



Your Accessibility Partners

**V1504**  
**Planning Guide**



Dec. 2006

## Company intro

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Savaria Concord Lifts is now the second largest accessibility company in North America. Savaria was founded in 1979, and has acquired Concord Elevator Inc. in July 2005.

Savaria Concord Lifts' mission is to provide products that facilitate mobility of all people with special needs, contributing to their well-being and quality of life.

Savaria Concord Lifts stands behind all its products, which meet safety standard requirements for various countries around the world. With the help of our network of over 600 distributors, our products are distributed in North America, South America, Europe, and Australia. In addition, we now have an exclusive dealer and partnership in Dubai, United Arab Emirates.

We manufactured over 4400 lifts and stairlifts in 2006 at the facility of Savaria . Our products contribute to a higher quality of life in homes and businesses by improving access.

It is a pleasure to introduce you to Savaria's complete line of accessibility products.

- V-1504            Vertical Platform Lift
- P.A.L            Vertical Platform Lift
- Telecab        Vanishing Residential Elevator
- Multilift        Residential Acme Screw Drive Vertical Platform Lift
- ES-125         Stair Platform Lift
- Step-Saver™    Stairway Chairlift
- B.07            Stairway Chairlift (battery, 110VAC power, or commercial)
- Stairfriend™   Curved Stairway Chairlift
- Orion Lu/La    Commercial Elevator
- Prolift         Residential or Commercial Elevator
- Ultimo         Residential or Commercial Elevator

**We thank you for your support and interest in our company.**

Cordially,



Marcel Bourassa, B.A.A.  
President



Robert Berthiaume, P. Eng.  
Executive V.P.

## Definition of a Vertical Platform Lift

The V1504 vertical wheelchair platform lift is the most versatile lift on the market. The unique drive and platform combinations of the V1504 vertical wheelchair platform lift allows for rapid delivery and ease of installation.

Vertical Platform lifts are designed to provide easy access for the physically challenged from one landing to another. The innovative design of Savaria lifts can meet any architectural requirements and can be installed in homes, schools, churches, municipals buildings, nursing home s, restaurants...

According to **A.S.M.E.** (American Society of Mechanical Engineers) safety standards, a vertical platform lift is a powered hoisting and lowering mechanism designed to transport a mobility-impaired person on a guided platform that travels vertically.

**C.S.A.** (Canadian Standard Association) safety standards, defines a vertical platform lift as a nonportable, permanently installed elevating device for transporting persons with physical disabilities on a platform that moves vertically between permanent levels.

***Please contact your local Savaria Concord authorized dealer for more details.***

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# 1- Technical Analysis of a V1504

## Specifications

<b>Rated Load (capacity)</b>	750 lb (340 kg)
<b>Maximum Travel</b>	12' (3.6m) (14' (4.2m) in some jurisdictions) (USA) 23' (7 m) (CAN)
<b>Travel Speed</b>	25 feet/min (0.13 m/s) approx
<b>Platform</b>	Control buttons on platform* 42" (1,067 mm) high side guard panels Non-skid platform surface
<b>Standard Platform Dimensions</b>	34" x 54" (864 X 1,372 mm)
<b>Levels Serviced</b>	2 (standard), 3, 4
<b>Car Access</b>	Enter/Exit same side, 90° exit, front/rear Combination mechanical lock and electric contacts or electric strikes*
<b>Finish</b>	Beige electrostatic powder coat paint on all steel surfaces and vacuum-formed plastics.
<b>Tower</b>	8 foot long modular guide rail assembly Roller guide support
<b>Operations</b>	115 VAC operation (115 VAC up direction and 12 VDC down direction battery powered) Continuous pressure directional buttons Keyed call stations
<b>Power Supply</b>	110 volt, 15 amp, 1 phase, 60 Hz
<b>Drive System</b>	Quiet 2:1 Roller chain hydraulic
<b>Emergency</b>	12 VDC Battery lowering
<b>Controller</b>	Electronic-free relay logic
<b>Electrical</b>	Automatic battery recharging system (115 VAC) Low voltage controls Normal limit switches
<b>Motor/Pump</b>	115VAC, 1.5HP (1.119kW) Gear type hydraulic pump
<b>Manual Lowering</b>	Remote location emergency manual lowering valve  <b>V1504 Models: PE - STD - TL - LUX - Prestige</b> On the side of the drive tower or outside the hoistway at desired landing when applicable

\*Consult local codes and regulations

## **Models Overview**



### **V1504 – STD (Standard Model)**

- Built around a powerful, safe and reliable hydraulic drive system
- Can raise a platform and the users throughout various architectural boundaries
- Designed to fit indoor hoistway applications and also for outdoor use



### **V1504 – TL (Tall Enclosure Model)**

- Designed to provide an enclosure with metal inserts from the bottom landing door to the top landing gate.
- Good alternative to a three gate system because of its simplicity and ease of operation



### **V1504 - PE & ALPE (Plexiglas Enclosure & ALPE Models)**

- Designed to provide anaesthetic enclosure with Plexiglas inserts
- Available with various travels
- Offered with top landing gate for semi-enclosed hoistway or with top landing door, enclosure extension and Plexiglas dome for both indoor and outdoor applications
- Made of aluminum extrusions
- Yellow zinc treatment on steel parts to withstand the outdoor environment



### **V1504 – LUX (Luxury Framed Model)**

- Created to meet those very personalized architectural needs
- Rich blend of tempered glass, stainless steel or brass materials
- Designed with a bottom landing door and top landing gate or door



### **V1504 – Prestige (Frameless Model)**

- Designed to meet those very personalized architectural needs
- Constructed with high quality ½ in.(12.7mm) structural tempered glass and brass materials
- Will blend in with any upscale environment



### **V1504 – MOB (Mobile model)**

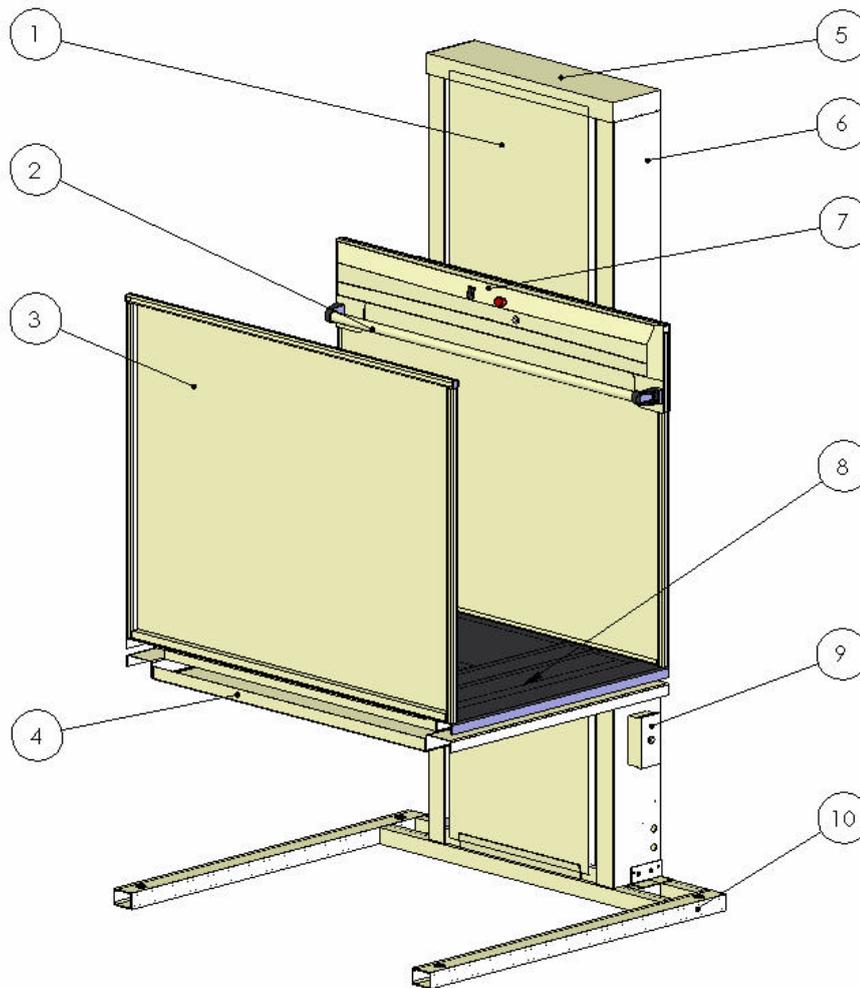
- Can be rolled inside a building to any low rise barrier in order to become wheelchair accessible
- Easily stores out of sight when not in use

## 2- Enclosed and Unenclosed Vertical Platform Lift

Savaria V1504 model is offered in several types of configurations.

