

#### **IMPORTANT NOTICE**

This Planning Guide provides nominal dimensions and specifications useful for the initial planning of a project. Before beginning actual construction, make sure you have the installation (shop) drawings customized with specifications and dimensions for your specific project.

Lift configurations and dimensions are in accordance with our interpretation of the standards set forth by the codes listed on the front cover of this Planning Guide. Please consult Savaria or the authorized Savaria dealer in your area for more specific information pertaining to your project, including any discrepancy between referenced standards and those of any local codes or laws.

The dimensions and specifications in this Planning Guide are subject to change (without notice) due to product enhancements and continually evolving codes and product applications.

Visit our website **www.savaria.com** for the most current Vuelift drawings and dimensions.

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#### **Purpose of This Guide**

This guide assists architects, contractors, and lift professionals to incorporate the Vuelift Residential Elevator into a residential design. The design and manufacture of the Vuelift Elevator meets the requirements of the following codes and standards:

- ASME A17.1/CSA B44 2000, Section 5.3
- ASME A17.1/CSA B44 2004, Section 5.3
- ASME A17.1 2004, Addendum 2005, Section 5.3
- ASME A17.1/CSA B44 2007, Section 5.3
- ASME A17.1/CSA B44, Addendum 2008, Section 5.3
- ASME A17.1/CSA B44 2010, Section 5.3
- ASME A17.1/CSA B44 2013, Section 5.3
- ASME A17.1/CSA B44 2016, Section 5.3
- ASME A17.1 1996, Part 5

We recommend that you contact your local authority having jurisdiction to ensure that you adhere to all local rules and regulations pertaining to residential elevators.

**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 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 Vuelift drawings and dimensions.

#### How to Use This Guide

- 1 Determine your client's intended use of the lift.
- 2 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.

## **Revision History of This Guide**

December 4, 2017 - Initial release

December 14, 2017 - Added Electrical Requirements section on page 9 (round) and page 25 (octagonal)

January 31, 2018 - Added drawings for Type 2, Octagonal, Glass on pages 38 to 43

March 8, 2018 - Revised Noise Level spec in Specifications tables on pages 6 to 22

March 23, 2018 - Added dimensions for controller box and UPS on pages 21 and 45

March 29, 2018 - Revised drawing on page 42

May 7, 2018 - Added wheelchair plan views on pages 21 and 46

May 14, 2018 - Added notes to wheelchair plan views on pages 21 and 46

May 16, 2018 - Added note on pages 22 and 47 stating that a remote controller cannot be more than 50 feet away from the top of the unit in order for the cable to reach

June 7, 2018 - New front cover

December 7, 2018 - Revised drawing on page 46

December 19, 2018 - Added new Chapter 3 for Round Glass Large (RGL) and Octagonal Glass Large (OGL) elevators; All drawings revised to latest version

January 2, 2019 - Revised drawings to latest version

January 14, 2019 - Drawing added to show location of extra header rings for floor-to-floor height >14 (as needed) on pages 20, 40, 48, 55, 75 and 83

March 26, 2019 - Added remote controller drawings on pages 24, 59 and 86

March 27, 2019 - Added info for electrical outlet on pages 10,11, 12, 29, 30, 31, 64, 65 and 66

May 9, 2019 - Revised drawings on pages 20, 40, 48, 55, 75 and 83

May 22, 2019 - Added balcony and handrail information on pages 18, 39, 48, 57, 77 and 86

May 29, 2019 - Added Model Specification sheets on pages 15, 37, 47, 77 and 87

June 5, 2019 - Revised drawings on pages 53, 83, and 93

October 16, 2019 - Revised drawings to latest version

October 28, 2019 - Revised drawings to latest version

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# **Chapter 1: Round Acrylic Medium (RAM)**



# **Specifications (RAM)**

Specification	Specification Data
Load capacity	840 lb (381 kg)
Maximum travel	42.5 ft (12.95 m)
Travel speed	32 ft/min (0.16 m/s)
Noise level (for typical installation)	65 dB
Daily cycle	Normal: 40 Heavy: 80 Excessive: 150 Maximum starts in 1 hour on standard installation: 20 NOTE: Please consult your Sales Representative if there's a chance you may exceed these amounts.
Maximum levels serviced	6
Minimum overhead	106"(2692 mm) for standard cab 96" (2438 mm) for short cab
Cab	Cab walls: Full clear acrylic Cab interior height (standard): 84 in (2.13 m) Cab interior height (optional): 76.5 in (1.94 m) Cab weight: 550 lb (250 kg) Cab floor area: 13.09 sq ft (1.22 sq m)
Footprint	54" diameter (1.37 m)
Power supply	30A, 230-V, single-phase, 50/60 Hz
Cab lighting	15A, 115V, single-phase, 50/60 Hz
Suspension	Type: Galvanized aircraft cable (2 x 3/8" diameter) Construction: IWRC 7 x 19 RHRL Nominal strength: 14,400 lb (6,545 kg) Weight of ropes: 0.243 lb/ft (3.616 g/cm) Travel cable weight: 0.228 lb/ft (3.393 g/cm)
Drive train	Type: Winding drum Motor: 1.5 HP with integrated brake Transmission: Ultra-low vibration, 3-stage, right-angle, helical-bevel drive Motor control: Preprogrammed variable frequency drive Door interlocks: Honeywell RDI-G-L5B certified (compliant with ASME A17.1 Section 2.12.4.3)
Pit/floor load	Refer to the section "Load Calculations"
Distance between 2 landings	93" (2362 mm) minimum
Pit depth	4" - 12" (102 mm- 305 mm) No pit with optional short ramp
Temperature	-10 °C to +40 °C (14 °F to 104 °F)
Safety features	Pit run/stop switch and car top run/stop switch Emergency stop switch Safety brakes Electrical circuit overspeed Manual lowering Emergency battery back-up for cab lighting and lowering

Specification	Specification Data
Options	Optional configurations: Type 1, 2, 3
	Optional colors:
	White (Texture White PX521W859)
	• Silver (Texture Silver PX521S343)
	Custom powder-coat frame
	Note that Black is the standard color (Texture Black PX622N365)
	Other options: Up to 6 stops, panoramic car ceiling, balcony attachment

# Safety First (RAM)

#### **3 & 5 Rule (Code Prior to 2016)**

The ASME A17.1/CSA-B44–Safety Code for Elevators and Escalators (**PRIOR TO 2016**) mandates the following maximum hoistway door clearances (see drawing on next page).

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 3" (76 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 5" (127 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

#### 3/4 & 4 Rule (Code 2016 and After)

The ASME A17.1-2016/CSA B44-16 Safety Code for Elevators and Escalators (2016 AND AFTER) mandates the following maximum hoistway door clearances (see drawing on next page):

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 0.75" (19 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 4" (102 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

# **Electrical Requirements (RAM)**

Your electrician and phone installer must supply the following connections:

- Main Disconnect One 230V single-phase, 30 Amp fused disconnect box with 20 Amp fuse/breaker. If voltage is not 230V minimum, a buck-boost transformer is required.
- Lighting Disconnect One 120V, 15 Amp fused disconnect or circuit breaker for cab lighting.
- Telephone Line One telephone line jack in close proximity to the controller.
- Electrical Outlet One 15A GFCI outlet shall be installed near the pit or base ring.

