

# V1504

**VERTICAL PLATFORM LIFT** 

# **PLANNING GUIDE**

Applicable Codes: ASME A17.1 ASME A18.1 CAN/CSA B355 CAN/CSA B613

> 24-m09-2015 Part No. 000690

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#### Purpose of This Guide

This guide assists architects, contractors, and lift professionals to incorporate the V1504 Vertical Platform Lift into a residential or public building design. The design and manufacture of the V1504 Vertical Platform Lift meets the requirements of the following codes and standards:

- ASME A18.1-2003 Section 2 (Public)
- ASME A18.1-2005 Section 2 (Public)
- ASME A18.1-2008 Section 2 (Public)
- ASME A18.1-2011 Section 2 (Public)
- ASME A18.1-2014 Section 2 (Public)
- ASME A18.1-2003 Section 5 (Private)
- ASME A18.1-2005 Section 5 (Private)
- ASME A18.1-2008 Section 5 (Private)
- ASME A18.1-2011 Section 5 (Private) ASME A18.1-2014 Section 5 (Private)
- ASME A17.1-1996 Section 20 (Public)
- ASME A17.1-1996 Section 21 (Private)
- CAN/CSA B355 S1-02 (Public) CAN/CSA-B355-09 (Public)
- CAN/CSA B613-2000 (Private)

We recommend that you contact your local authority having jurisdiction to ensure that you adhere to all local rules and regulations pertaining to vertical platform lifts. **IMPORTANT:** This Planning Guide provides nominal dimensions and specifications useful for the initial planning of a vertical platform lift project. Dimensions and specifications are subject to change without notice due to continually evolving code and product applications. Before beginning actual construction, please consult Savaria Corporation or the authorized Savaria dealer in your area to ensure you receive your site-specific installation drawings with the dimensions and specifications for your project.

Visit our website for the most recent V1504 drawings and dimensions.

#### How to Use This Guide

- Determine your client's intended use of the lift.
   Determine the local code requirements.
- 3 Determine the site installation parameters.
- 4 Determine the cab type and hoistway size requirements.
- 5 Plan for electrical requirements.

#### History

April 6, 2010 - Initial release May 16, 2011 - Updated "Travel speed" in Specifications table to 20 ft/min (0.1 m/s) June 17, 2011 - Added 24V battery backup to Options to Specifications table on page 5 July 8, 2013 - Added Noise Level to Specifications table on page 4 July 29, 2013 - Added optional 80" cab wall height to Specifications table on page 4 October 7, 2013 - Added seat capacity to Specifications table on page 4 November 12, 2013 - Revised drawings on pages 12 through 26 to include 42"-wide platforms December 5, 2013 - Revised enclosure drawings on pages 20 through 24 February 12, 2014 - Added seat dimensions on page 27 March 18, 2014 - Revised motor/drive information in Specifications table on page 5 April 7, 2014 - Revised drawings on pages 20-24 April 29, 2014 May 29, 2014 - Added NOTE to page 27 specifying max seat capacity; Changed motor/drive specification on page 4 from 1 HP to 3 HP June 9, 2014 - Added Remote Controller/Pump Box dimensions on page 28 June 25, 2014 - Added door and gate drawings - pages 25 to 36 July 28, 2014 - Added DuraSwing operator drawings - pages 37 to 40 September 11, 2014 - Removed section "Additional Branch Circuit" from page 43 November 5, 2014 - Revised Applicable Codes on page 3 January 20, 2015 - Added new 2014 code in section above February 17, 2015 - Revised drawings on pages 13 to 19 September 24, 2015 - Added Daily Cycle to specifications table on page 4

# Specifications

# V1504 Specifications

Specification	Specification Data
Load capacity	750 lb (340 kg)
Seat capacity	330 lb (150 kg)
Maximum travel	23 ft (7 m)
Travel speed	20 ft/min (0.1 m/s)
Noise level (for typical installation)	72.9 dBA (up direction); 50.0 dBA (down direction) Measured at a height of 1m, distance of 1m, in front of the motor with all panels on
Daily cycle	Normal: 30 Heavy: 75 Excessive: 100 Maximum starts in 1 hour on standard installation: 12 NOTE: Please consult your Sales Representative if there a chance you may exceed these amounts.
Levels serviced	2 (standard), 3, 4
Cab sizes	36" x 48" (914 mm x 1219 mm)
	36" x 54" (914 mm x 1371 mm)
	36'' x 60'' (914 mm x 1524 mm)
	42" x 48" (1067 mm x 1219 mm)
	42" x 54" (1067 mm x 1371 mm)
	42" x 60" (1067 mm x 1524 mm)
Cab walls (height)	Standard 42-1/8" (1070 mm)
	Optional 80" (2031 mm)
Cab access	Enter/exit same side (platform Type 1L and 1R)
	Front/rear access (platform Type 2)
	90 degree access (platform Type 3 and 4)
Power supply	120 VAC, 20 A, 60 Hz, single phase
Motor/drive	2:1 chain hydraulic, 3 HP, gear-type motor for 110V
Control system	Electronic-free relay logic controller
Tower	Modular 8 ft (2.4 m) base guide rail assembly
	Roller guide support
Pit depth requirement	3" (76.2 mm)
Finish	Beige electrostatic powder coat paint on all steel surfaces and vacuumed formed plastics
Standard features	115 VAC operation (115 VAC up direction; 12 VDC battery down direction)
	Call/send stations at landings
	Continuous-pressure type buttons
	Operating control buttons on platform
	Automatic battery recharging system (115 VAC)
	Remote manual lowering device
	Low-voltage controls
	Limit switches
	Handrail
	Non-skid platform surface
	No machine room required
	Emergency stop button

#### V1504 Specifications

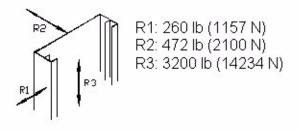
Specification	Specification Data
Safety features	Platform gate
	Safety underpan
	Door locks
	Safety brake
	Emergency stop buttons
	Manual lowering and battery lowering system
Options	Platform gate with metal insert and electric strike
	Top landing gate
	Upper/lower landing door 80" (2032 mm)
	Fire-rated, flush-mounted landing entrances
	Folding seat on platform
	Telephone on platform
	Custom color
	Fixed access ramp
	Public building package
	Outdoor package
	Automatic safety ramp on platform (for outdoor model)
	24V battery backup
	Remote controller/pump box

# **Site Construction Details**

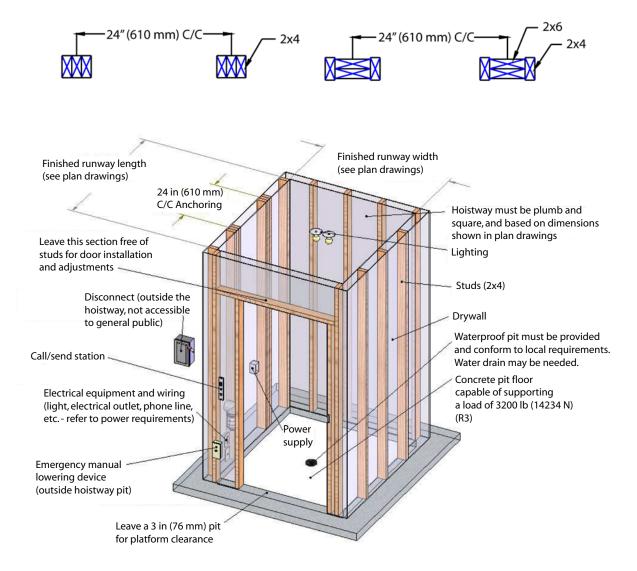
The V1504 needs a wall that supports a minimum of 472 lb (2100 N) of pull out force at any bracket. The floor must be capable of supporting a load of 3200 lb (14.2 kN). See Figure 1. A wall with a combination of two columns of three 2x4's, or a concrete or brick wall is required.

Figure 2 details a sample wooden support wall configuration

#### Figure 1: Wall/Floor Loading



#### Figure 2: Sample Wooden Support Wall Configuration



#### Figure 3: Wooden Hoistway Construction - Recommended Steps



Step 1 Pit (by others)



Step 2 Studs (by others)



Step 3 Electrical wiring and equipment (by others)



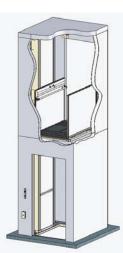
Step 4 Drywall (by others)



Step 5 Door positioning (by Savaria Concord installer)



Step 6 Door drywall (by others)



Completed hoistway

Figure 4 illustrates a sample concrete/steel structure configuration.

