:</b>	Maximum 2
<b>Lighting Supply:</b>	110-Volt, Single Phase, 60 Cycle, 15 Amps
<b>Door Opening:</b>	35" x 6'-8" (890 x 2030 mm) Nominal
<b>Jack Type:</b>	1:2 Cable Hydraulic
<b>Pump Type:</b>	Submersible Type
<b>Door Type:</b>	Pro-Auto Door, 2 hr. UL/ULC Fire Rated Door
<b>Leveling Device Type:</b>	Magnetic Floor Scanner

### 4.2 SIGNAGE

#### 4.2.1

The lift shall have all necessary signs, capacity plates, and data signs as per the Local and National Codes and Standards.

#### 4.2.2

A capacity plate indicating the rated load in pounds and kilograms and operating instructions shall be furnished by the manufacturer and fastened in a prominent place at each landing and in the cab. The capacity plate and operating instructions will be engraved on non-glare, micro-surface, white letters on a blue background, self-adhesive, flexible plastic material. The letters and figures stating the capacity shall not be less than 1/4" in height.



### **4.3 CAR ENCLOSURE**

#### **4.3.1 Walls**

MCP melamine panels 1/2" (13 mm) with clear anodized aluminum trim.

#### **4.3.2 Ceilings**

Architectural white painted steel frame, with four (4) incandescent down lights.

#### **4.3.3 Floor**

Steel frame with Plywood sheeting.

#### **4.3.4 Handrail**

One (1) stainless steel handrail shall be located on control wall of the cab.

#### **4.3.5 EMERGENCY OPERATION**

The car shall be equipped with a battery that will power an emergency lowering device, unlock door and power an alarm in the event of failure of the normal building power supply. Battery will be rechargeable with an automatic recharging system.

#### **4.3.6 EMERGENCY LIGHT**

The car shall be equipped with an integral emergency light that will illuminate automatically in the event of a main power failure.

#### **4.3.7 CAR OPERATING PANEL**

Car operating panel shall be hinged and consist of one constant pressure metal push button with halo lighting for each landing, an emergency stop and alarm button mounted on a removable stainless steel panel (Type 304 #4 stainless steel finish).

#### **4.3.8 CAR LIGHTING**

The car lighting shall consist of four (4) low voltage incandescent down stainless lights. The failure of one lamp shall not cause the remaining lamps to extinguish.

#### **4.3.9 AUTOMATIC LIGHTS**

Overhead lights in the car compartment shall turn ON automatically when the lift door is opened and stay ON while the lift is in use. A timer will shut OFF the lift lights when the lift is not in use.



#### **4.4 PRO AUTO SWING DOOR ENTRANCES**

Complete entrance assembly to carry a fire label from UL/ULC certifying it has been tested and approved for minimum fire separation of two (2) hours. The landing entrances shall be supplied as an integral unit, pre-wired, zinc wipe coated and ready for installation at the site. Each integral landing entrance shall have an automatic swing type power door and have the following equipment included and mounted:

##### **4.4.1**

Door vision panel approximately 3" x 26 3/4" (75 x 680mm) of clear wired glass (or to the maximum permitted by the fire label) with aluminum finish frame.

##### **4.4.2**

Swing clear non-exposed heavy-duty stainless steel ball bearing hinges.

##### **4.4.3**

Interlock shall be provided with an electric contact, which will interrupt the power to the control mechanism if the door is in the OPEN position or if the door is not securely closed and locked. The interlock will prevent movement of the lift when the door is OPEN.

##### **4.4.4.**

Door to be 35" x 80" (890 x 2030 mm) nominal, swing type.

##### **4.4.5**

The door locking mechanism shall be of the concealed type with no visible beak.

##### **4.4.6**

Door shall be equipped with aluminum push plate, pull handle and interior kick plates.

##### **4.4.7**

Keyed hall call station with a metal push button with halo lighting and a stainless steel cover plate shall be an integral part of each landing doorframe.

##### **4.4.8**

The automatic power door operator shall be concealed type, with accurate and adjustable speed control and pressure sensitivity.

##### **4.4.9**

Lock shall be time delayed electrically controlled for vandal resistant security.

**4.4.10**

Landing sill shall be aluminum checker plate.

**4.5 PLATFORM TOE GUARD**

A platform toe guard shall be provided at each car entrance opening to extend below car entrance opening for safety.

**4.6 LEVELING DEVICE****4.6.1**

The lift shall be provided with a 2 way leveling device which will maintain the car within 1/2" (13 mm) of the landing by magnetic sensing.

**4.6.2**

Leveling device switches shall be located in a position to be inaccessible to unauthorized persons (i.e., located behind the cab control wall accessible by removable panel).

**4.6.3**

All limits shall be mechanically sensed for accurate operation.

**4.7 HYDRAULIC POWER UNIT**

- a) The pump and motor shall be the submersible type installed inside the oil tank.
- b) The controller shall be integrally mounted on the power unit frame and pre-wired and tested before shipment.
- c) Control circuitry to be "Programmable Logic Controls".
- d) The power unit control valve shall include all hydraulic control valving inherently. This valve shall incorporate the following features:
  - (i) Up and down acceleration and deceleration speed adjustment for a smooth starts and stops.
  - (ii) Smooth stops at each landing shall be an inherent feature of the valve.
  - (iii) Adjustable pressure relief valve.
  - (iv) Manually operating DOWN valve to lower elevator in an emergency.
  - (v) Pressure gauge indicating in P.S.I. and Bars.
  - (vi) Gate valve to isolate cylinder from pump unit.
  - (vii) Negative pressure switch

**4.8 CYLINDER AND PLUNGER****4.8.1**

The cylinder shall be constructed of steel pipe of sufficient thickness and suitable safety margin. The top of the cylinder shall be equipped with a cylinder head with an internal guide ring and self-adjusting packing.