**NOTE:** Savaria does not provide power cable to main disconnect.

## **Recommended Manufacturers for Fused Disconnect**

#### **Square D**

- Main disconnect: 230V single-phase disconnect model # H221N.
   240V, 30 Amp with Interlock Kit ELK031 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### Siemens

- Main disconnect: 230V single-phase disconnect model #HF221N.
   240V, 30 Amp with Interlock Kit-HA 161234 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- · Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### G.E.

- Main disconnect: 230V single-phase disconnect model #TH3221.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect 120V, 15 Amp fused disconnect or circuit breaker.

#### **Cutler Hammer**

- Main disconnect: 230V single-phase disconnect model # DH221NGK.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

Recommended manufacturers for circuit breakers at the distribution panel (and the distribution panel itself): Square D or Siemens only.

# **Provisions By Others (RAM)**

#### General

#### **Construction Site**

The owner/agent is required to provide all masonry, carpentry, and drywall work as required. Floors shall be in a finished state prior to installation of the unit. Refer to the section, Site Preparation on the next page.

#### **Dimensions**

The contractor/customer must verify all clearance dimensions prior to delivery of the unit.

# Structural Floor Loads

A structural engineer is required to ensure that the building will safely support all loads imposed by the lift equipment. Refer to the tables on the installation drawings (shop drawings) for pit/floor loads imposed by the equipment. Refer to the section, Load Calculations.

# Electrical Power Supply

See the following table. Lockable fused disconnects must be installed in compliance with electrical code and are to be provided prior to installation of the unit. Roughed in power to the lift must be provided to the head assembly location prior to installation of the unit.

Power Supply Specifications	Disconnect Size	Time Delay Fuse Size	Volts	Phase
Motor and equipment	30 Amps	30 Amps	230 Volts	Single
Cab lights	15 Amps	15 Amps	115 Volts	Single
Pit light	15 Amps	15 Amps	115 Volts	Single

#### **Telephone**

If a telephone circuit is required, the jack is to be provided and installed by others. This circuit shall be brought to a location next to the controller and be available to connect and test upon elevator installation.

#### **Electrical Outlet**

One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### **Permanent Power**

Before installation can begin, permanent power must be supplied.

#### Entrances Handrails

All balcony levels require handrails to be installed per local codes after installation is completed. The handrail and installation is to be provided by the contractor/customer. Savaria Concord Lifts Inc. and/or local installer are not responsible for handrail installation or materials.

## **Site Preparation (RAM)**

The following items MUST be completed prior to installation of the elevator.

#### **Finished Floors**

Finished floors be installed at all landing levels.

#### 230V Power (with Switched Disconnect)

- Permanent 230V, single-phase, 30-Ampere dedicated power to a lockable fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted in a location within line of sight of the elevator or controller.
- 230V source must be run from the disconnect switch to a junction box in a discrete location at the top of the elevator hoistway location.
- Disconnect must be installed according to all applicable local codes.

#### 110V Power (with Switched Disconnect)

- Permanent 110V, single-phase, 15-Ampere dedicated power to a lockable, fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted near the 230V disconnect switch.

#### **Telephone Works**

• Telephone jack must be provided next to the electrical disconnects. This can be the common house line in most jurisdictions. Please check with your local installer or building contractor for code requirements.

#### **Electrical Outlet**

• One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### Floor Built for Load

• Smooth level surface for installing the elevator, with floor load bearing capacity for the elevator plus rated load. An exact specification can be provided by contacting Savaria.

#### **Floor and Pit Cutouts Complete**

- If a pit is to be used, a smooth, level surface of at least 4" must be provided. For pit depths greater than 12", contact Savaria to ensure proper equipment will be provided.
- It is recommended that any pit floor and walls be finished prior to installation. Pit floor and walls are visible after elevator installation is completed.
- Hole in floor, or modified balcony rail as directed by drawings.

#### **Check Floor to Floor Maximum and Minimum Distances**

- 106" (2692 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for standard cab configuration.
- 96" (2438 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for modified short cab configuration.

#### **Drywall and Painting**

All drywall and painting must be complete.

## **Load Calculations (RAM)**

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Vuelift elevators are designed such that the dead load and impact load are transferred to the lowest level through the rail base plates and rings when installed properly in a building with structural integrity including consistent floor to floor heights.

Note: Vuelift elevators are designed for applications in buildings that maintain consistent floor to floor height as the building ages.

If floor to floor height changes after installation, the elevator MUST be taken out of service pending inspection and correction by a trained installation technician.

- All mid floors including the bottom floor may be subjected to a maximum lateral load of 200 lb.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 2.0, doubling the loads shown here.
- To reiterate, these figures DO NOT include your factor of safety for floor loads. Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Lower Floor Dead Load (lbf) = (38 x feet of hoistway) + (60 x number of floors) + 2193

Lower Floor Impact Load (lbf) = 3703

Lower Floor Total Load (lbf) = Dead Load + Impact Load

Mid Floor Load (lbf) = 182

Shipping Weight (lb) =  $(694 \times number of floors) + 1720$ 

**Note:** Shipping weight includes the actual component weights for all parts, plus shipping crate and packaging weight.

#### **Examples**

	3 stop with 36' of hoistway	2 stop with 19' hoistway
Lower Floor Dead Load	3,741	3,035
Lower Floor Impact Load	<u>3,703</u>	<u>3,703</u>
Lower Floor Total Load	7,444	6,738
Mid Floor Loads (on each mid floor)	182	182
Shipping Weight	3,802	3,108

# **Drawings (RAM)**

- · Plan view
- Pit/bottom floor/thru-floor view
- Balcony detail
- Balcony plate and handrail informationThru-floor detail
- · Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout detail
- Wheelchair plan view
- Controller box dimensions

# **Model Specifications - Round**

## Round (Acrylic)

• Capacity: 381kg (840 lb)

• Cab Size: 1.22 sqm (13.09 sq. ft.)

Clear Cab Size: 1298mm (51 in.)Cab Height: 2134mm (84 in.)

Hoistway Footprint

Acrylic: 1372mm (54 in.)
Pit/Thru Floor Cutout: 1422mm (56 in.)
Balcony/Header Ring: 1473mm (58 in.)
Pit/Thru Floor Ring: 1575mm (62 in.)
Minimum Overhead Clearance: 2692mm (106 in.)