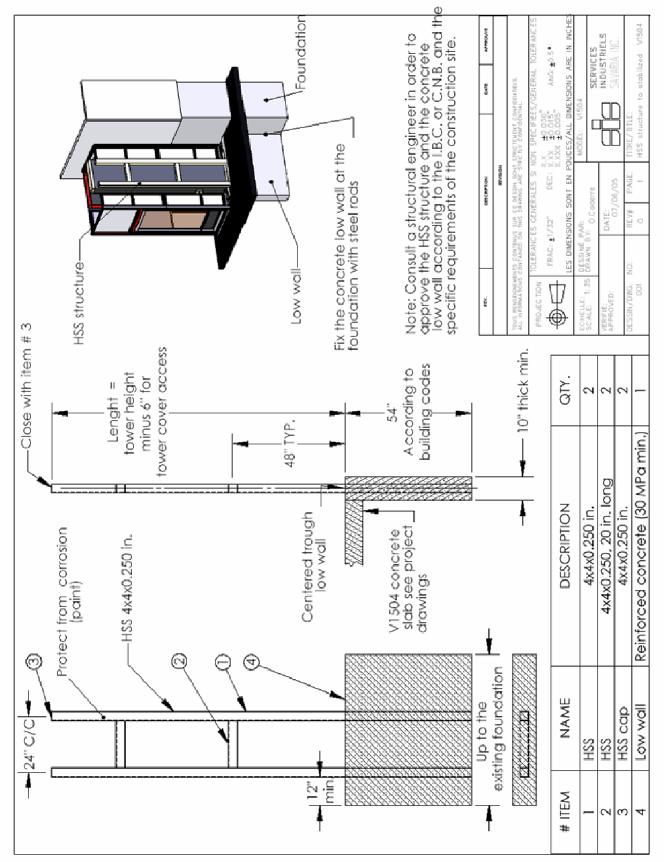


Figure 4: Sample Concrete/Steel Structure Configuration

Figure 5 illustrates a sample outdoor enclosure application.

#### Figure 5: Sample Outdoor Enclosure Application

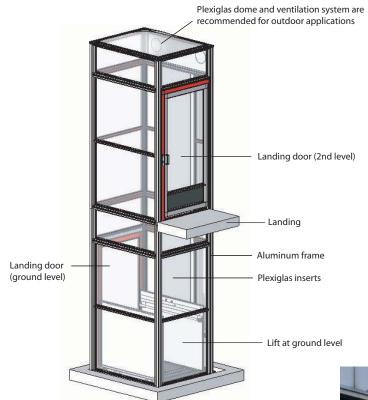
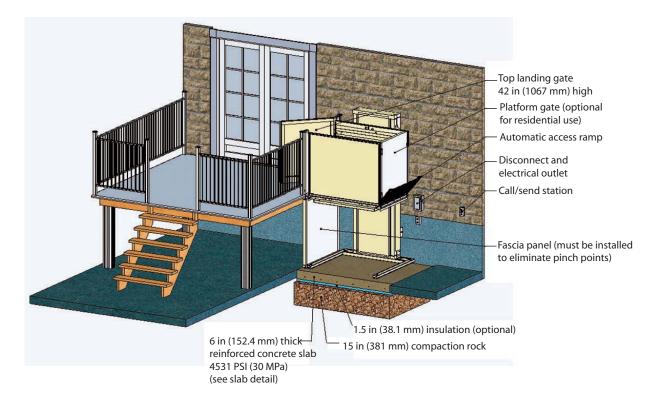


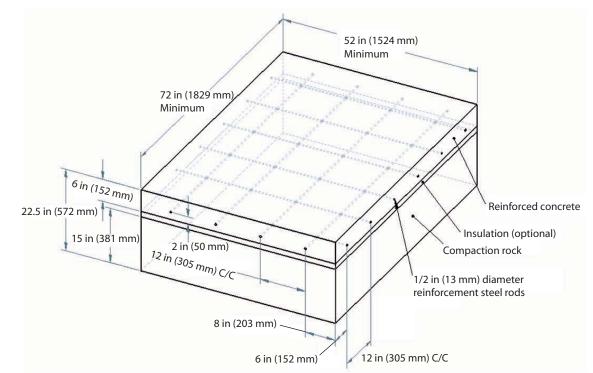


Figure 6 illustrates the site construction details for a typical outdoor application.



#### Figure 6: Sample Unenclosed Outdoor Application

Figure 7 illustrates the concrete slab detail for a typical outdoor application.



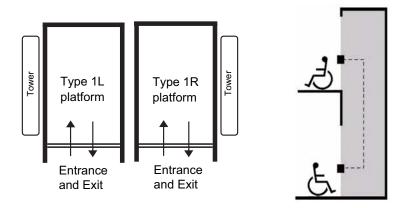
#### Figure 7: Concrete Slab Detail

# **Cab Types**

# Type 1 Cabs

For type 1 cabs, entry and exit are available from only one end of the platform.

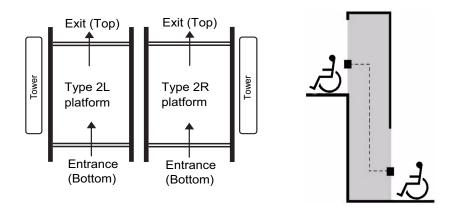
## Figure 8: Type 1 Left and Right



# Type 2 Cabs

For type 2 cabs, entry and exit are available from both ends of the platform.

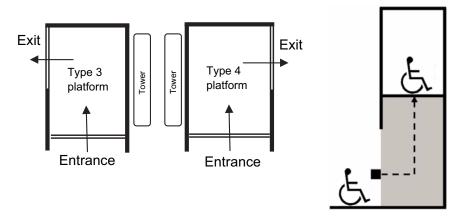
## Figure 9: Type 2



# Type 3 and 4 Cabs

For type 3 and 4 cabs, entry and exit are available from one end and one side of the platform.