### *Anatomy of the Lift*

V1504 consists in a tower and a platform. The tower is customized in height and the platform in size for each client. Here is the general form of the V1504.

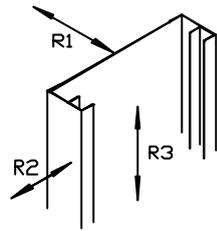


Number	Description	Number	Description
1	Front tower panel	6	Modular tower
2	Handrail	7	Car operating panel (C.O.P.)
3	Side guard panel	8	Non-skid platform
4	Safety underpan	9	Manual lowering device
5	Tower cover	10	Self support base

## Site Construction Details

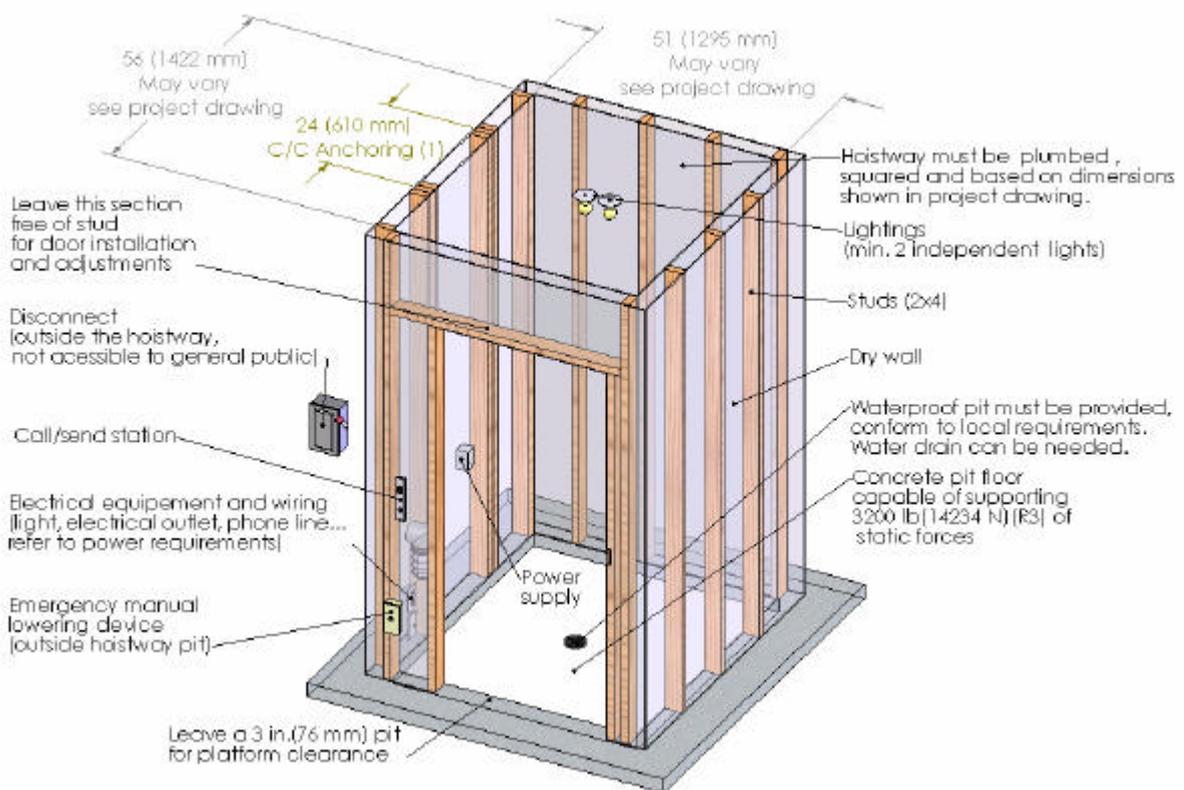
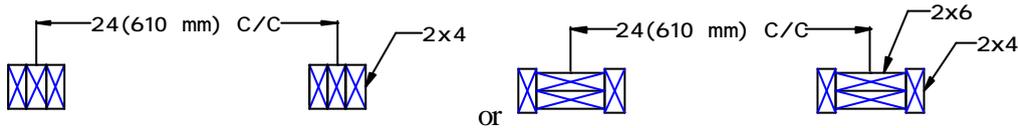
V1504 needs a minimal support to operate. In fact, you will need a wall that supports 472 lb (1157 N) of pull out force. A combination of 2 columns of three 2x4 is required. A concrete or brick wall can also satisfy that need.

### Rail Reactions



R1: 472 LB (2100N)  
 R2: 260 LB (14234N)  
Pit Loading:  
 R3: 3200 LB (14234N)

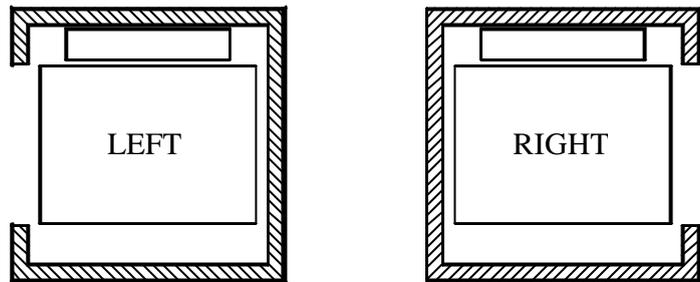
### Support Wall Configuration (1)



## Types of Configurations

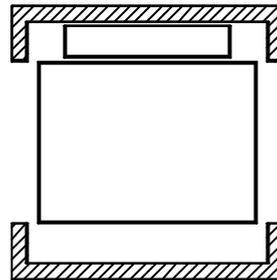
Here are all the possible lift configurations

### **TYPE: Same Side** **(SS)**



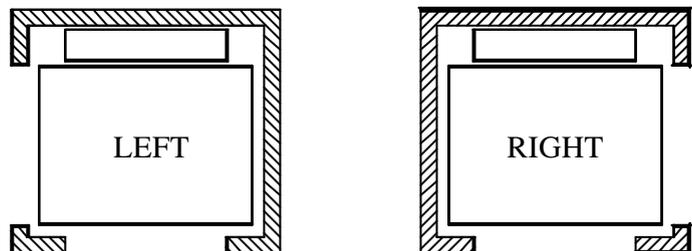
Same side configuration offers an enter/exit same side.

### **TYPE: Front/Back** **(FB)**



Front/back configuration offers both front and rear entrances.