**4.8.2**



The plunger shall be constructed of a steel shaft of proper diameter machined true and smooth. The plunger shall be provided with a stop electrically welded to the bottom to prevent the plunger from leaving the cylinder.

**4.9 CABLE**

Minimum of two 3/8" (10 mm) cables. Minimum breaking strength 14,400 lbs. each.

**4.10 SAFETY DEVICE**

A "slack/broken cable" safety device shall be supplied, which will stop and sustain the lift and its rated load, if either of the hoisting cables become slack or breaks. The safety device shall be resettable by the operation of the lift in the upward direction. A switch shall be mounted in such a position to sense the operation of the safety device, and will open the safety circuit to the controller to prevent operation of the lift in either direction.

**4.11 GUIDE YOKE**

The 1:2 guide yoke/sheave arrangement shall be supplied with a sheave, guide shoes, roller bearings and adjustable cable guards. The sheave shall be finished with rounded grooves to fit the cables.

**4.12 NORMAL TERMINAL STOPPING DEVICES**

Normal terminal stopping devices shall be mechanically sensed at the top and bottom of runway to stop the car automatically.

**4.13 GUIDE RAILS AND BRACKETS****4.13.1**

Steel 8lb/ft "T" guide rails and brackets shall be securely fastened to the building structure.

**4.13.2**

Brackets shall securely hold the guides in a plumb and true position regardless of car loading. Maximum of 4 levels.

**4.13.3**

Guides shall be bolted through the hoistway enclosure with back-up plates, washers and nuts. Subject to architects' alterations and approvals.





#### **4.14 CAR SLING**

##### **4.14.1**

Car sling shall be fabricated from steel members with adequate bracing to support the platform and cab.

##### **4.14.2**

The buffer-striking member on the underside of the car must stop the lift before the plunger reaches its down limit of travel.

##### **4.14.3**

Guide shoes to be solid slipper type with polyurethane inserts.

#### **4.15 WIRING**

All wiring and electrical connections shall comply with applicable codes, insulated wiring shall have flame retardant and moisture proof outer covering and shall be run in conduit or electrical wire ways. Traveling cables shall be flexible and suitably suspended to relieve strain.

### **Part 5- Execution**

#### **5.1 EXAMINATION**

All site dimensions shall be taken to ensure that tolerances and clearances have been maintained and meet local regulations.

#### **5.2 PREPARATION**

Pre-inspect the construction and service requirements for “Work by Others.” These requirements will be included in drawings, diagrams, engineering data sheets and special instructions before the work commences.

### **Part 6- Warranty**

#### **6.0**

Concord Elevator shall provide a Manufacturer’s limited parts warranty as outlined in Appendix A.



## **Part 7- Owner's and Instruction Manual**

### **7.0**

After the installation is completed, the contractor shall instruct the owner in the proper use, operation and maintenance requirements of the lift. Instructions to also include emergency procedures and safety rules and precautions. The contractor should also supply the owner with an Owner's Manual detailing the operating, safety, and maintenance procedures of the lift.

# Appendix A

## Concord Elevator Manufacturer's Limited Product Warranty

Term of warranty – this warranty is valid for a period of 36 months from the date that the product shipped from our factory. Purchase price for product must be paid in full for manufacturer to release parts under this warranty.

Coverage – this warranty applies to the repair or replacement, at Manufacturer's option, of parts that fail due to defective material or workmanship. Manufacturer may, at its option, provide factory reconditioned parts. This warranty is provided to the Authorized Concord Dealer on behalf of the final purchaser of the product and is not transferable. The Manufacturer's warranty does not cover labor charges for the removal, repair or replacement of warranty parts but such costs may be covered for a period of time by Authorized Dealer's warranty, which is provided to purchaser separately.

### Conditions:

- 1) This warranty only applies to products installed and maintained by a Concord Elevator Authorized Dealer in conformance with all applicable local and national codes.
- 2) The warranty is void if regular inspection and maintenance of product is not being carried out by an Authorized Concord Dealer in accordance with the recommendations contained in the Owner's Manual. It is the Owner's responsibility to keep records of all such service.
- 3) This warranty does not apply to the following:
  - 1) Consumable items which include: light bulbs, batteries, oil seals, mechanical switches, guide shoe inserts, drive belts, hydraulic fluids, greases, oils etc.
  - 2) Structural or cosmetic components that are subject to normal wear and tear, external forces and/or misuse. This includes metal panels, glass, plexiglass, gates, doors, buttons, switches, upholstery, trim etc
  - 3) Items that require periodic assessment, maintenance and/or replacement. This includes paint, caulking, weather seals, etc
  - 4) Malfunction or damage to product caused by accident, misuse, abuse or vandalism, lack of proper maintenance, improper installation or placement of product, neglect, improper adjustment, modification or alteration, structural condition of building or hoistway, overloading, failure to follow operating instructions or acts of God.

### Standard Procedures:

Required warranty parts will be shipped at Concord Elevator's expense by UPS ground. Expedited or air shipment of parts is available at Dealer's request and expense. Some parts covered under this warranty may be commercially available from a source close to the job site and Concord will reimburse Dealer for cost to purchase these items provided that approval is obtained from Concord's Technical Support Department in advance.

### Disclaimers:

*Concord disclaims liability for any personal injury or property damage resulting from the operation of a product that has been modified from the original Concord design. No person or company is authorized to change the design of this product without written authorization by Concord.*

*Concord's obligation under this warranty is exclusively limited to the repair or exchange of parts that fail within the applicable warranty period.*

*Concord assumes no responsibility for expenses or damages, including incidental or consequential damages. Some states and/or provinces do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply to you.*