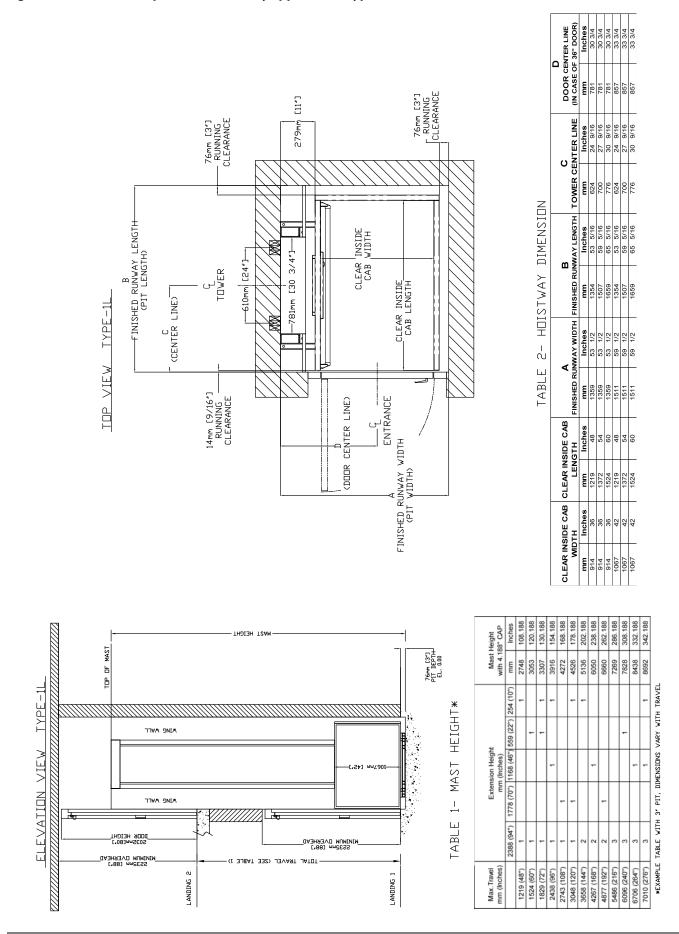
# Figure 10: Type 3 and 4

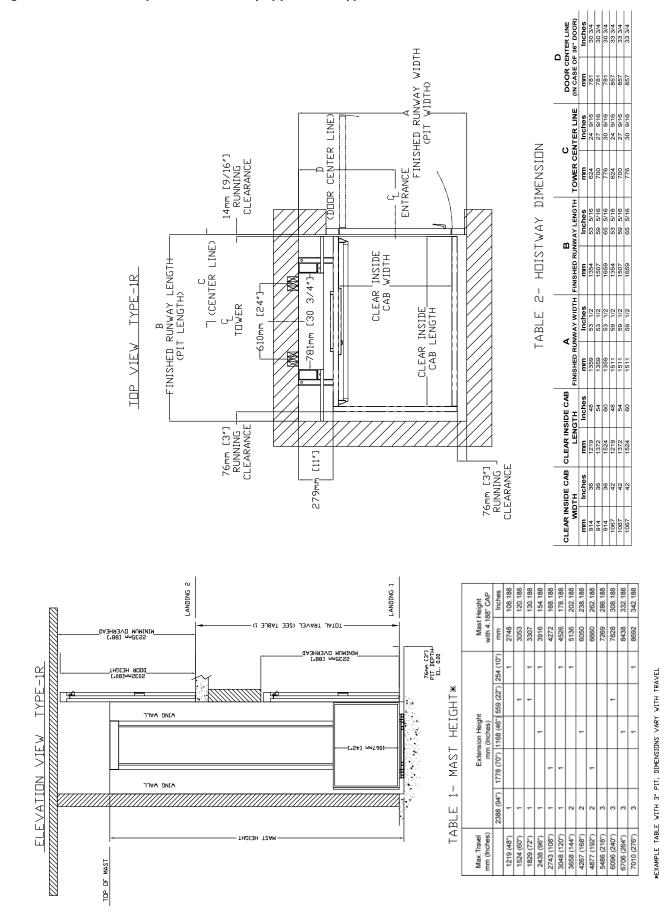


# Drawings

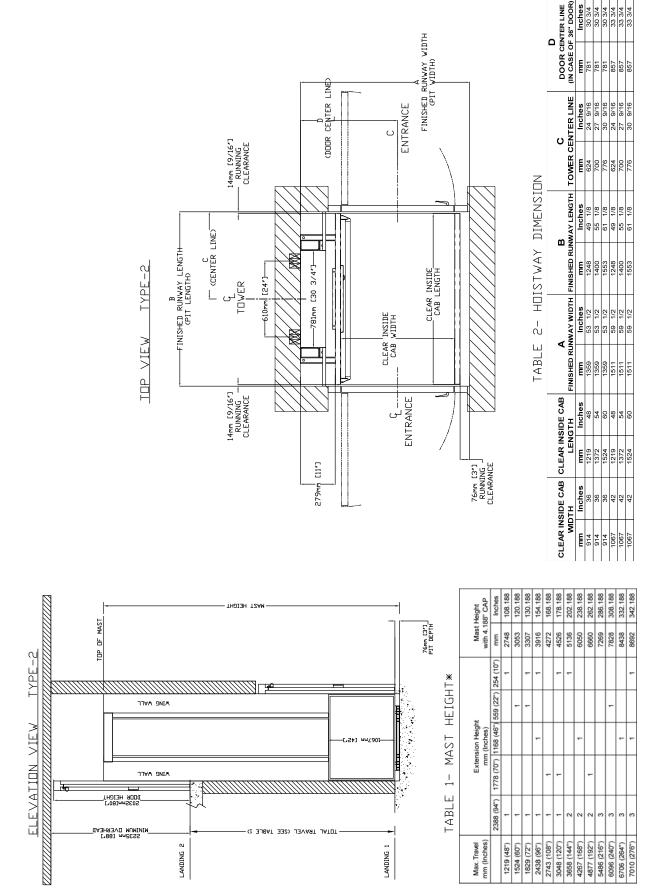
- Elevation and plan view, hoistway application (Type 1L)
- Elevation and plan view, hoistway application (Type 1R)
- Elevation and plan view, hoistway application (Type 2)
- Elevation and plan view, hoistway application (Type 3)
- Elevation and plan view, hoistway application (Type 3, 45" opening)
- Elevation and plan view, hoistway application (Type 4)
- Elevation and plan view, hoistway application (Type 4, 45" opening)
- Elevation and plan view, enclosure application (Type 1L)
- Elevation and plan view, enclosure application (Type 1R)
- Elevation and plan view, enclosure application (Type 2)
- Elevation and plan view, enclosure application (Type 3, 45" opening)
- Elevation and plan view, enclosure application (Type 4, 45" opening)
- Auto door, left-hand
- Auto door, right-hand
- Manual door, left-hand
- Manual door, right-hand
- Prodoor auto, left-hand
- Prodoor auto, right-hand
- Prodoor manual, left-hand
- Prodoor manual, right-hand
- Auto half gate, left-hand
- Auto half gate, right-hand
- Manual half gate, left-hand
- Manual half gate, right-hand
- DuraSwing on half gate, right-hand
- DuraSwing on half gate, right-hand, 45" opening
- DuraSwing on half gate, left-hand
- DuraSwing on half gate, left-hand, 45" opening
- Seat dimensions
- Remote controller/pump box dimensions

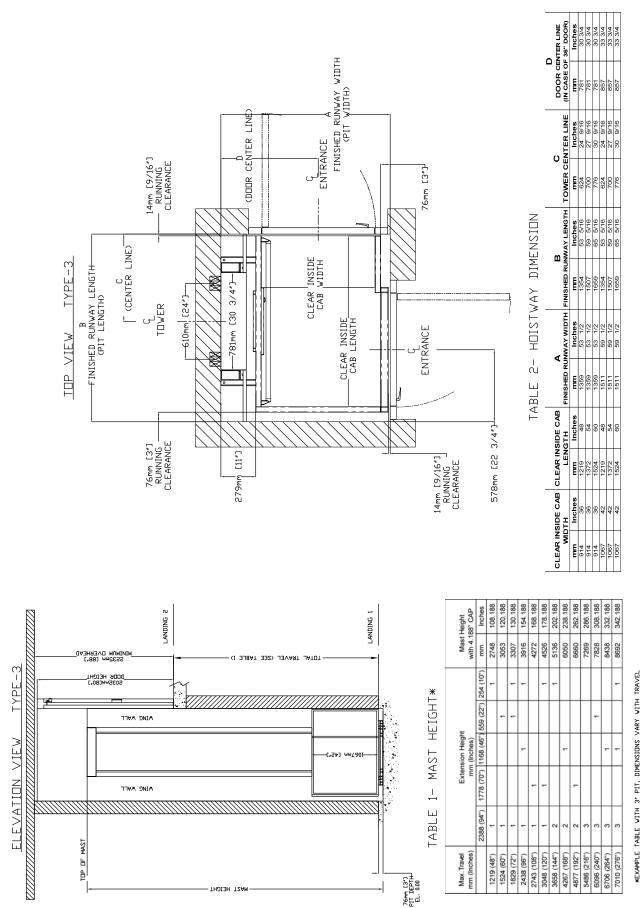
*Note:* Refer to the Architescts & Builders portion of our main website (www.savaria.com) for other door/gate sizes.