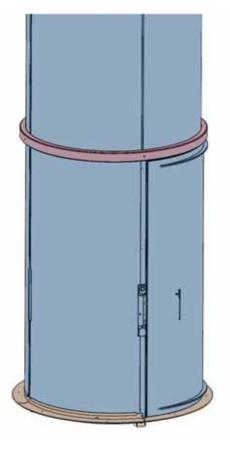


Figure 1: Plan view (RAM)

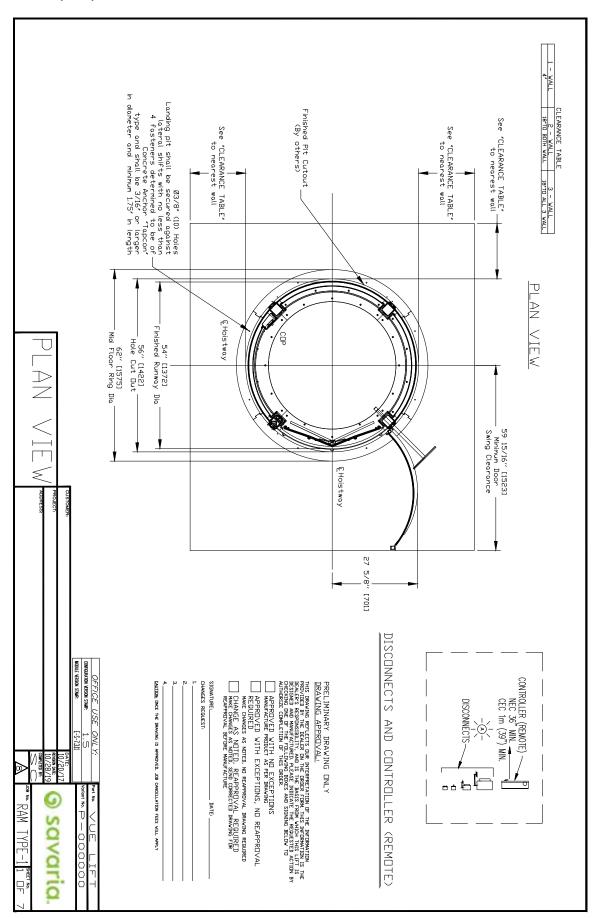


Figure 2: Pit/bottom floor/thru-floor view (RAM)

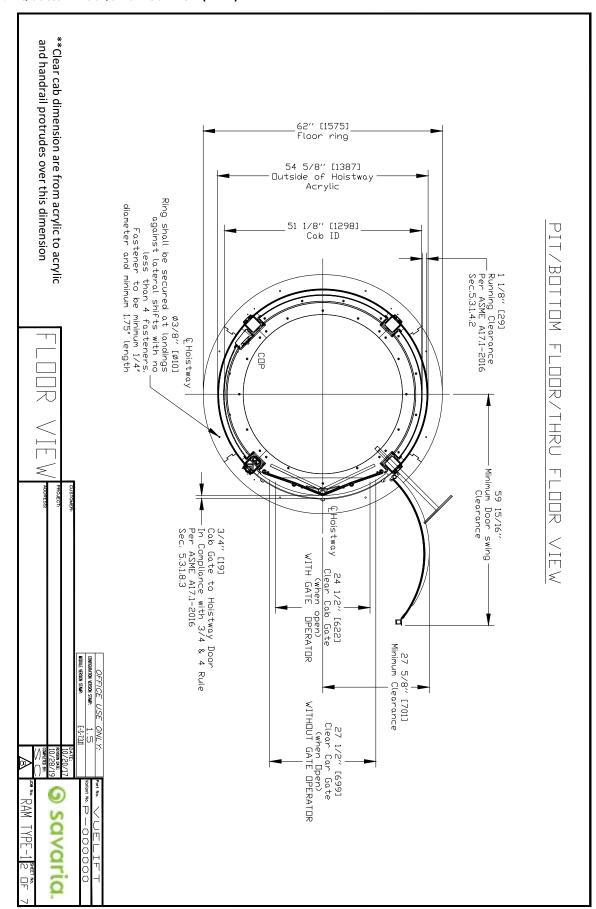


Figure 3: Balcony detail (RAM)

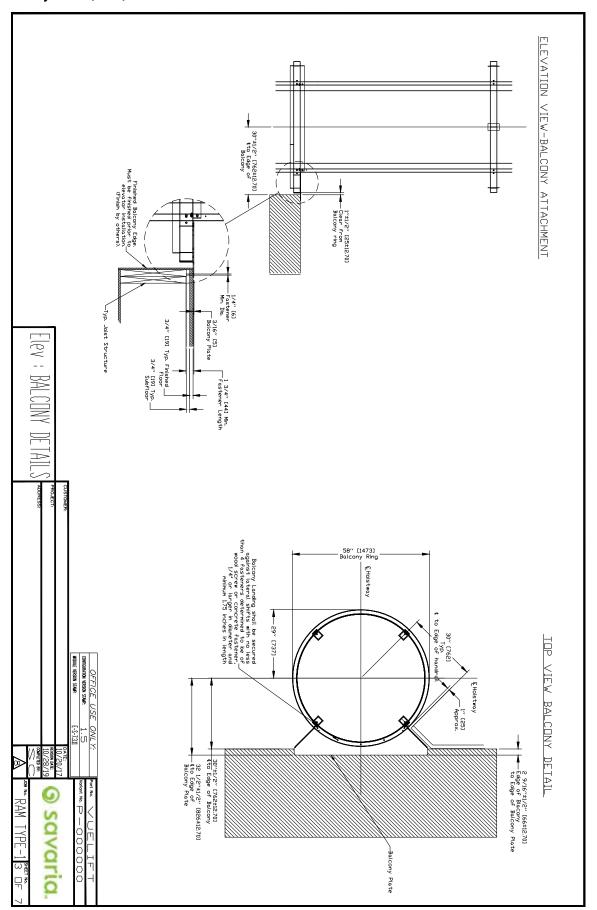
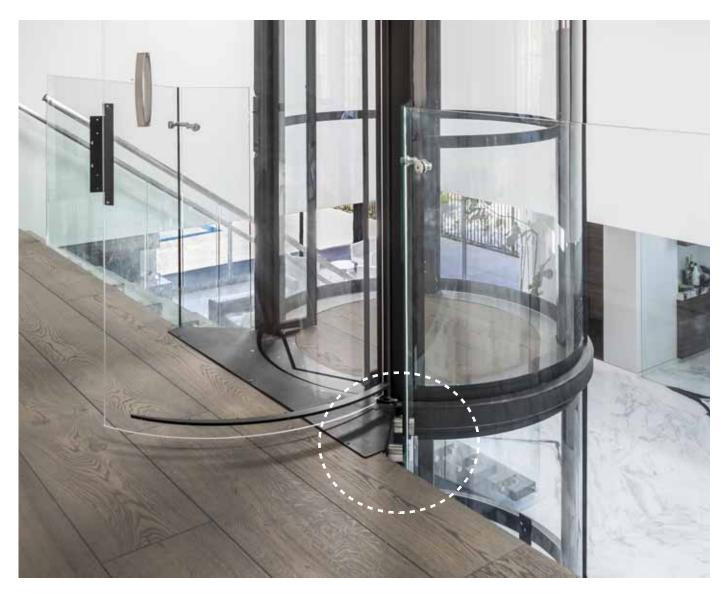


Figure 4: Balcony plate and handrail information (RAM)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 5: Thru-floor detail (RAM)