### **TYPE: 90° Side Access** **(SA)**

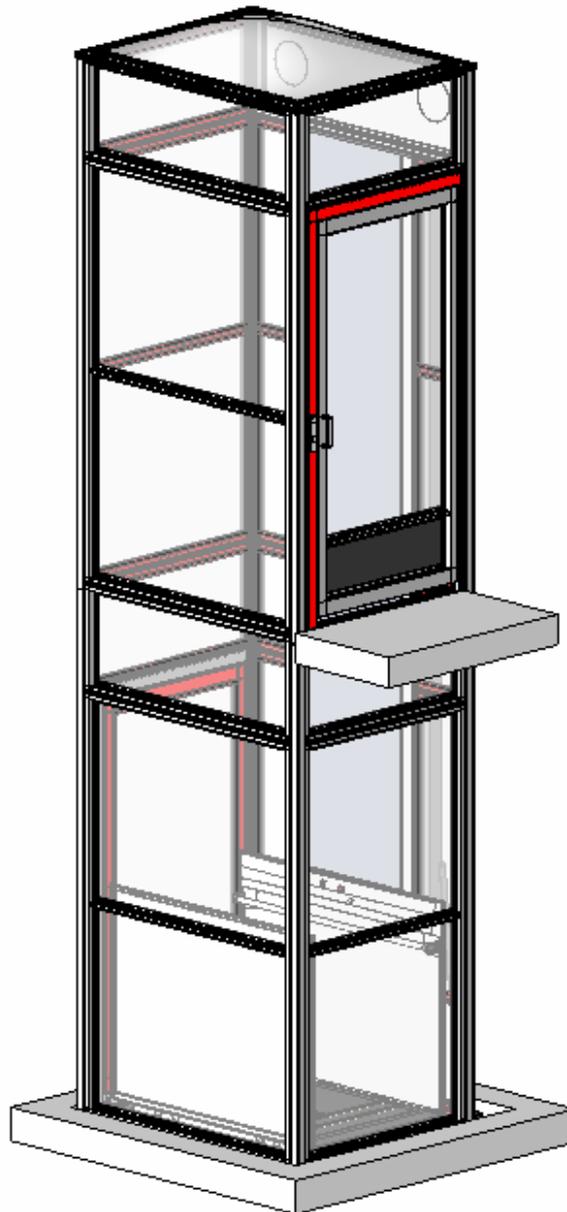


90° side access configuration offers both front and side entrances.

## 2.1- V1504-TL/PE/LUX Savaria Modular Enclosures

Different types of enclosure could be provided:

- V1504-TL is an aluminium frame enclosure with metal inserts
- V1504-PE is an aluminium frame enclosure with Plexiglas inserts
- V1504-LUX is a stainless steel frame with tempered glass inserts
- V1504 PRESTIGE is a frameless enclosure with tempered glass enclosure



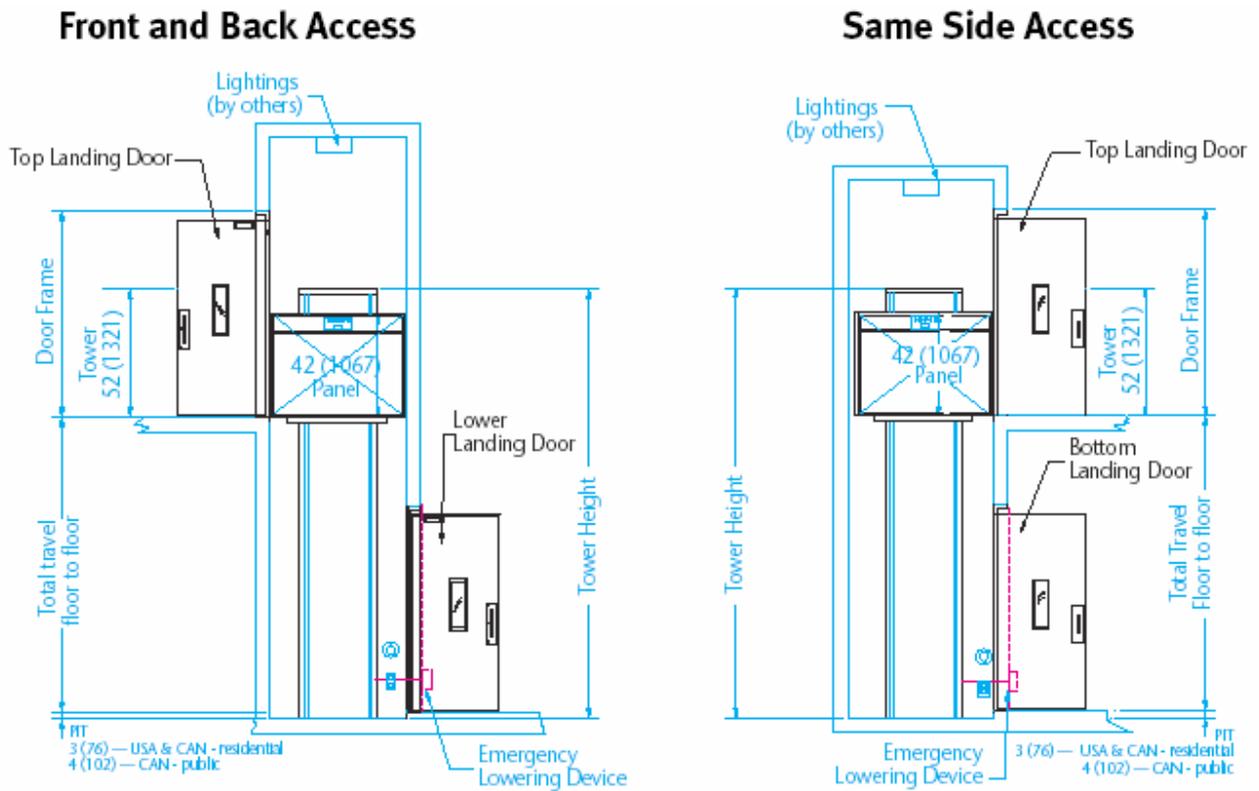
V1504-PE

### 3- Drawings

#### 3.1- Dimensions

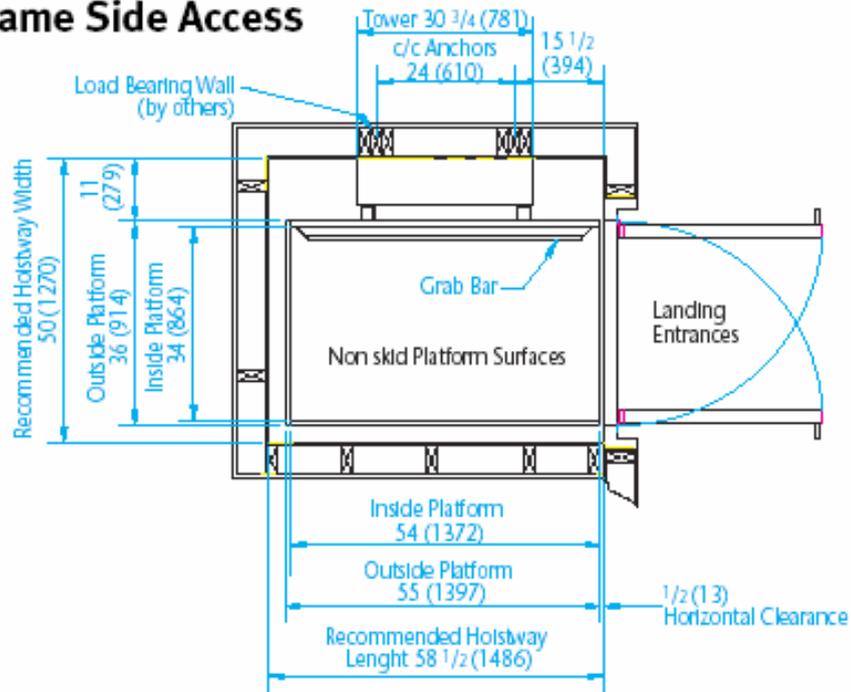
You will find in this section general drawings for different applications. For more details, consult our web site ([www.savariadealers.com](http://www.savariadealers.com)) or your dedicated regional sales manager for a code ID and password.