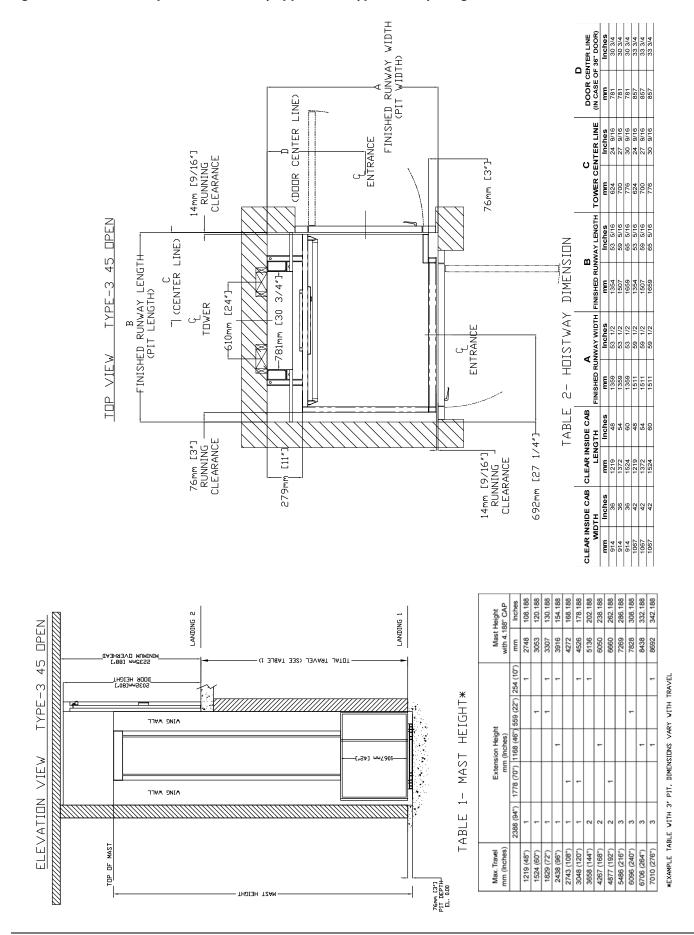


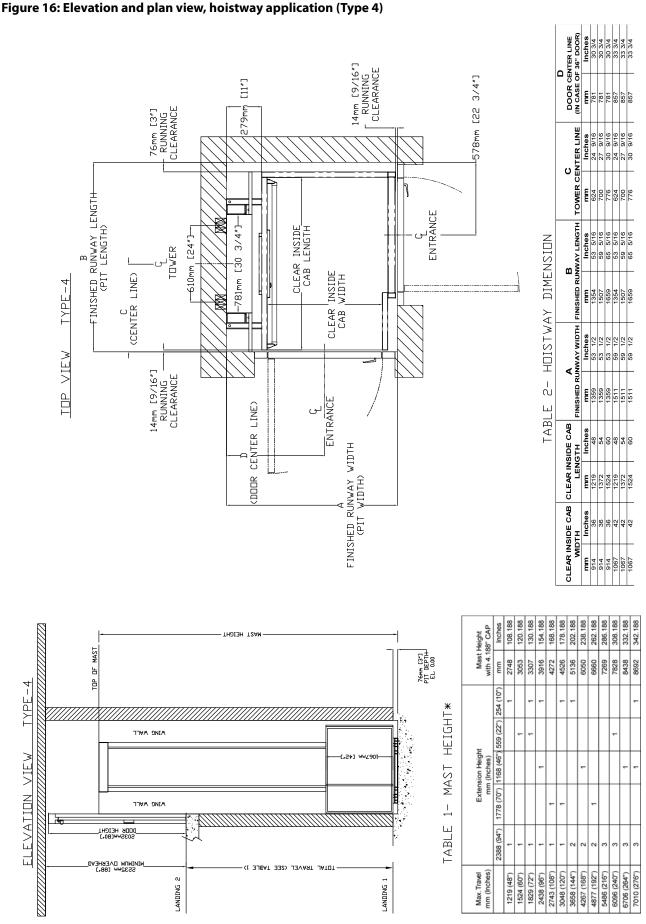


#### Figure 12: Elevation and plan view, hoistway application (Type 1R)

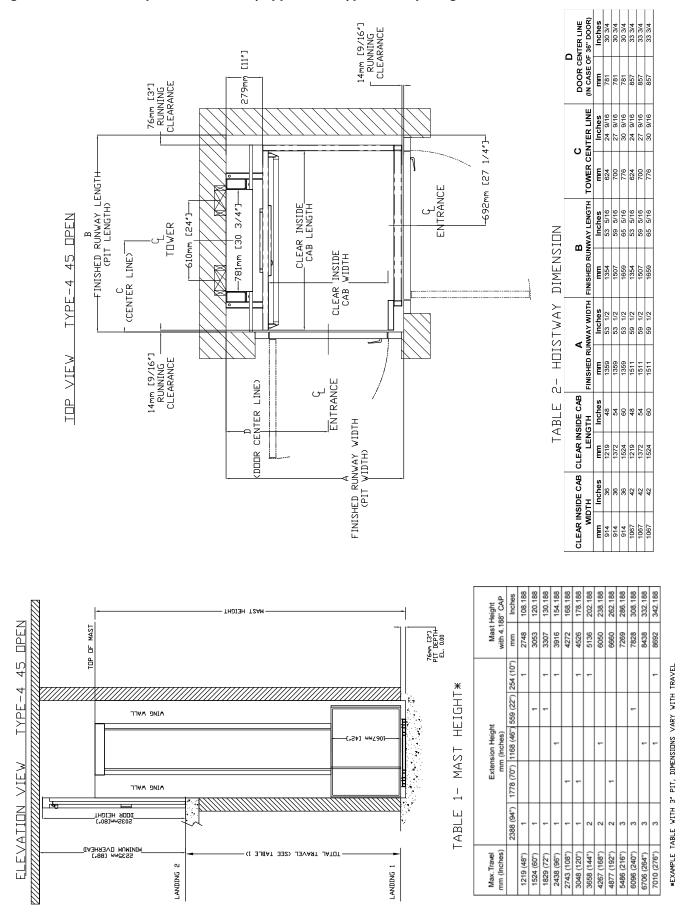








\*EXAMPLE TABLE WITH 3" PIT, DIMENSIONS VARY WITH TRAVEL



#### Figure 17: Elevation and plan view, hoistway application (Type 4, 45" opening)

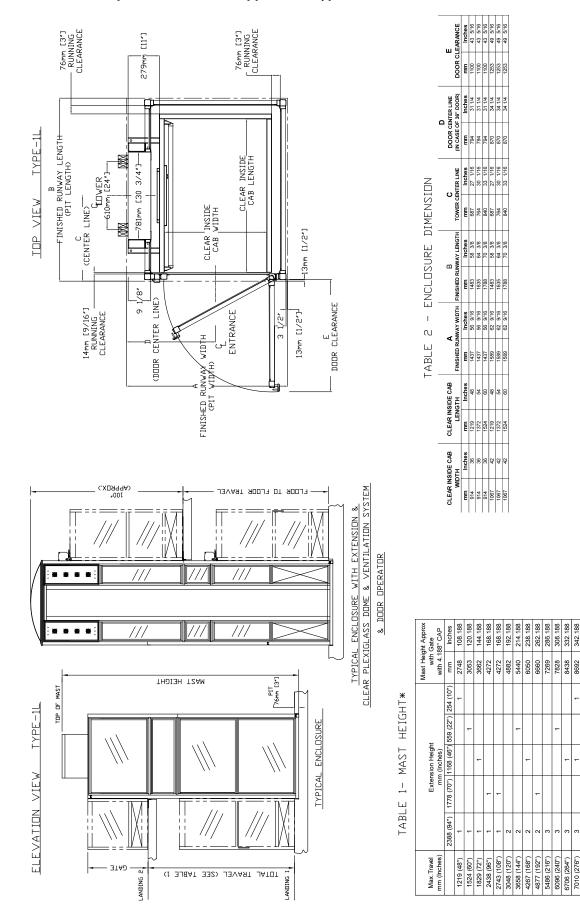


Figure 18: Elevation and plan view, enclosure application (Type 1L)

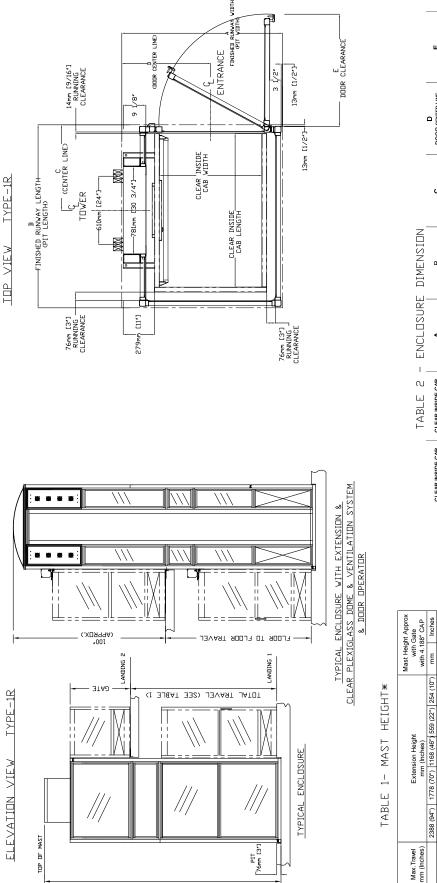
20

6706 (264") 7010 (276")

332.188 342.188

VARY WITH TRAVEL

\*EXAMPLE TABLE VITH 3' PIT, DIMENSIONS



MAST HEIGHT



168.188 168.188 192.188 214.188 233.188 262.188 262.188 366.1885366.1885 366.1885366.1885 366.1885366.1885 366.1885366.1885 366.1885366.1885 366.1885366.1885 366.1865365.1885 366.1855365.1885 366.1885365.18853655

6050 6660 7269 7828 8438

8692

VITH TRAVEL

VARY

7010 (276°) 3 1 1 1 \*EXAMPLE TABLE WITH 3" PIT, DIMENSIDNS

6706 (264")

4272 4272 4882 5440

 1524 (60")

 1829 (72")

 2438 (96")

 2438 (96")

 2743 (108")

 3048 (120")

 3658 (144")

 4267 (168")

 4877 (192")

 5486 (216")

 6096 (240")

108.188 120.188 144.188

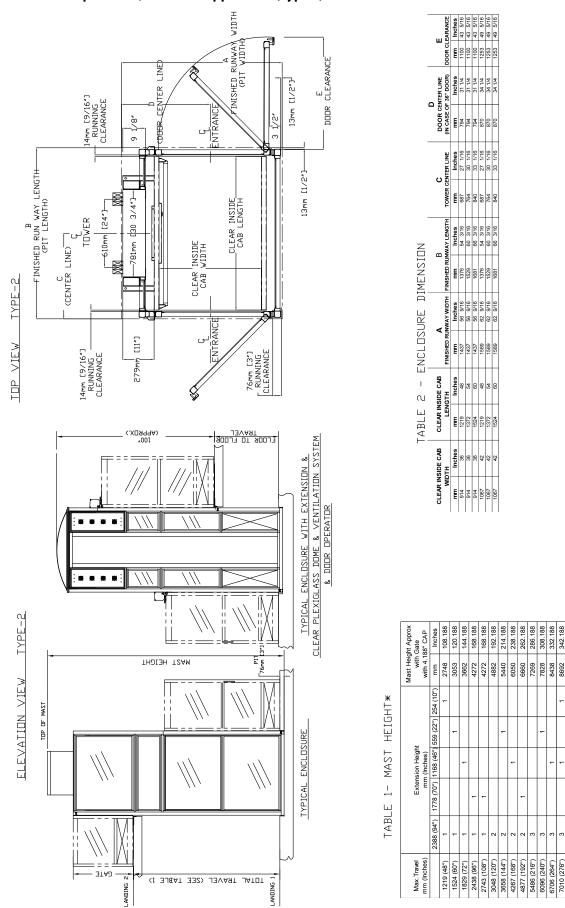
2748

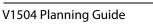
2388 (94")

1219 (48")



Figure 20: Elevation and plan view, enclosure application (Type 2)





3048 (120") 3658 (144") 4267 (168") 4877 (192")

5486 (216")

6096 (240")

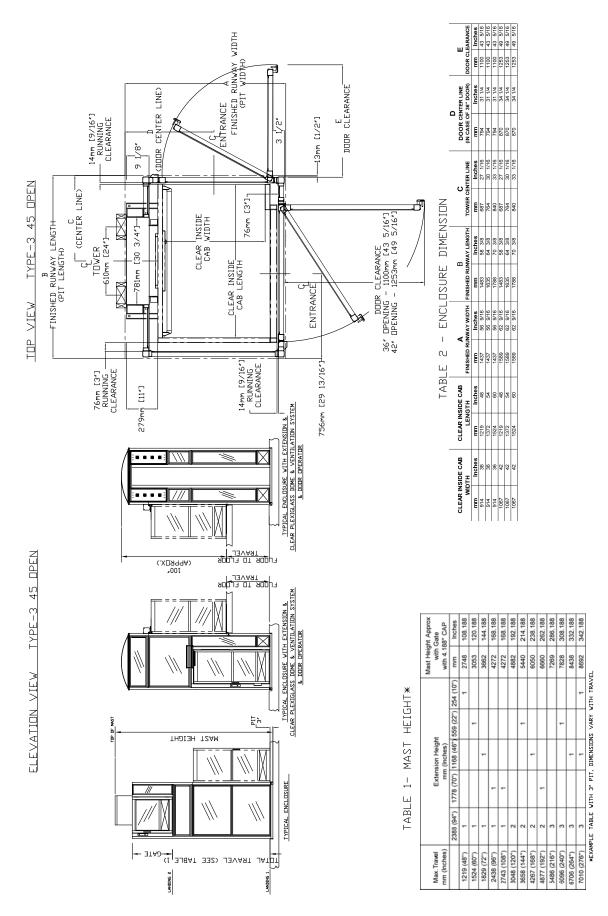
6706 ( 7010

2743 (108")