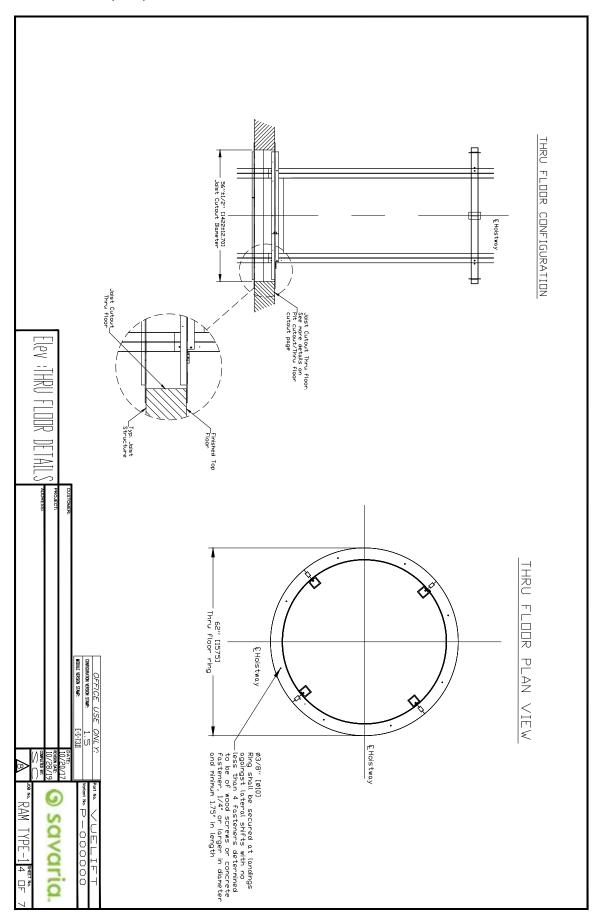


Figure 6: Elevation view (RAM)

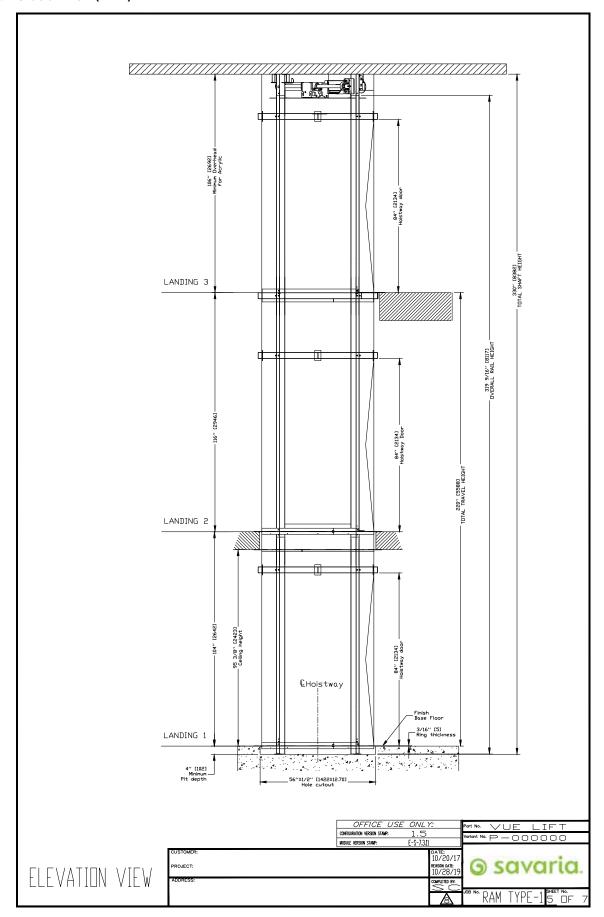
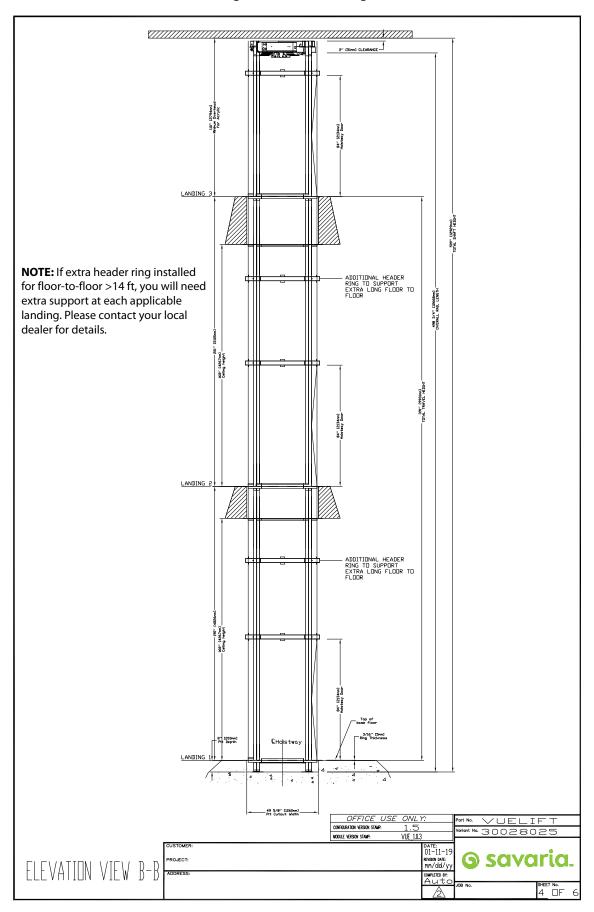


Figure 7: Elevation view (RAM) - extra header rings if floor-to-floor height > 14 ft



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Figure 8: Datasheet (RAM)

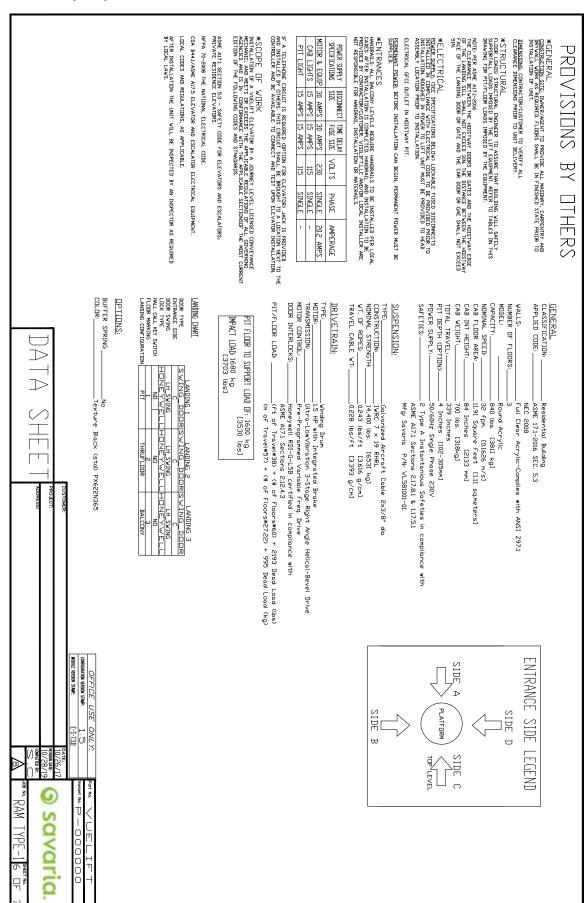


Figure 9: Pit cutout detail (RAM)