#### 3.1.1- Hoistway

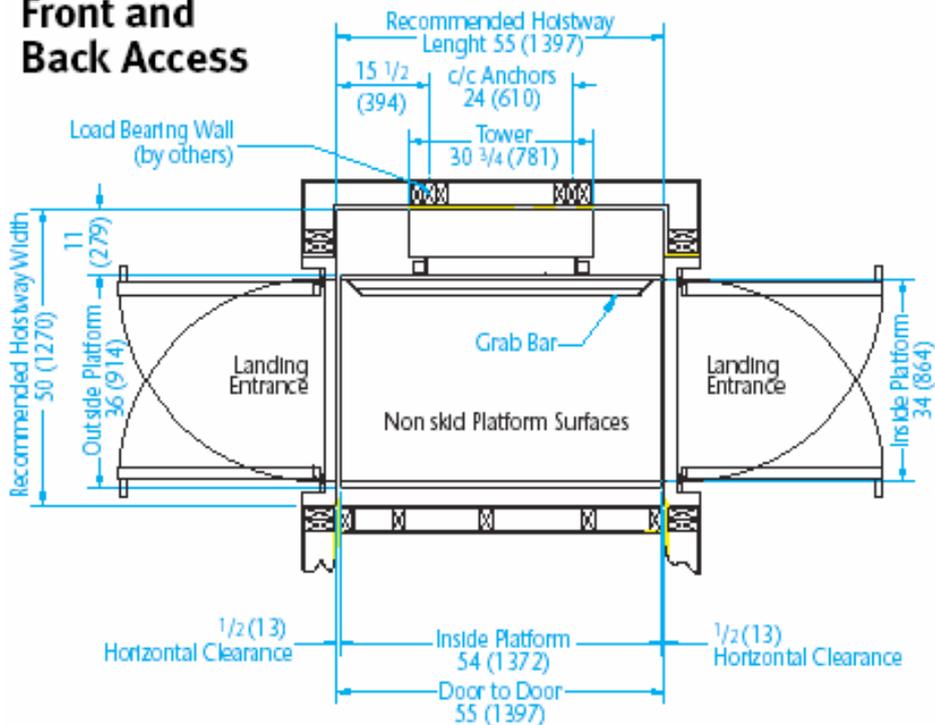


### 3.1.2- Platform

#### Same Side Access



#### Front and Back Access



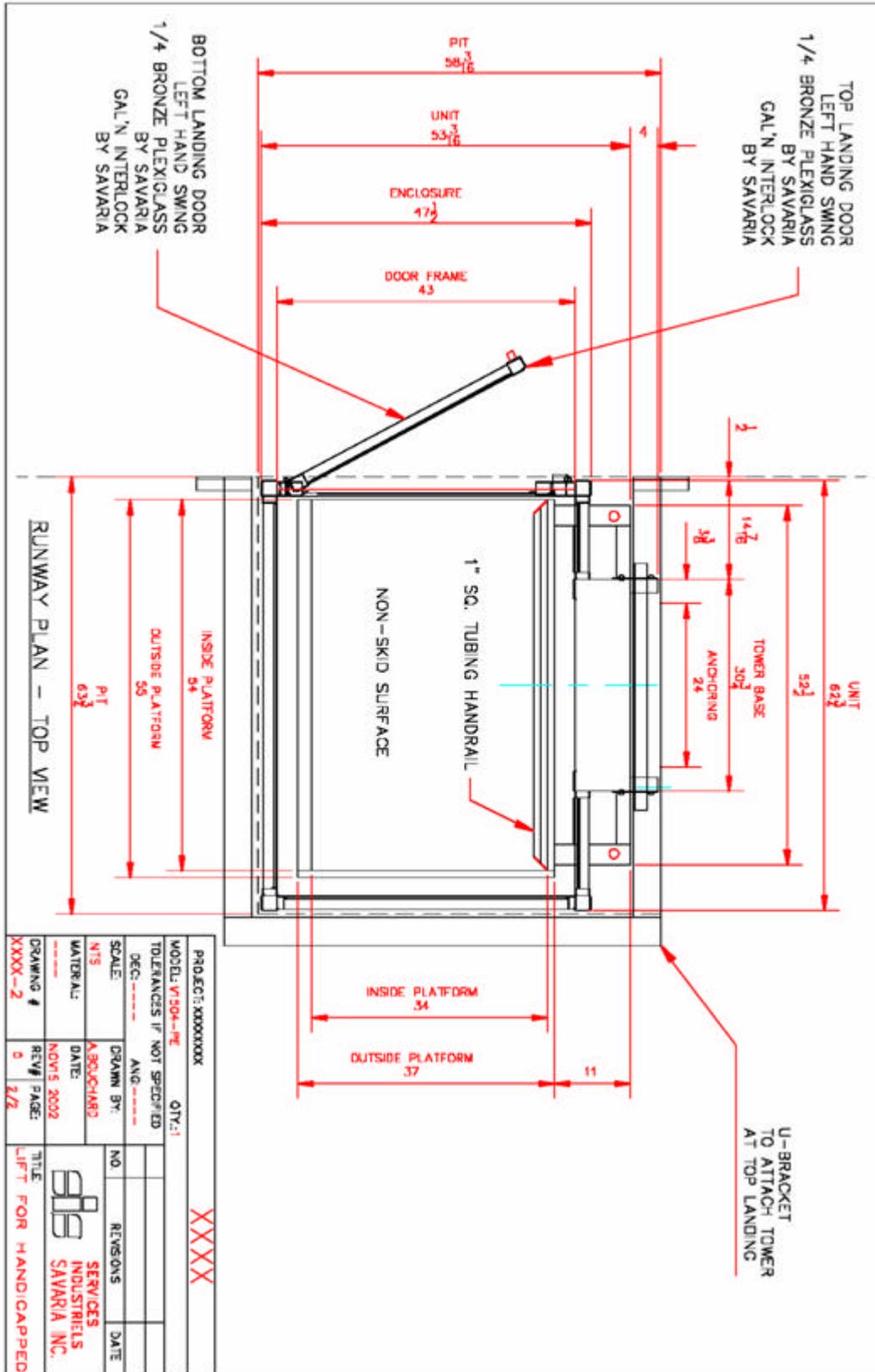


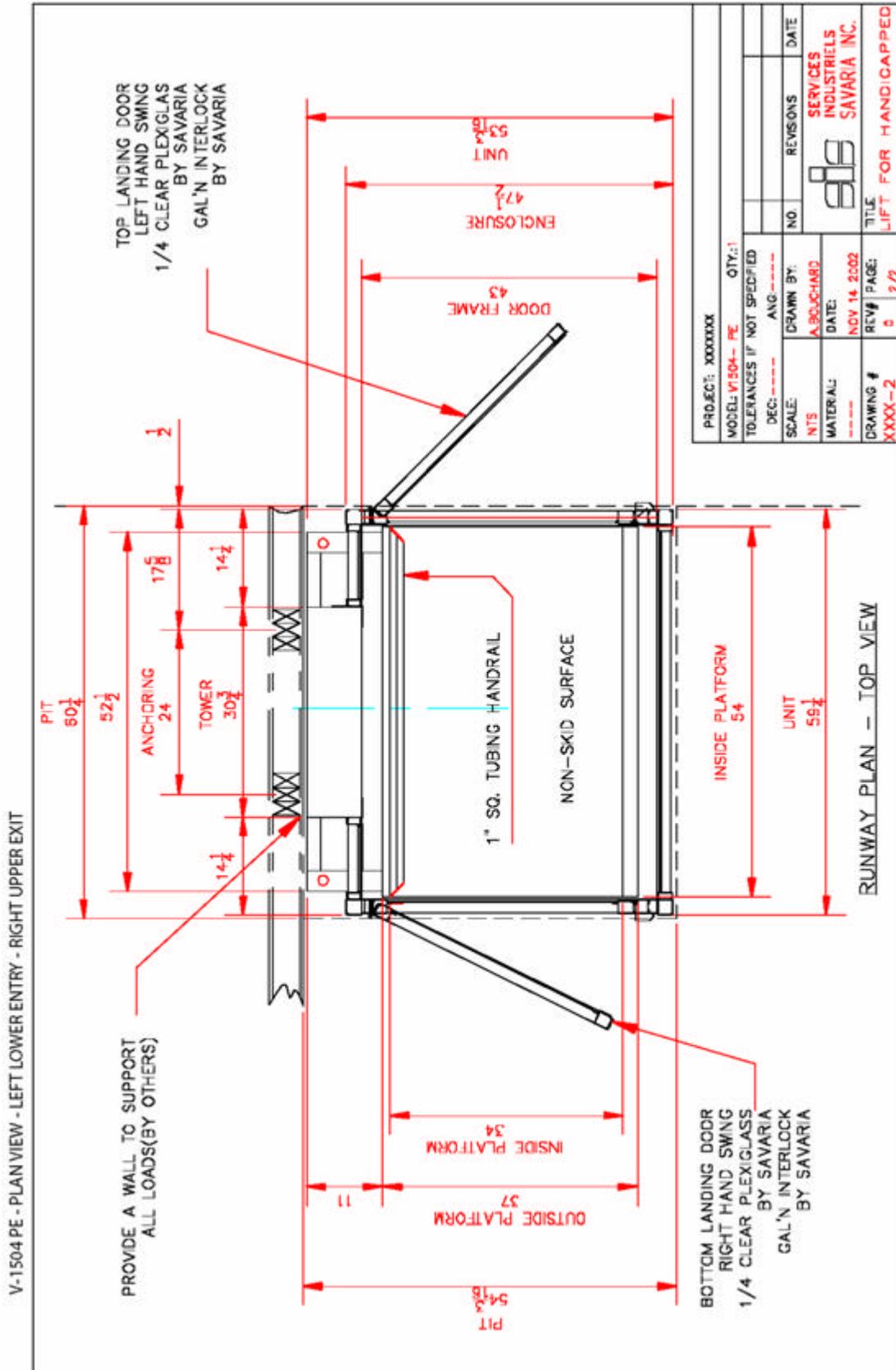






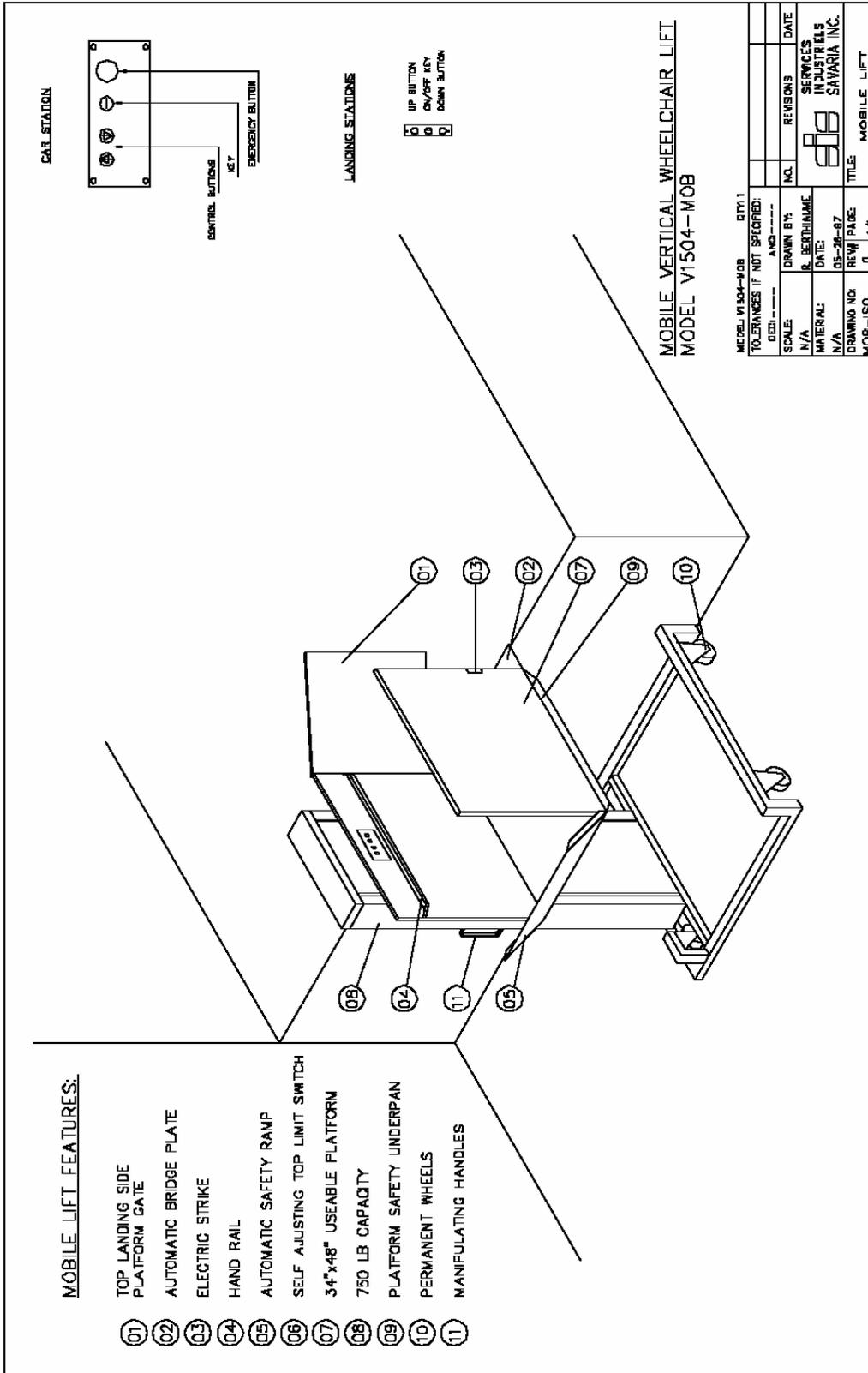
### 3.5 V1504 PE Plan View

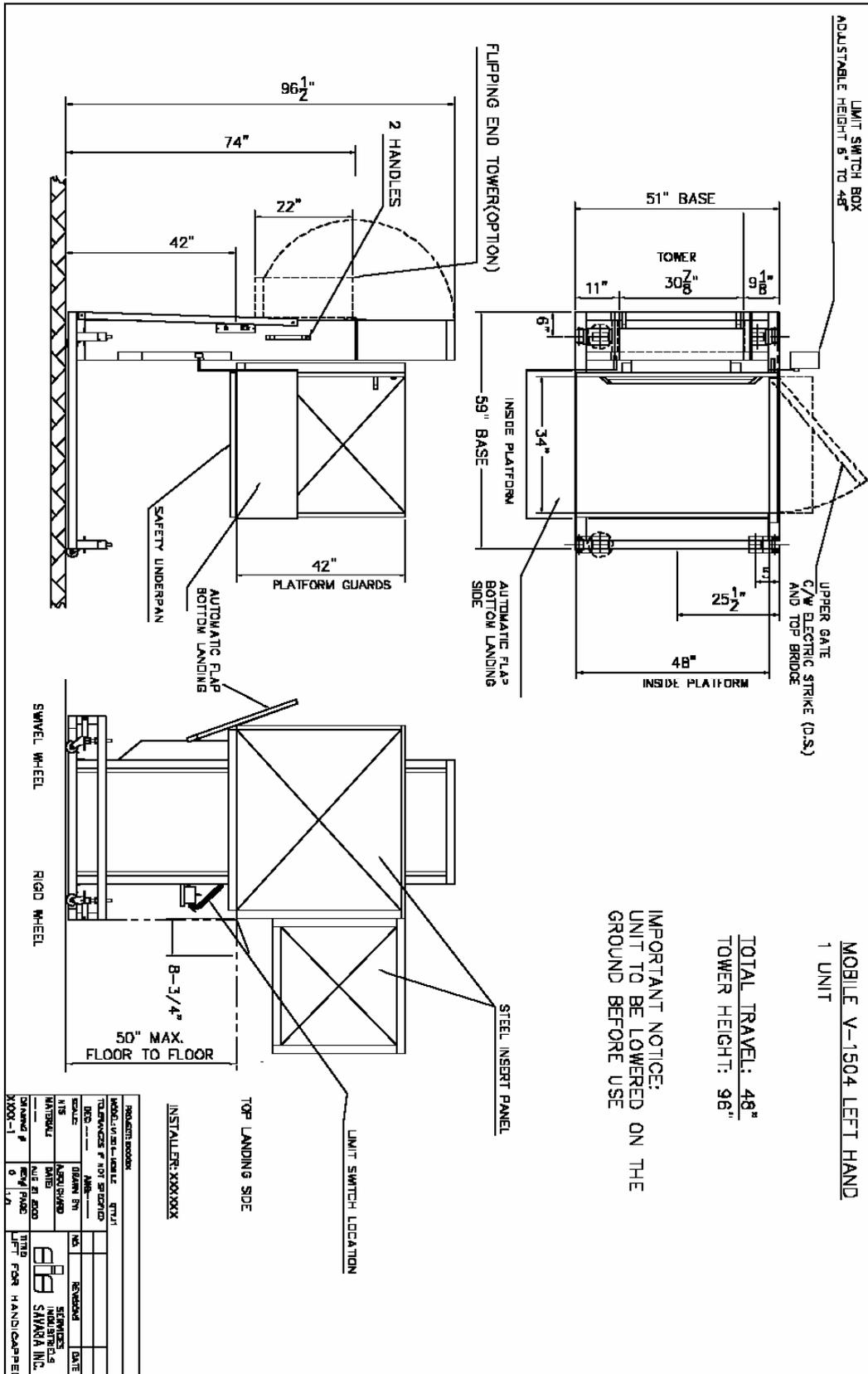


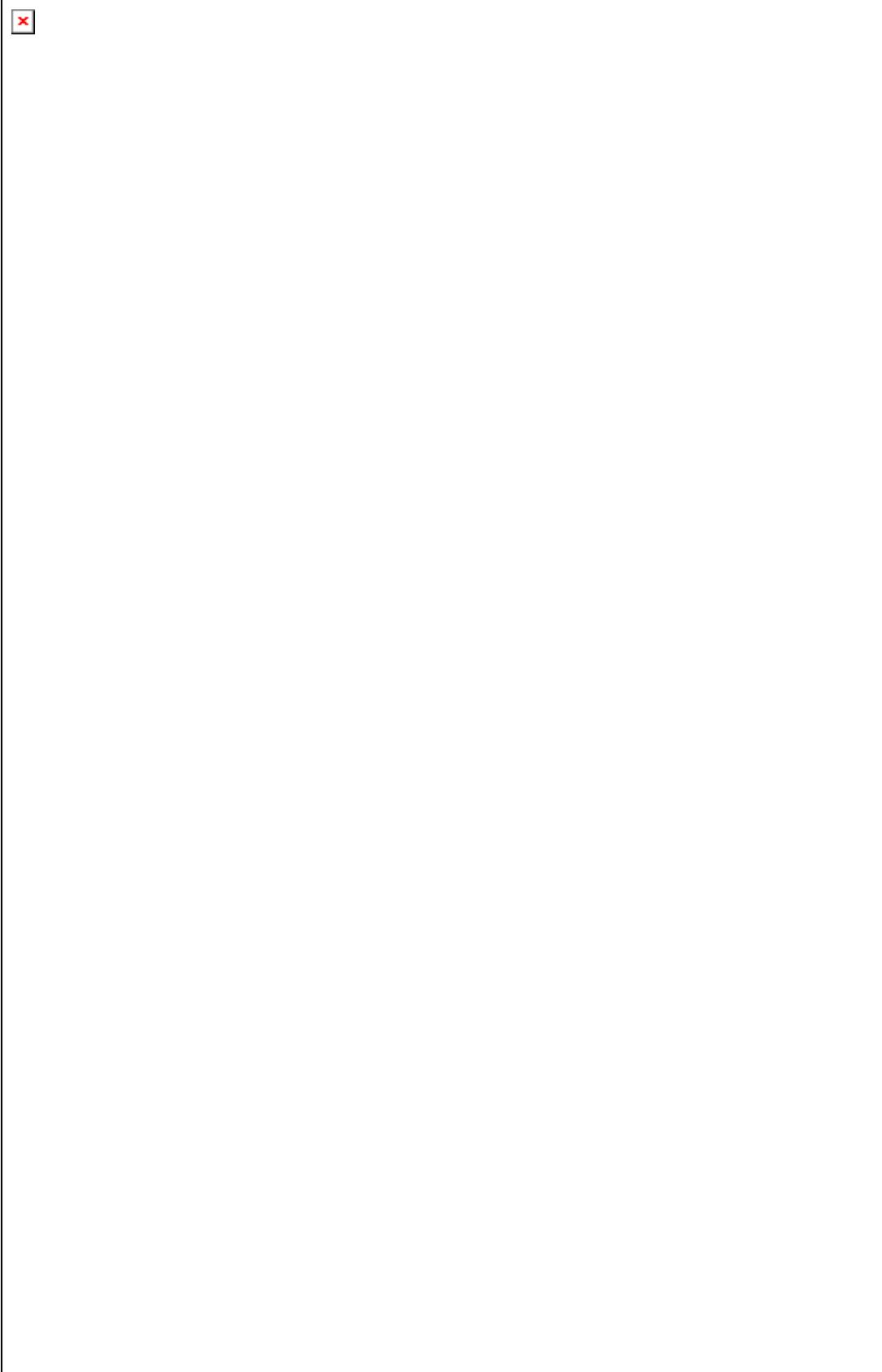




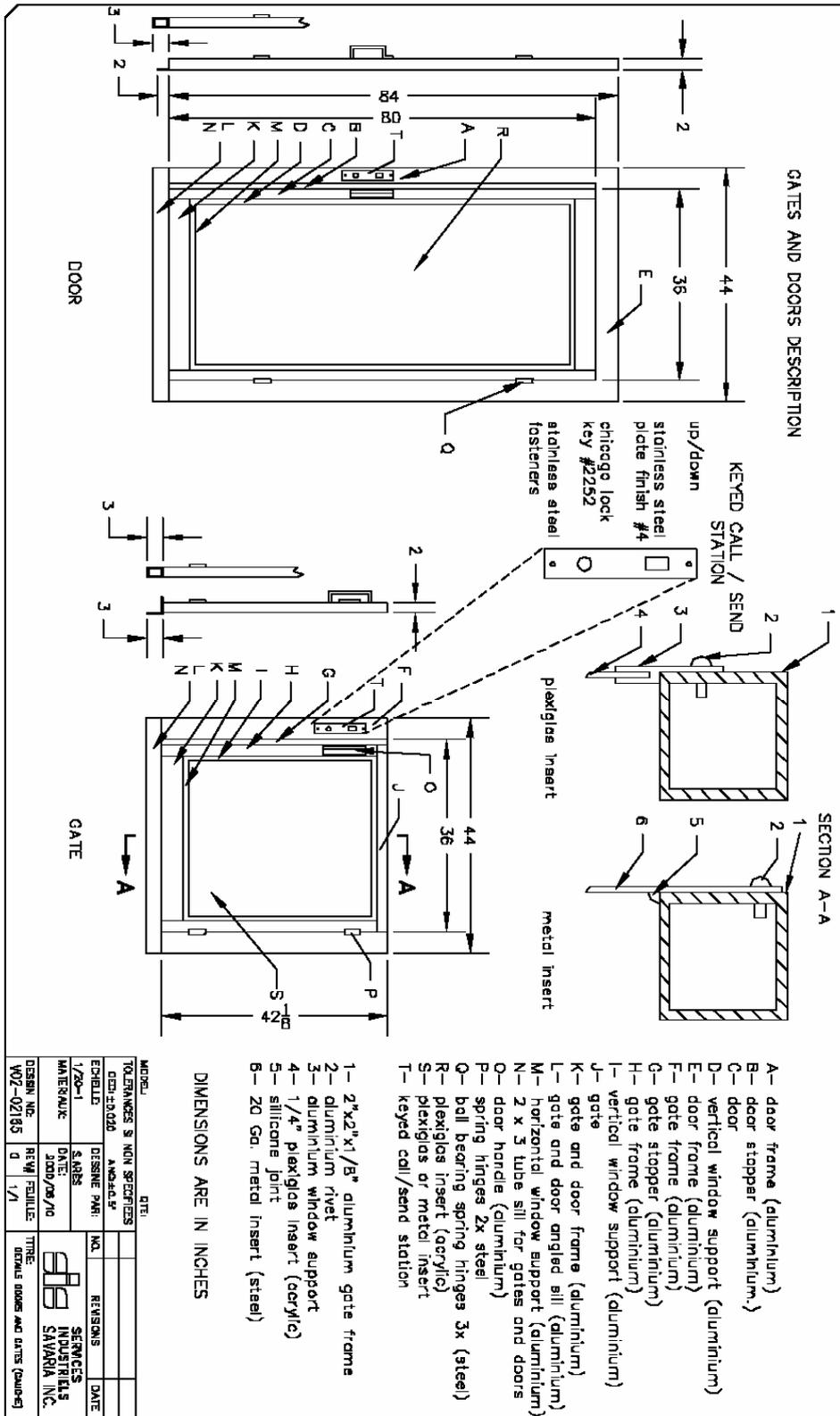
**3.6-V1504 MOBILE**





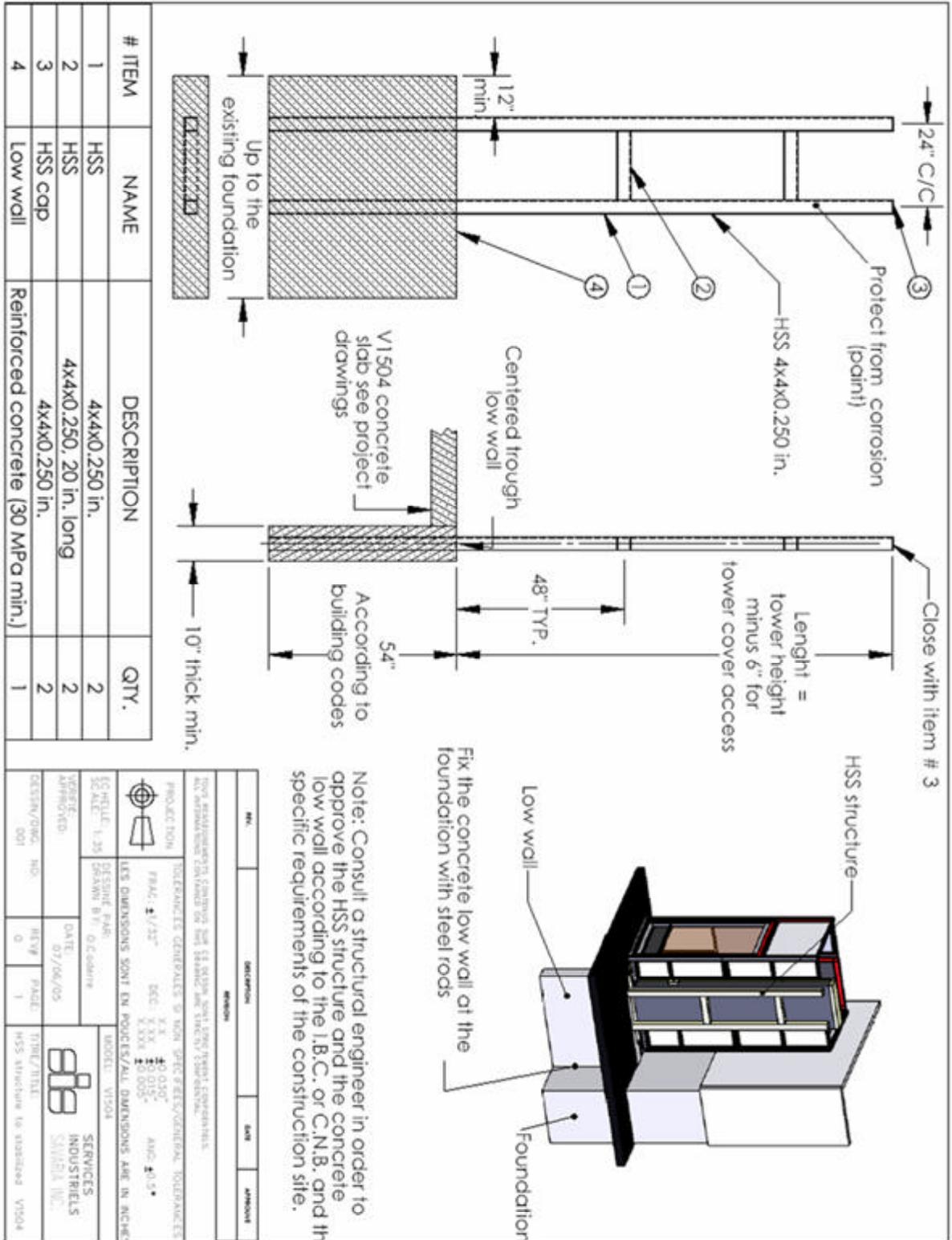


### 4-V1504 Doors/Gates





### 5- HSS Structure



## 6- Architect Specifications

### V1504-STD

#### Section 14420

#### Typical hydraulic vertical platform lift specifications Savaria model V1504-STD (Dry walls or block