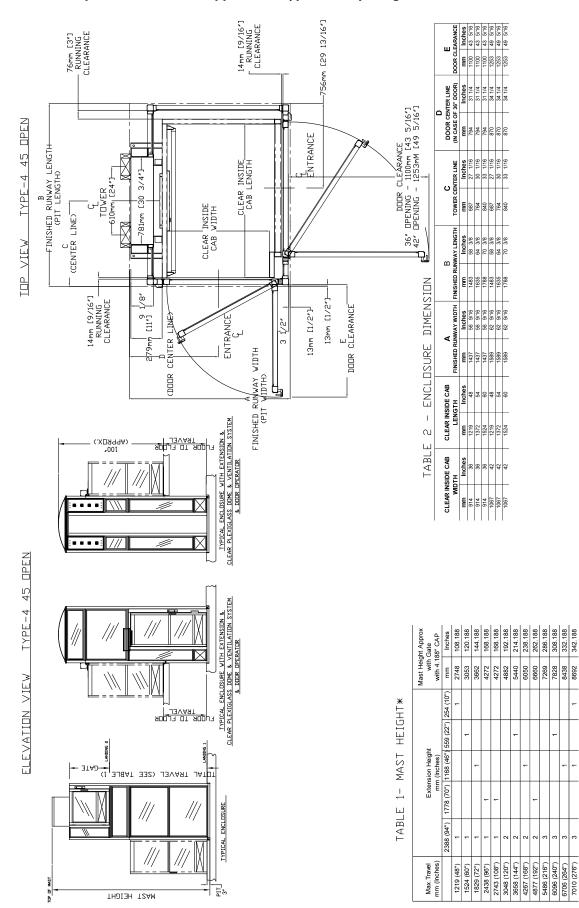
4272 4882 5440 6050 6660 7269 7269 7269 7828 8438 8438

VITH TRAVEL

# Figure 21: Elevation and plan view, enclosure application (Type 3, 45" opening)



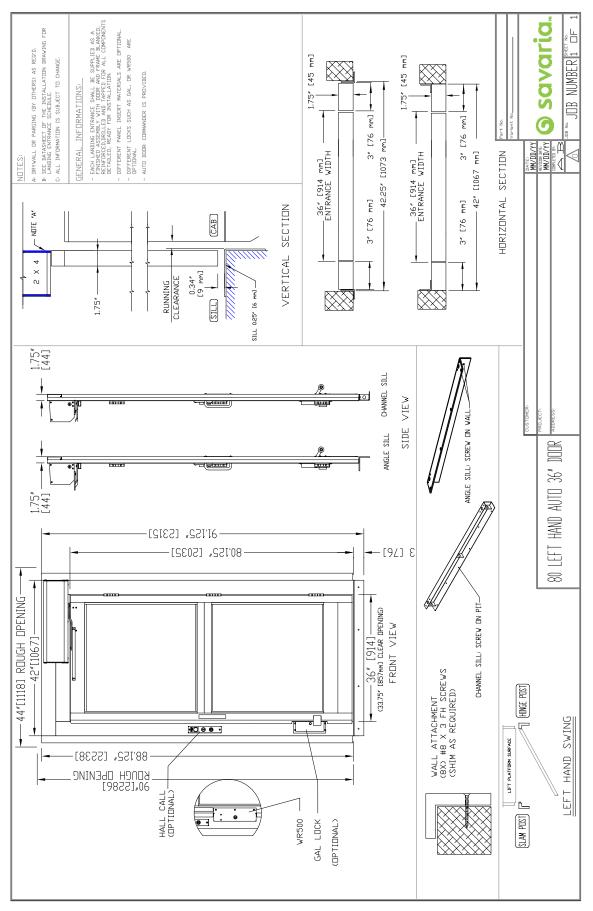
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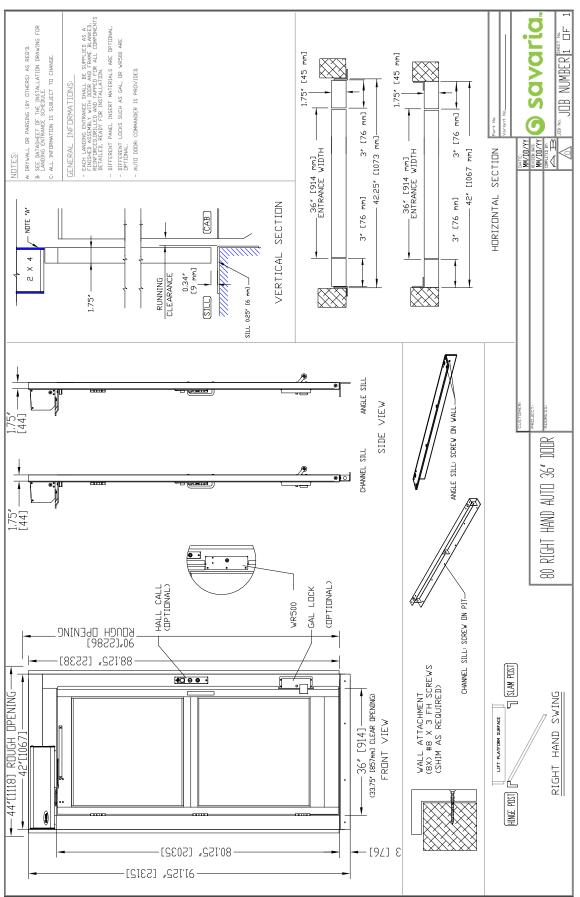