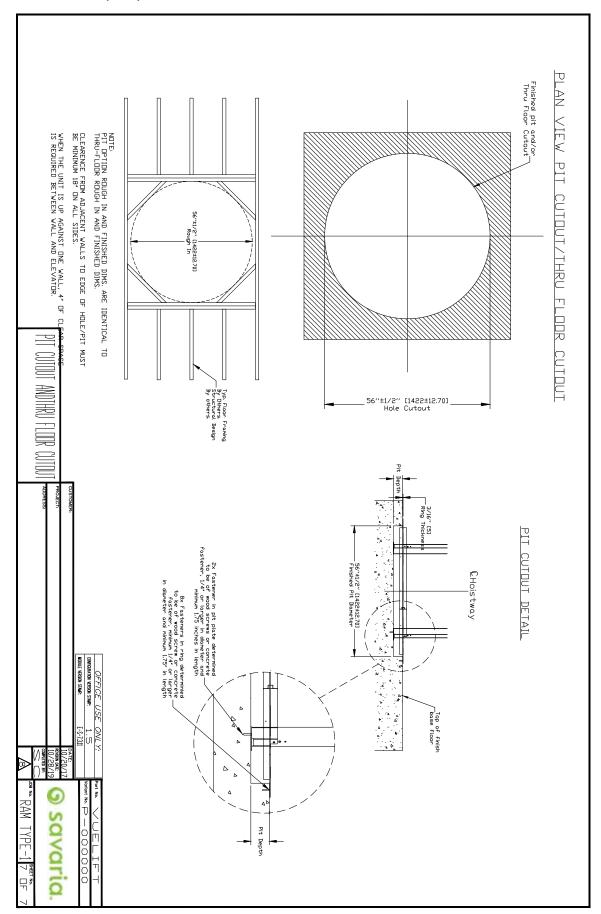
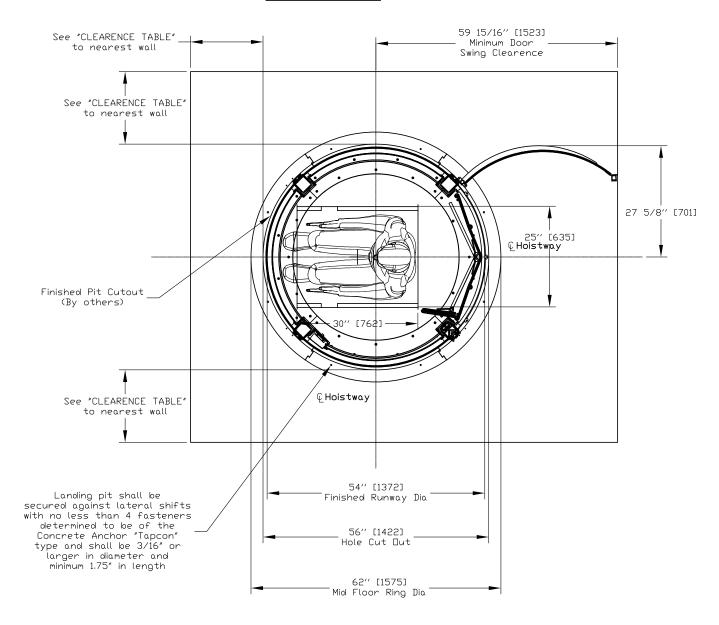


Figure 10: Wheelchair plan view (RAM)

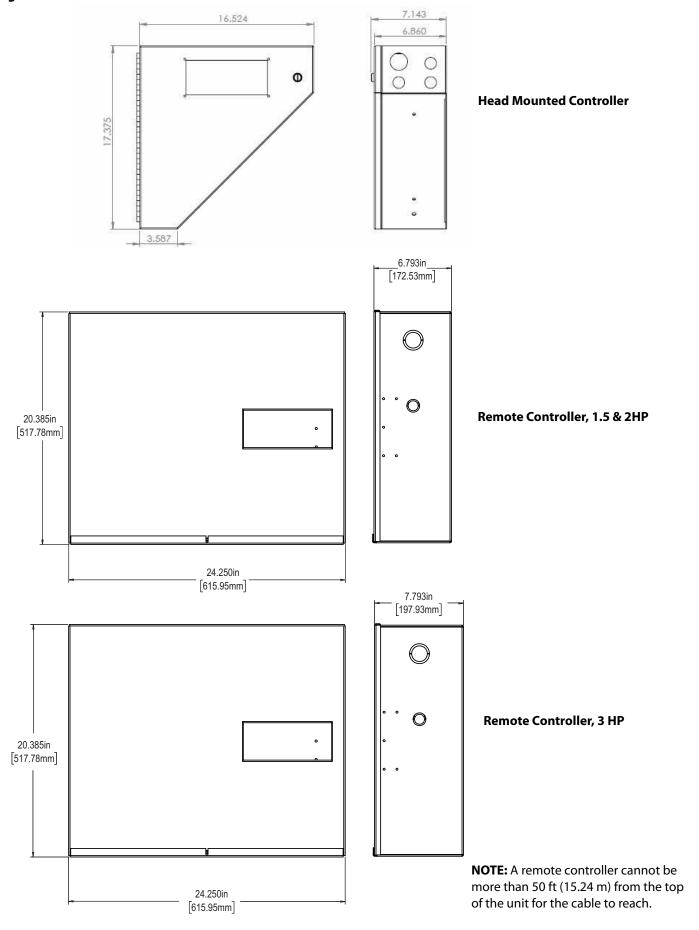
## PLAN VIEW



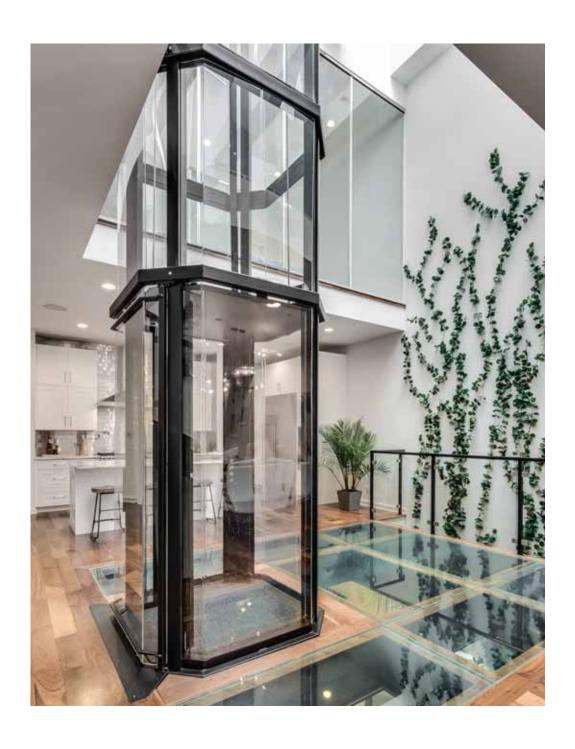
Notes:  ${}^*$  No footrest used on wheelchair.

<sup>\*\*</sup> Size may vary. Please review with your local dealer the availability of a true size template to review if chair will fit.