enclosure)

##### 1.0 GENERAL

###### RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including instructions to Bidders, Supplementary instructions to Bidders, General Conditions, and Specification Sections apply to work of this Section.

##### 1.1 DESCRIPTION

- A. Work described in this section includes providing equipment, incidental material and labor required for complete, operable hydraulic platform lift installation. Where singular reference is made to lifts or lift components, such reference shall apply to number of lifts or components required to complete installation. This specification provides a broad outline of required equipment and does not describe the details of design and construction. Lifts shall be erected, installed, adjusted, tested and placed in operation by lift system manufacturer, or manufacturer's authorized installer.
- B. Lifts shall be in accordance with the ASME A18.1 and ADA compliant including local codes and regulations except where specified otherwise.
- C. The lift described here, manufactured by Savaria corporation Inc., is a vertical platform lift consisting of a hydraulic tower with a lifting platform. The platform can be customized to better accommodate a wheelchair user or a person with impaired mobility. The lift can be used indoor or outdoor (with optional package) and in commercial and residential applications.

##### 1.2 PREPARATORY WORK BY OTHERS

- A. The following preparatory work to receive the lifts specified in this section is part of the work by others:
1. Permanent 120 VAC, 20-amp single-phase power to operate lift to be provided from a lockable fused/cartridge type disconnect switch with auxiliary contacts for battery operation. Refer to drawings for permanent power specifications and location of disconnects. Temporary power may be provided to expedite installation of lift.
  2. Provide a plumb and square hoistway with smooth interior surfaces, including fascias or furring of the hoistway interior.
  3. Provide rough openings per lift contractor's shop drawings.
  4. Provide substantial, level pit floor slab as indicated on the lift contractor's shop drawings.