VARY WITH TRAVEL

\*EXAMPLE TABLE WITH 3" PIT, DIMENSIONS

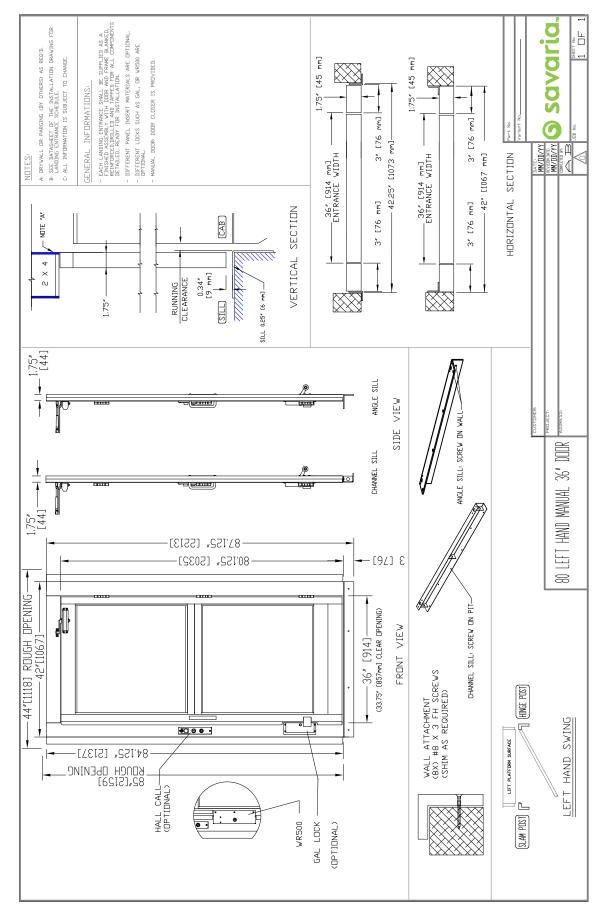


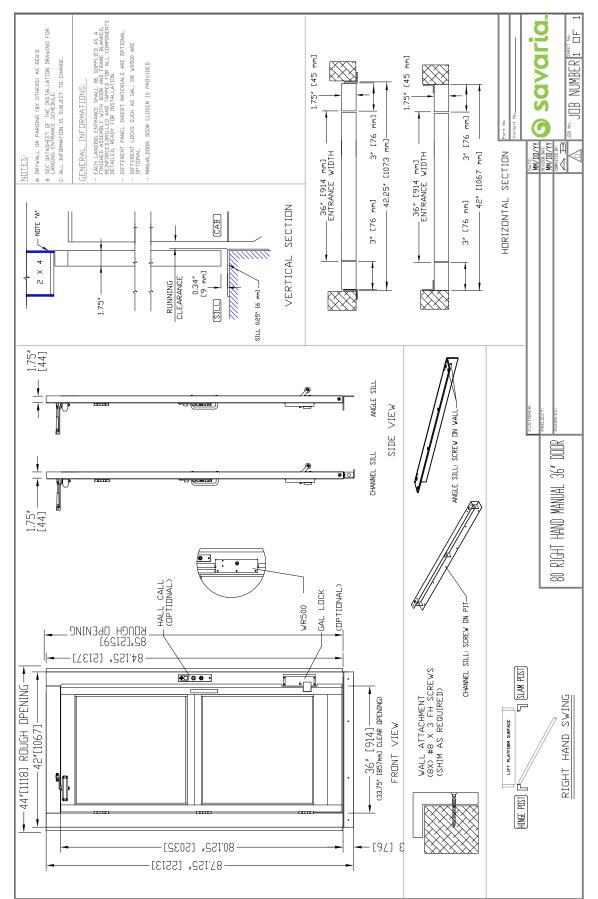




#### Figure 24: Auto door, right-hand

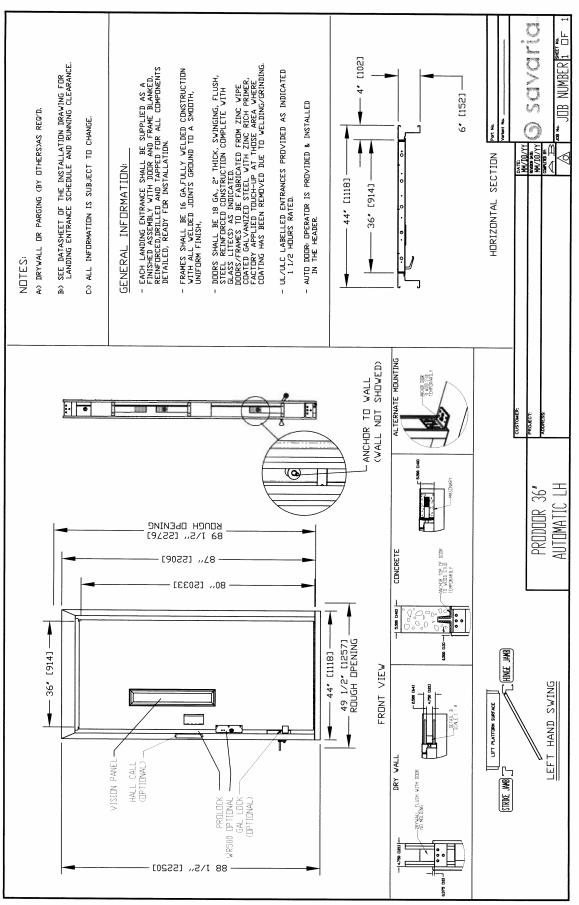
Figure 25: Manual door, left-hand



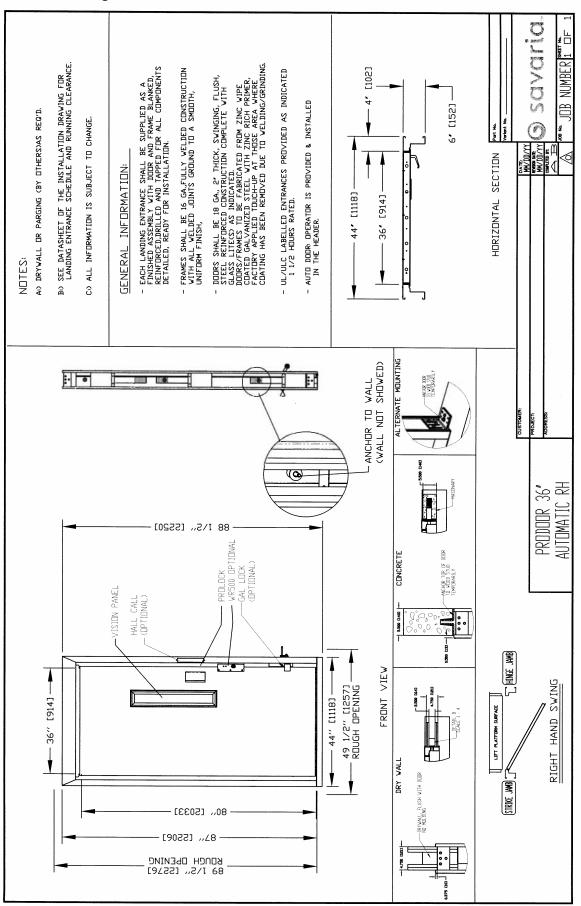


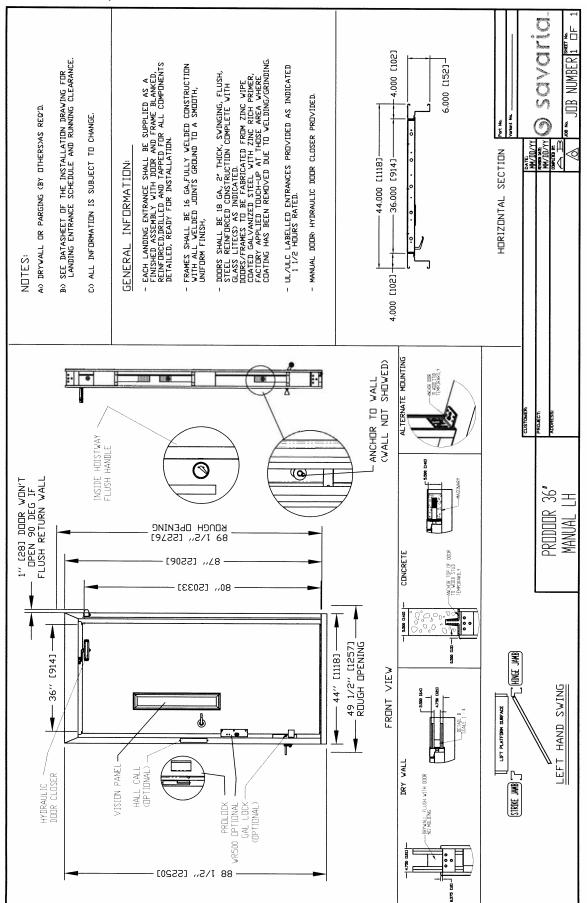
#### Figure 26: Manual door, right-hand

#### Figure 27: Prodoor auto, left-hand

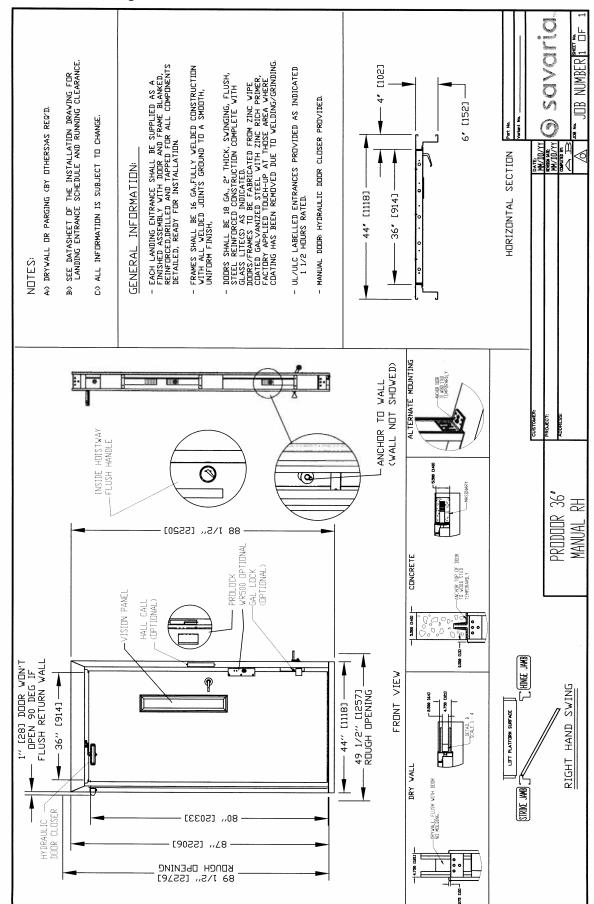


#### Figure 28: Prodoor auto, right-hand



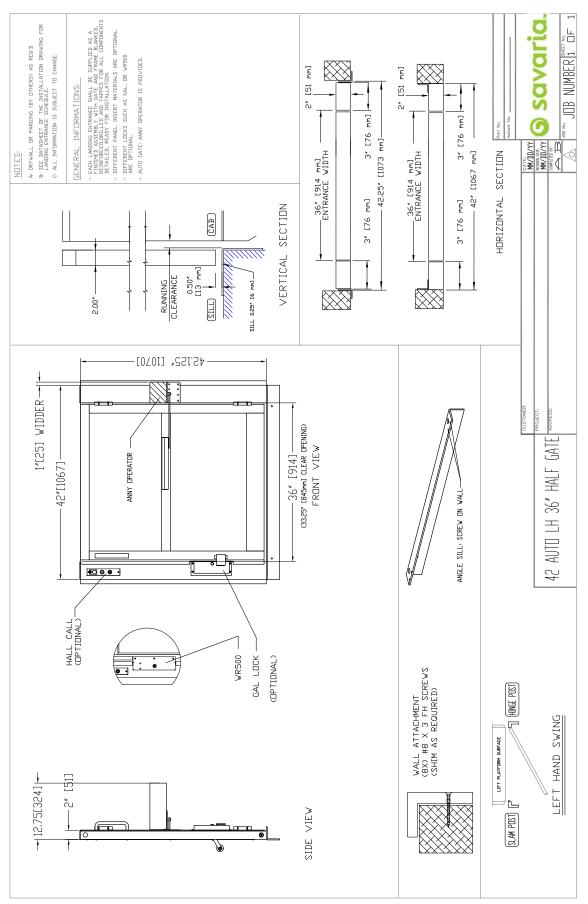


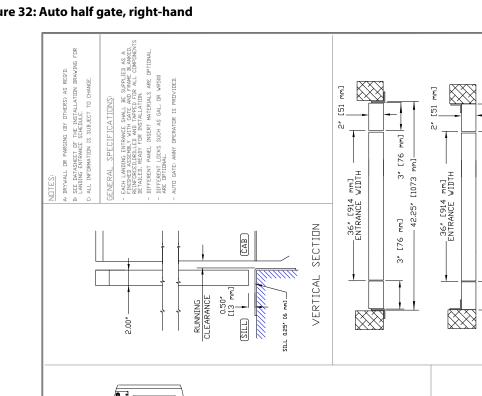
#### Figure 29: Prodoor manual, left-hand