Figure 11: Controller box dimensions



# Chapter 2: Octagonal Acrylic Medium (OAM) & Octagonal Glass Medium (OGM)



# **Specifications (OAM and OGM)**

Specification	Specification Data
Load capacity	Acrylic model: 840 lb (381 kg) Silica glass model: 950lb (432 kg)
Maximum travel	42.5 ft (12.95 m)
Travel speed	Acrylic model: 32 ft/min (0.16 m/s) Silica glass model: 40 ft/min (0.20 m/s)
Noise level (for typical installation)	65 dB
Daily cycle	Normal: 40 Heavy: 80 Excessive: 150 Maximum starts in 1 hour on standard installation: 20 NOTE: Please consult your Sales Representative if there a chance you may exceed these amounts.
Maximum levels serviced	6
Minimum overhead	Acrylic model (standard cab): 106" (2692 mm) Acrylic model (optional short cab): 96" (2438 mm) Silica glass model: 108" (2743 mm)
Cab	Cab walls: Full clear acrylic or silica glass Cab interior height (standard): 84 in (2.13 m) Cab interior height (optional, acrylic only): 76.5 in (1.94 m) Cab weight (acrylic): 500 lb (250 kg) Cab weight (silica glass): 1000 lb (455 kg) Cab floor area: 12.83 sq ft (1.19 sq m)
Footprint	48" x 48" (1.2 m x 1.2 m)
Power supply	30A, 230-V, single-phase, 50/60 Hz
Cab lighting	15A, 115V, single-phase, 50/60 Hz
Suspension	Type: Galvanized aircraft cable (2 x 3/8" diameter) Construction: IWRC 7 x 19 RHRL Nominal strength: 14,400 lb (6,545 kg) Weight of ropes: 0.243 lb/ft (3.616 g/cm) Travel cable weight: 0.228 lb/ft (3.393 g/cm)
Drive train	Type: Winding drum Motor (acrylic model): 1.5 HP with integrated brake Motor (silica glass model): 3.0 HP with integrated brake Transmission: Ultra-low vibration, 3-stage, right-angle, helical-bevel drive Motor control: Preprogrammed variable frequency drive Door interlocks: Honeywell RDI-G-L5B certified (compliant with ASME A17.1 Section 2.12.4.3)
Pit/floor load	Refer to the section "Load Calculations"
Distance between 2 landings	93" (2362 mm) minimum
Pit depth	4" - 12" (102 mm - 305 mm) No pit with optional short ramp
Temperature	−10 °C to +40 °C (14 °F to 104 °F)

Specification	Specification Data
Safety features	Pit run/stop switch and car top run/stop switch Emergency stop switch Safety brakes Electrical circuit overspeed Manual lowering Emergency battery back-up for cab lighting and lowering
Options	Optional configurations: Type 1, 2, 3 Optional cab wall and hoistway: Acrylic or low-iron silica glass Optional colors:  • White (Texture White PX521W859)  • Silver (Texture Silver PX521S343)  • Custom powder-coat frame Note that Black is the standard color (Texture Black PX622N365) Other options: Up to 6 stops, panoramic car ceiling, balcony attachment

# **Safety First (OAM and OGM)**

#### 3 & 5 Rule (Code Prior to 2016)

The ASME A17.1/CSA-B44–Safety Code for Elevators and Escalators (**PRIOR TO 2016**) mandates the following maximum hoistway door clearances (see drawing on next page).

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 3" (76 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 5" (127 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

#### 3/4 & 4 Rule (Code 2016 and After)

The ASME A17.1-2016/CSA B44-16 Safety Code for Elevators and Escalators (2016 AND AFTER) mandates the following maximum hoistway door clearances (see drawing on next page):

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 0.75" (19 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 4" (102 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

# **Electrical Requirements (OAM and OGM)**

Your electrician and phone installer must supply the following connections:

- Main Disconnect One 230V single-phase, 30 Amp fused disconnect box with 20 Amp fuse/breaker. If voltage is not 230V minimum, a buck-boost transformer is required.
- Lighting Disconnect One 120V, 15 Amp fused disconnect or circuit breaker for cab lighting.
- Telephone Line One telephone line jack in close proximity to the controller.
- Electrical Outlet One 15A GFCI outlet shall be installed near the pit or base ring.

**NOTE:** Savaria does not provide power cable to main disconnect.

# Recommended Manufacturers for Fused Disconnect Square D

- Main disconnect: 230V single-phase disconnect model # H221N.
   240V, 30 Amp with Interlock Kit ELK031 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### Siemens

- Main disconnect: 230V single-phase disconnect model #HF221N.
   240V, 30 Amp with Interlock Kit-HA 161234 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### G.E.

- Main disconnect: 230V single-phase disconnect model # TH3221.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect 120V, 15 Amp fused disconnect or circuit breaker.

#### **Cutler Hammer**

- Main disconnect: 230V single-phase disconnect model # DH221NGK.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

Recommended manufacturers for circuit breakers at the distribution panel (and the distribution panel itself): Square D or Siemens only.

# **Provisions By Others (OAM and OGM)**

#### General

#### **Construction Site**

The owner/agent is required to provide all masonry, carpentry, and drywall work as required. Floors shall be in a finished state prior to installation of the unit. Refer to the section, Site Preparation on the next page.

#### **Dimensions**

The contractor/customer must verify all clearance dimensions prior to delivery of the unit.

# Structural Floor Loads

A structural engineer is required to ensure that the building will safely support all loads imposed by the lift equipment. Refer to the tables on the installation drawings (shop drawings) for pit/floor loads imposed by the equipment. Refer to the section, Load Calculations.

## Electrical Power Supply

See the following table. Lockable fused disconnects must be installed in compliance with electrical code and are to be provided prior to installation of the unit. Roughed in power to the lift must be provided to the head assembly location prior to installation of the unit.

Power Supply Specifications	Disconnect Size	Time Delay Fuse Size	Volts	Phase
Motor and equipment	30 Amps	30 Amps	230 Volts	Single
Cab lights	15 Amps	15 Amps	115 Volts	Single
Pit light	15 Amps	15 Amps	115 Volts	Single

#### **Telephone**

If a telephone circuit is required, the jack is to be provided and installed by others. This circuit shall be brought to a location next to the controller and be available to connect and test upon elevator installation.

#### **Electrical Outlet**

One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### **Permanent Power**

Before installation can begin, permanent power must be supplied.

#### Entrances Handrails

All balcony levels require handrails to be installed per local codes after installation is completed. The handrail and installation is to be provided by the contractor/customer. Savaria Concord Lifts Inc. and/or local installer are not responsible for handrail installation or materials.

# **Site Preparation (OAM and OGM)**

The following items MUST be completed prior to installation of the elevator.

#### **Finished Floors**

Finished floors be installed at all landing levels.

#### 230V Power (with Switched Disconnect)

- Permanent 230V, single-phase, 30-Ampere dedicated power to a lockable fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted in a location within line of sight of the elevator or controller.
- 230V source must be run from the disconnect switch to a junction box in a discrete location at the top of the elevator hoistway location.
- Disconnect must be installed according to all applicable local codes.

#### 110V Power (with Switched Disconnect)

- Permanent 110V, single-phase, 15-Ampere dedicated power to a lockable, fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted near the 230V disconnect switch.

#### **Telephone Works**

• Telephone jack must be provided next to the electrical disconnects. This can be the common house line in most jurisdictions. Please check with your local installer or building contractor for code requirements.

#### **Electrical Outlet**

One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### Floor Built for Load

• Smooth level surface for installing the elevator, with floor load bearing capacity for the elevator plus rated load. An exact specification can be provided by contacting Savaria.