##### 1.3 QUALITY ASSURANCE

###### MANUFACTURER

Company with not less than 20 years of experience in the design, fabrication and assembly of vertical platform lifts.

###### SUBCONTRACTOR QUALIFICATIONS:

1. Execute work of this section only by a company that has adequate product liability insurance.

2. Skilled tradesmen must be employees of the installing contractor approved by the lift manufacturer, with demonstrated ability to perform the work on a timely basis.

**REQUIREMENTS OF REGULATORY AGENCIES:**

1. Fabrication and installation work in compliance with applicable jurisdictional authorities.
2. File shop drawings and submissions with local authorities as the information is made available. Company pre-inspection and jurisdictional authority inspections and permits are to be made on timely basis as required.

**SUBMITTALS:**

1. Shop drawings shall show a complete layout of lifting equipment detailing dimensions and clearances as required.
2. The lift contractor shall provide physical samples of all items requiring selection of color or finish.

**1.4 MAINTENANCE**

- A. The lift shall be cleaned regularly and inspected at intervals no longer than every 6 months.

**1.5 WARRANTY**

- A. A warranty of 30 months on parts shall be offered by the lift manufacturer.

**2.0 PRODUCTS**

**2.1 PLATFORM LIFT**

- A. Basic of specification is Savaria Concord hydraulic vertical platform lift model V1504-STD:

1. Rated Load.....750 lb (340 kg)
2. Rated Speed.....25 f.p.m.(nominal) (0.13 m/s)
3. Usable Car Dimensions.....34'' x 54'' (864 X 1,372 mm)
4. Levels Serviced.....2,3,4
5. Number of Openings.....2
6. Car Access.....Enter/Exit same side, 90° exit, front/rear
7. Max. Travel.....23 feet (7,000 mm)
8. Operations.....Constant pressure
9. Power Supply.....110 volt, 15 amp, 1 phase, 60 Hz
10. Drive System.....2:1 Roller chain hydraulic
11. Paint.....Powder coat finish
12. Emergency Power.....Battery operation in down direction
13. Controller.....Electronic-free relay logic
14. Motor/Pump.....110VAC, 1.5HP
15. Manual lowering.....Outside the hoistway at desired landing
16. Color.....Almond beige

**B. CAR ENCLOSURE**

1. Side guards of platform shall have a steel frame with a powder coat finish and steel panel inserts to a minimum of 42'' (1,067 mm) above the upper landing.
2. No platform gate required, allowing for ease of operation.
3. Upper gate shall be 42'' high x 36'' wide, with metal or plexiglass inserts and shall be equipped with interlock, spring hinges and kick plate. Lower door shall be 80'' high x 36'' wide, with metal or

plexiglass inserts and shall be equipped with interlock hydraulic closer and kick plate on both sides. The inside kick plate shall be made of steel.

ALTERNATE A: 36'' wide x 80'' high top landing door instead of the top landing gate.

ALTERNATE B: Lower and upper door and door frame with 1 1/2 hour ULC Fire rating, heavy duty hinges, Door vision panel,  
flush mounting of door inside the hoistway and adjustable hydraulic door closer on door frame

4. Lift shall have manufacturer's standard non-skid flooring.
5. Doors and gates shall be flush mounted inside the hoistway as to avoid pinch points and shear hazards.
6. Handrail: A single handrail with both ends returned to the side guard shall be located on the control wall of the carriage.

## 2.2 **CAR OPERATION**

- A. Car Operating Panel shall consist of constant pressure buttons or rocker switches, emergency stop/alarm button, on/off key switch and emergency light mounted on a removable stainless steel panel (Type 304 #4 Stainless Steel Finish).
- B. Emergency Operation — The car shall be equipped with a battery operated light fixture, emergency battery lowering device and alarm in case of normal building supply failure. The battery shall be the rechargeable type with an automatic recharging system. A manual-lowering device shall be located outside the hoistway in a lockable box at positioned at a designated landing.

## 2.3 **PUMPING UNIT AND CONTROL**

- A. The pumping unit and control shall be enclosed in the tower. The controller and pump unit shall be pre-wired and tested prior to shipment. The controller is to be electronic-free with relay logic operation for ease of maintenance and service. Pump unit shall incorporate the following features:
  1. Smooth stops at each landing.
  2. Adjustable pressure relief valve.
  3. Manually operable down valve to lower lift in the event of an emergency. This valve shall be activated from outside of the hoistway through a keyed box.
  4. Pressure gauge isolating valve, manually operable.
  5. Gate valve to isolate cylinder from pump unit.
  6. Electrical solenoid for down direction control.
  7. Emergency lowering by battery power, from the car control.

## 2.4 **CYLINDER AND PLUNGER**

- A. 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.
- B. 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.

## 2.5 **ROLLER CHAINS**

- A. Two (2) No.50 roller chains with 5/8'' pitch. Minimum breaking strength 6100 lb (2773 kg) each

## 2.6 **LEVELLING DEVICE**

- A. The lift shall be provided with an anti-creep device which will maintain the carriage level within 1/2'' (12.69 mm) of the top landing.

- B. All limit switch and leveling device switches shall be located in a position to be inaccessible to unauthorized persons. They shall be located behind the mast wall and be accessible through removable panels.

### **2.7 GUIDE YOKE**

- A. The 2:1 guide yoke/sprocket assembly shall be supplied with two (2) sprockets, roller guide shoes, bearings and guards.

### **2.8 CALL STATIONS**

- A. Provide door frame mount key-controlled call stations for upper level and lower level on a stainless steel plate (Type 304 #4 stainless steel finish).

### **2.9 TERMINAL STOPPING DEVICES**

- A. Normal terminal stopping devices shall be provided at top and bottom of runway to stop the car positively and automatically.

Microswitches shall not be used.

### **2.10 GUIDE RAILS AND BRACKETS**

- A. Steel "C" guide rails and brackets shall be used to guide the platform and sling. Guide rails shall form part of the structural integrity of the unit and be integral to the mast enclosure, ensuring stability and minimum platform deflection when loaded.

### **2.11 CAR SLING**

- A. Car sling shall be fabricated from steel tubing 44" (1,116 mm) high with adequate bracing to support the platform and car enclosure. Roller guide shoes shall be mounted on the top and bottom of the car sling to engage the guide rails. Guide shoes shall be roller type with 3" diameter wheels.

### **2.12 WIRING**

- A. 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 wireways if located outside the unit enclosure. Quick disconnect harnesses shall be used when possible.

### **2.13 DOOR LOCKS**

- A. The door locks shall be GAL type "N" interlock or fire rated electric door strike conform to ASME A18.1 b 2000.

### **2.14 DOORS AND GATES**

- A. LOW-PROFILE ALUMINUM (TOP OR BOTTOM LANDINGS)

This door shall have a flush-mounted doorframe, an hydraulic door closer, a vision panel and a handle. Fire-rated electric door strike or GAL interlock shall be used.

- B. TOP LANDING GATE

This gate is installed on the top landing and shall be used with a fire-rated electric door strike or a GAL interlock. The size shall be 42" high and it shall be provided with metal or acrylic insert.

### **3.0 EXECUTION**

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

- B. 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 begins.

C. INSTALLATION:

1. Install all the components of the lift system that are specified in this section to be provided, and that are required by jurisdictional authorities to license the lift.
2. Trained employees of the lift contractor shall perform all installation work of this section.
3. Adjust lift for proper operation and clean unit thoroughly.
4. Instruct users in operation procedures and Owner's maintenance person in trouble-shooting and maintenance procedures.

END OF SECTION