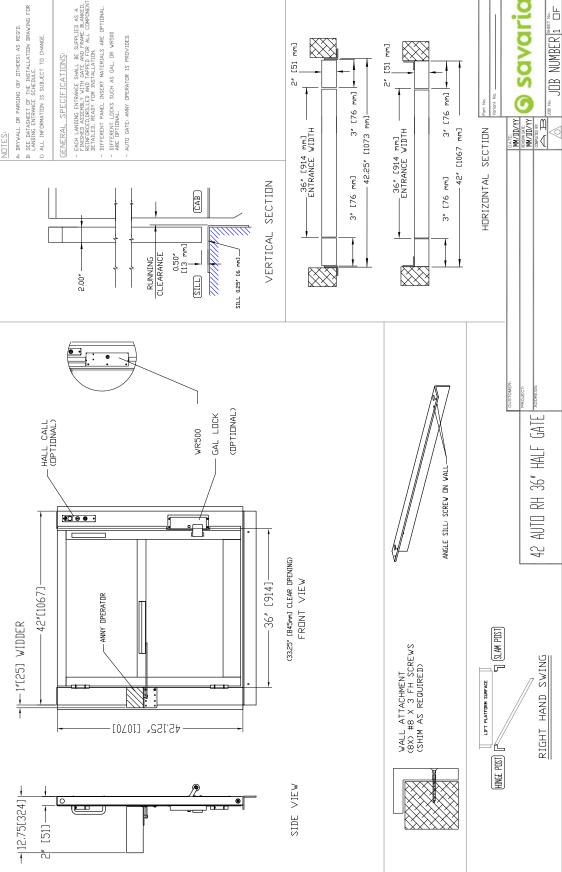


#### Figure 30: Prodoor manual, right-hand

Figure 31: Auto half gate, left-hand

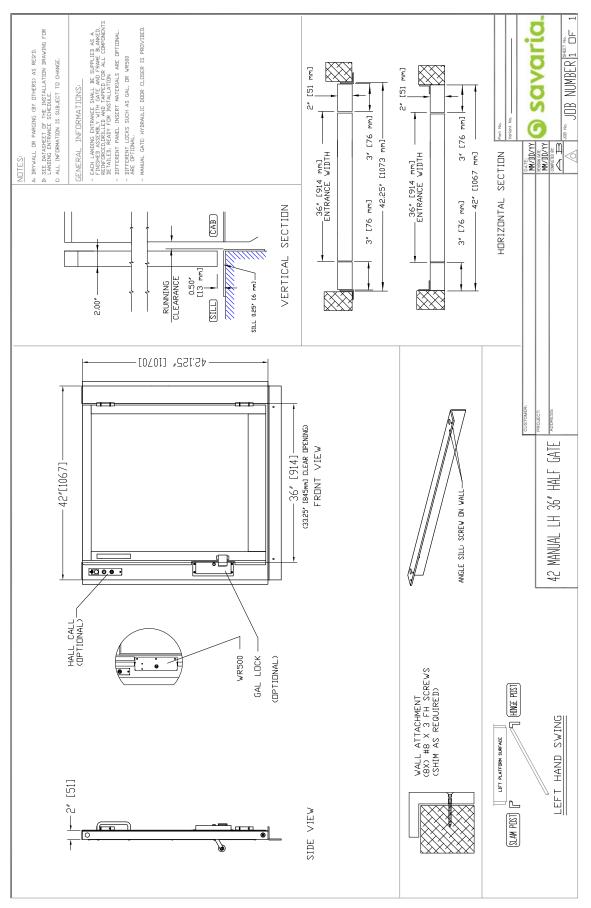


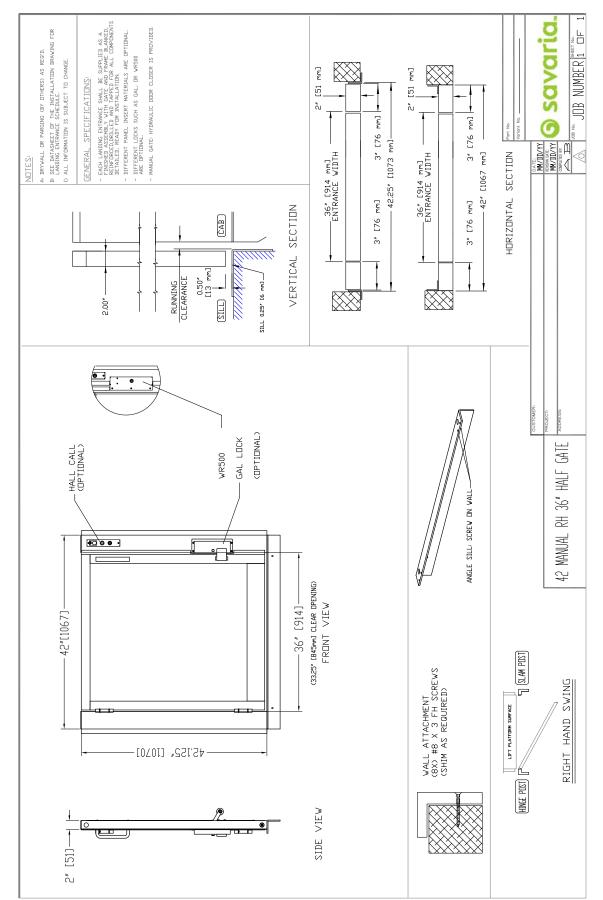




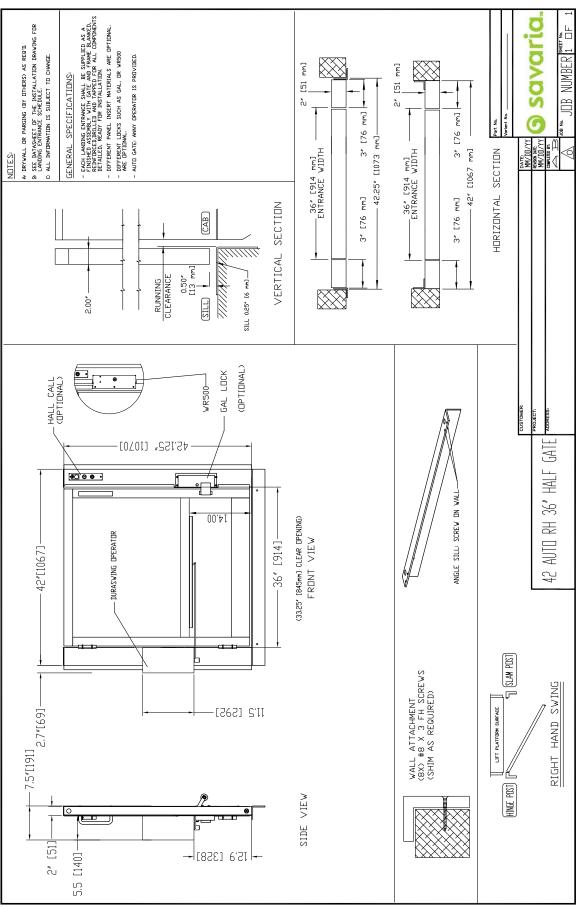
#### Figure 32: Auto half gate, right-hand