#### **Floor and Pit Cutouts Complete**

- If a pit is to be used, a smooth, level surface of at least 4" must be provided. For pit depths greater than 12", contact Savaria to ensure proper equipment will be provided.
- It is recommended that any pit floor and walls be finished prior to installation. Pit floor and walls are visible after elevator installation is completed.
- Hole in floor, or modified balcony rail as directed by drawings.

#### **Check Floor to Floor Maximum and Minimum Distances**

- 106" (2692 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for standard cab configuration.
- 96" (2438 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for modified short cab configuration.
- 108" (2743 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for silica glass model.

#### **Drywall and Painting**

All drywall and painting must be complete.

# **Load Calculations (OAM)**

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Vuelift elevators are designed such that the dead load and impact load are transferred to the lowest level through the rail base plates and rings when installed properly in a building with structural integrity including consistent floor to floor heights.

Note: Vuelift elevators are designed for applications in buildings that maintain consistent floor to floor height as the building ages.

If floor to floor height changes after installation, the elevator MUST be taken out of service pending inspection and correction by a trained installation technician.

- All mid floors including the bottom floor may be subjected to a maximum lateral load of 200 lb.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 2.0, doubling the loads shown here.
- To reiterate, these figures DO NOT include your factor of safety for floor loads. Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Lower Floor Dead Load (lbf) = (38 x feet of hoistway) + (60 x number of floors) + 2193

Lower Floor Impact Load (lbf) = 3703

Lower Floor Total Load (lbf) = Dead Load + Impact Load

Mid Floor Load (lbf) = 182

Shipping Weight (lb) =  $(694 \times number of floors) + 1720$ 

**Note:** Shipping weight includes the actual component weights for all parts, plus shipping crate and packaging weight.

#### **Examples**

	3 stop with 36' of hoistway	2 stop with 19' hoistway
Lower Floor Dead Load	3,741	3,035
Lower Floor Impact Load	<u>3,703</u>	<u>3,703</u>
Lower Floor Total Load	7,444	6,738
Mid Floor Loads (on each mid floor)	182	182
Shipping Weight	3,802	3,108

## **Load Calculations (OGM)**

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Each middle floor carries a separate Mid Floor Load supporting only that floor's metal floor rings, while the main cab/hoistway load (Lower Floor Total Load) is transferred fully to the bottom floor.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 2.0, doubling the loads shown here
- To reiterate, these figures DO NOT include your factor of safety for floor loads. Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Lower Floor Dead Load (lbf) = (143.0 x feet of hoistway) + (340 x number of floors) + 3100

Lower Floor Impact Load (lbf) = 7491

Lower Floor Total Load (lbf) = Dead Load + Impact Load

Mid Floor Load (lbf) = 200

Shipping Weight (lb) =  $(1967 \times number of floors) + 2562$ 

**Note:** Shipping weight includes the actual component weights for all parts, plus shipping crate and packaging weight.

#### **Examples**

3 stop with 32.2' of hoistway

Lower Floor Dead Load 8,725 Lower Floor Impact Load 7,491 Lower Floor Total Load 16,759

Total Load is distributed as follows:

- At any point in time, two opposing columns may have up to 12,000 lbf (6000 lbf/column)
- However, the max load carried by all four column combined will not exceed 16,759 lbf before addition of factor of safety required by local building code.

Mid Floor Loads (on each mid floor) 200 Shipping Weight 8,463

# **Drawings (OAM and OGM)**

#### OAM, TYPE 1

- Plan view
- · Pit/bottom floor/thru-floor view
- Balcony details
- Balcony plate and handrail information
- Thru-floor details
- · Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout/thru-floor cutout

#### **OGM, TYPE 1**

- Plan view
- · Pit/bottom floor/thru-floor view
- Balcony details
- Balcony plate and handrail information
- Thru-floor details
- · Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout/thru-floor cutout

#### OGM, TYPE 2

- Plan view
- · Pit/bottom floor/thru-floor view
- Balcony details
- Balcony plate and handrail information
- Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout/thru-floor cutout

#### Wheelchair plan view (octagonal)

#### **Controller box dimensions**

# Model Specifications – Octagonal

## Octagonal (Acrylic)

• Capacity: 381kg (840 lb)

• Cab Size: 1.19 sqm (12.83 sq. ft.)

• Clear Cab Size:  $1118w \times 1056d (44 \times 41^9/_{16} in.)$ 

• Cab Height: 2134mm (84 in.)

Hoistway Footprint

- **Acrylic**: 1215 x 1215mm (48 x 48 in.)

- Pit/Thru Floor Cutout:  $1260 \times 1260 \text{mm} (49^{5}/_{8} \times 49^{5}/_{8} \text{in.})$ 

- **Balcony/Header Ring**:  $1304 \times 1304 \text{mm} (51^{3}/_{8} \times 51^{3}/_{8} \text{in.})$ 

- **Pit/Thru Floor Ring**:  $1407 \times 1407 \text{mm} (55^{3}/_{8} \times 55^{3}/_{8} \text{in.})$ 

• Minimum Overhead Clearance: 2692mm (106 in.)

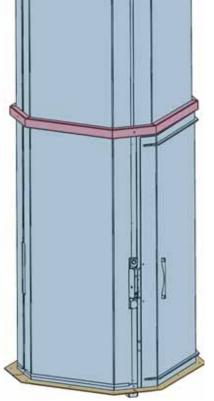


Figure 12: Plan view (OAM, type 1)

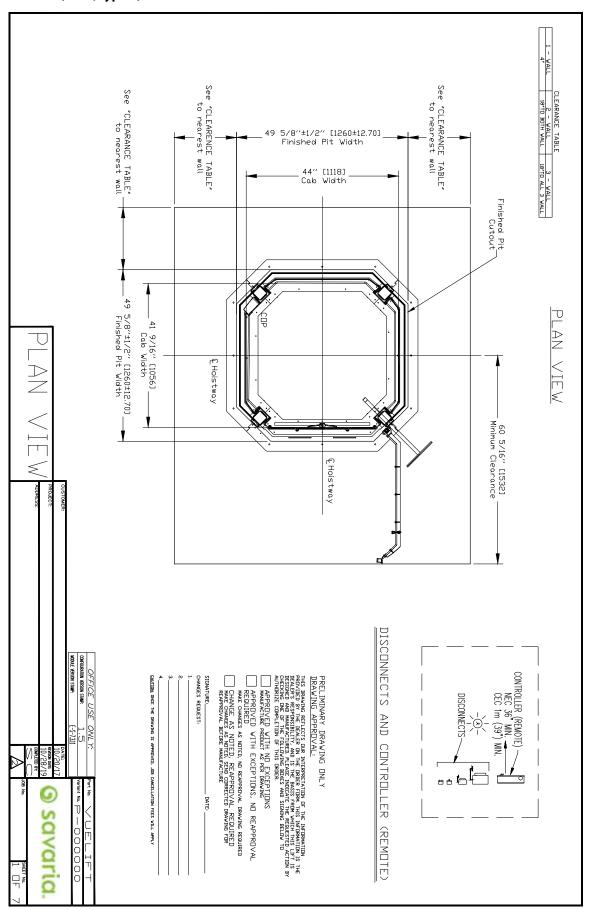


Figure 13: Pit/bottom floor/thru-floor view (OAM, type 1)