Figure 33: Manual half gate, left-hand









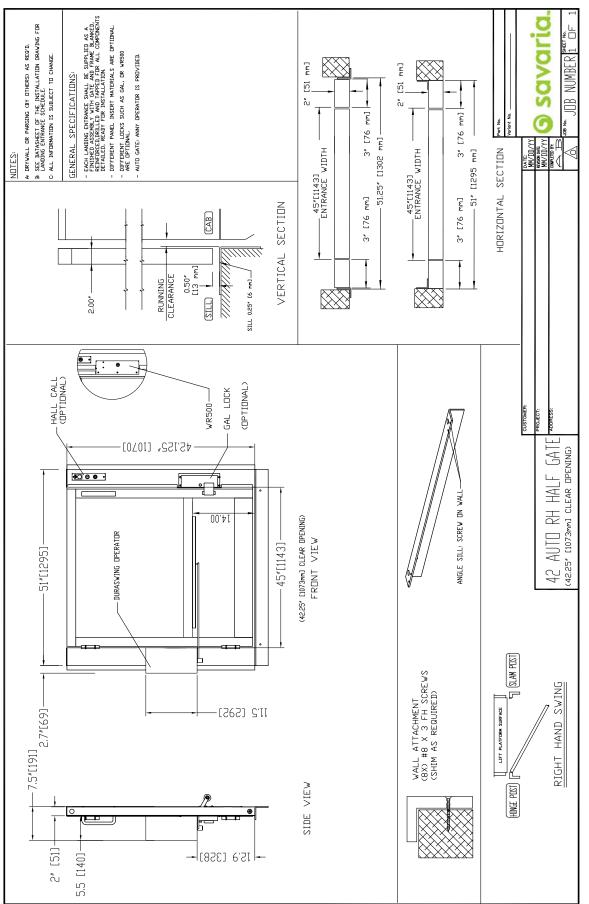
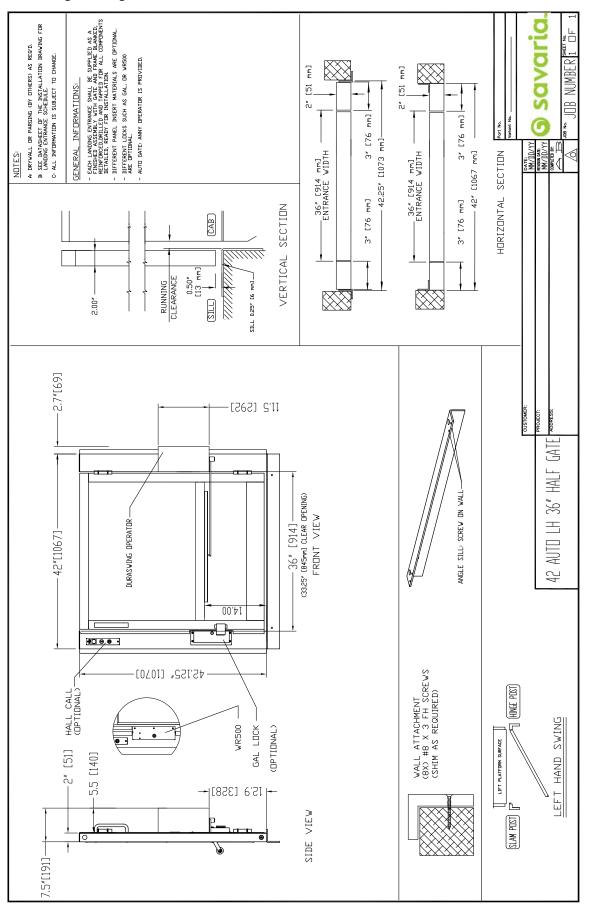


Figure 36: DuraSwing on half gate, right-hand, 45" opening

Figure 37: DuraSwing on half gate, left-hand



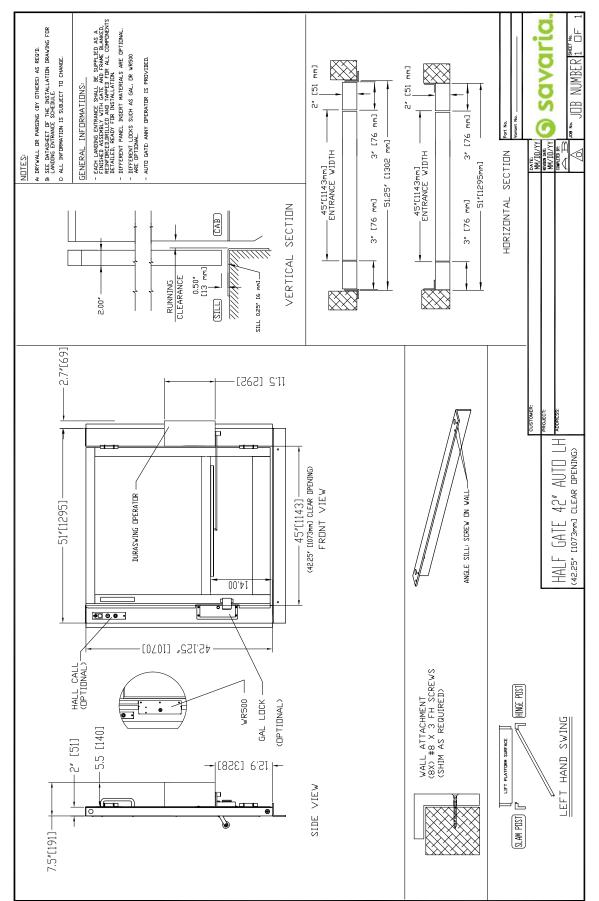
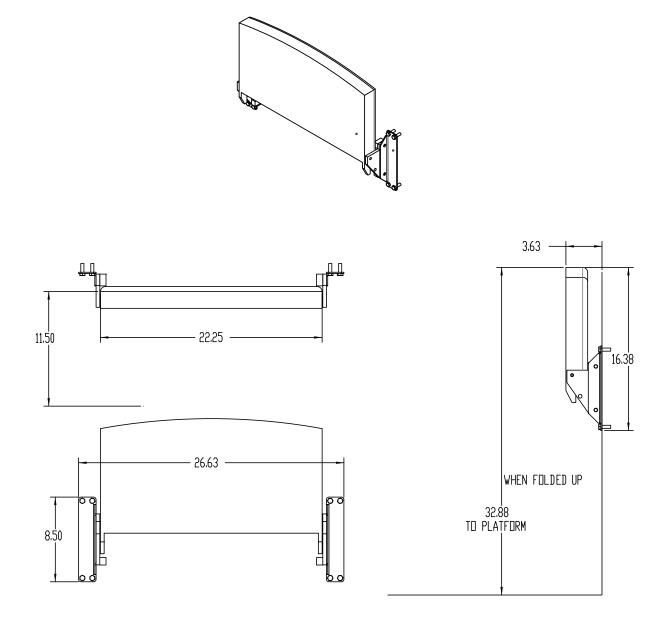
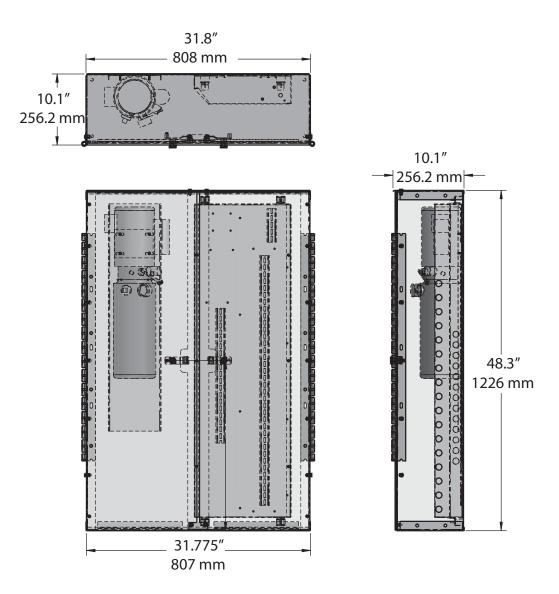


Figure 38: DuraSwing on half gate, left-hand, 45" opening



NOTE: Maximum seat capacity is 330 lbs (150 kg)



# PROVISIONS BY OTHERS GENERAL REQUIREMENTS

#### Hoistway

The hoistway must be designed and built in accordance with the "safety standard for platform lifts and stairway chairlifts" or the "safety code for elevators and escalators" and all state and local codes.

#### **Plumb Runway**

Due to close running clearances, the owner/agent must ensure that the hoistway and the pit (where provided) are level, plumb and square and are in accordance with the dimensions on the installation drawings.

#### Minimum Overhead Clearance

The owner/agent must ensure the minimum overhead clearance is in compliance with codes.

#### **Construction Site**

The owner/agent is required to provide all masonry, carpentry and drywall work as required and shall patch and make good (including finish painting) all areas where walls/floors may need to be cut, drilled or altered in any way to permit the proper installation of the lift.

#### Dimensions

The contractor/customer is required to verify all dimensions and report any discrepancies to our office immediately.

#### STRUCTURAL REQUIREMENTS

#### Floor/Support Wall Loads

The structural engineer is to ensure that the building and shaft will safely support all loads imposed by the lift equipment. Refer to the installation drawings for the loads imposed by the equipment.

#### Mast to be Securely Fastened

Where required, the mast must be securely fastened to the structural support wall. Refer to the installation drawings for the loads imposed by the equipment.

#### Where Doors are Required

Suitable lintels must be provided by the owner/agent. Door frames are not designed to support overhead wall loads.

#### ELECTRICAL REQUIREMENTS

#### General

Electrical equipment and wiring must comply with Section 38 of CSA C22.1 (Canada) or Section 620 of NEC ANSI NFPA 70 (USA).

#### **Power Supply**

A 120 VAC, 20A, 60 Hz, single-phase circuit through a fused disconnect with an auxiliary contact on the main power supply is required.

#### Lighting

Lighting of 100 lux minimum is required at platforms and landings. Lighting with a switch and electrical GFCI outlet is required in the hoistway pit.

#### ENTRANCE REQUIREMENTS

#### **Upper Landing Gates**

Where required, smooth solid barriers are to be supplied and installed on both sides of the entrance at the upper level and must be a minimum of 42" (1067 mm) high. The entrance assembly must be in place prior to this provision.

#### Fascia Panel Below Upper Level Entrance

Where required, fascia panel must be fastened to a solid wall and be perpendicular to the floor and walls. Hoistway fascia is not self-supporting for long, continuous runs void of entrances. Adequate support for the fascia must be provided.

#### **Entrance Assemblies**

Entrance assemblies must be adjusted to align with the platform and interlock equipment. Others must allow an adequate opening.

#### **Return Walls**

Return walls at the entrances must be built-in by others after the entrance assemblies are in place. The entrance assembly must be securely fastened to the walls by the contractor.

# V1504 Vertical Platform Lift PLANNING GUIDE

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