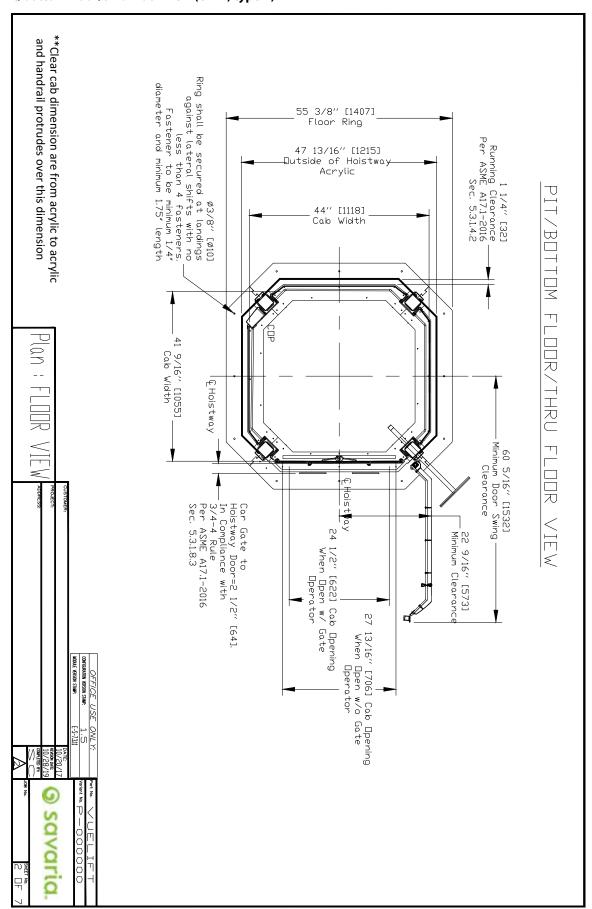


Figure 14: Balcony detail (OAM, type 1)

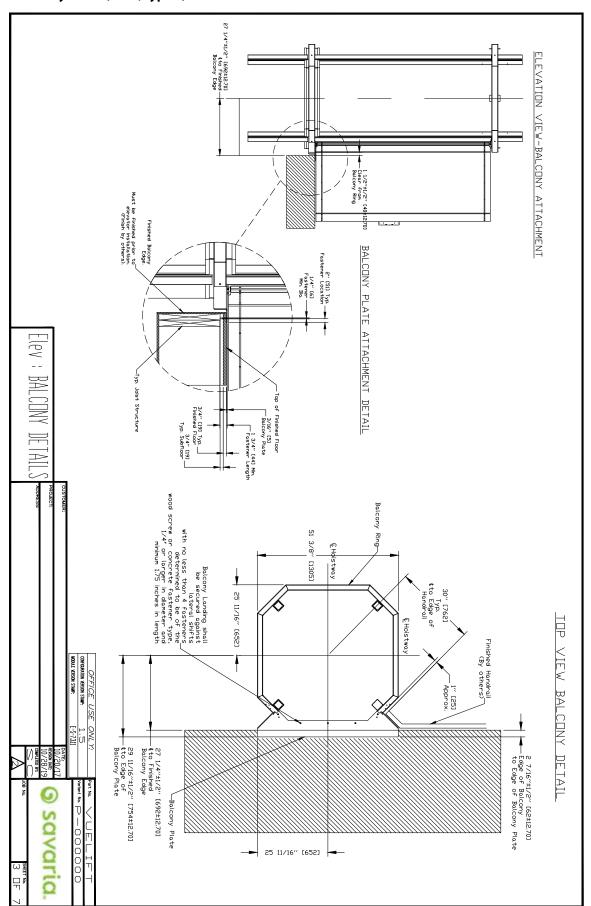
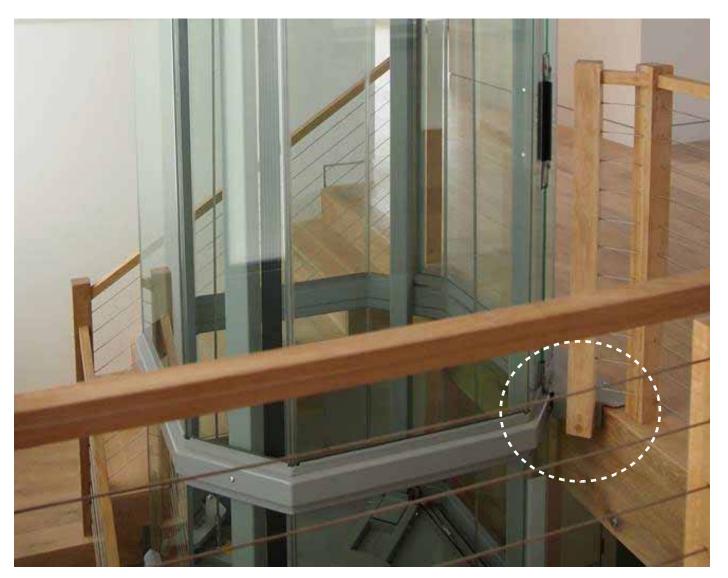


Figure 15: Balcony plate and handrail information (OAM, type 1)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 16: Thru-floor detail (OAM, type 1)

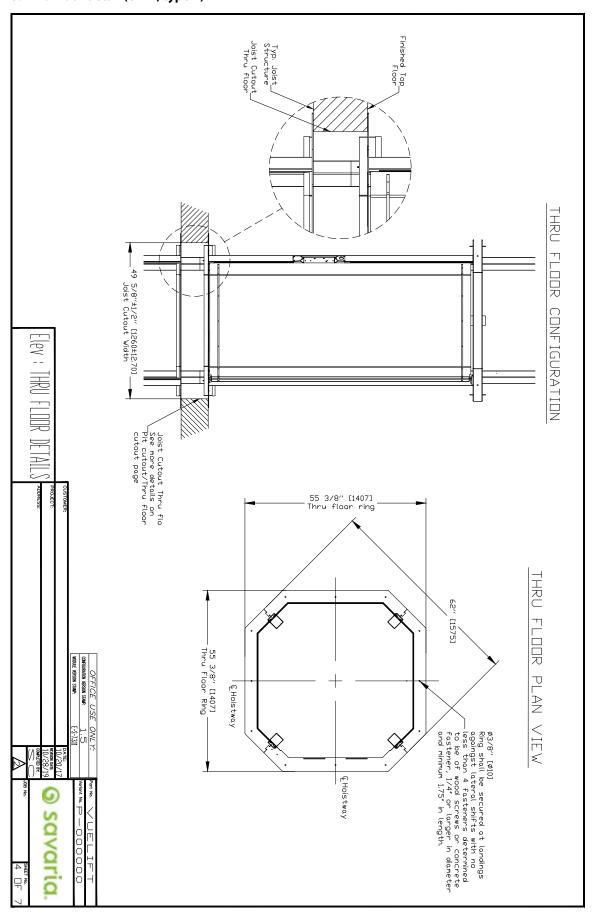


Figure 17: Elevation view (OAM, type 1)

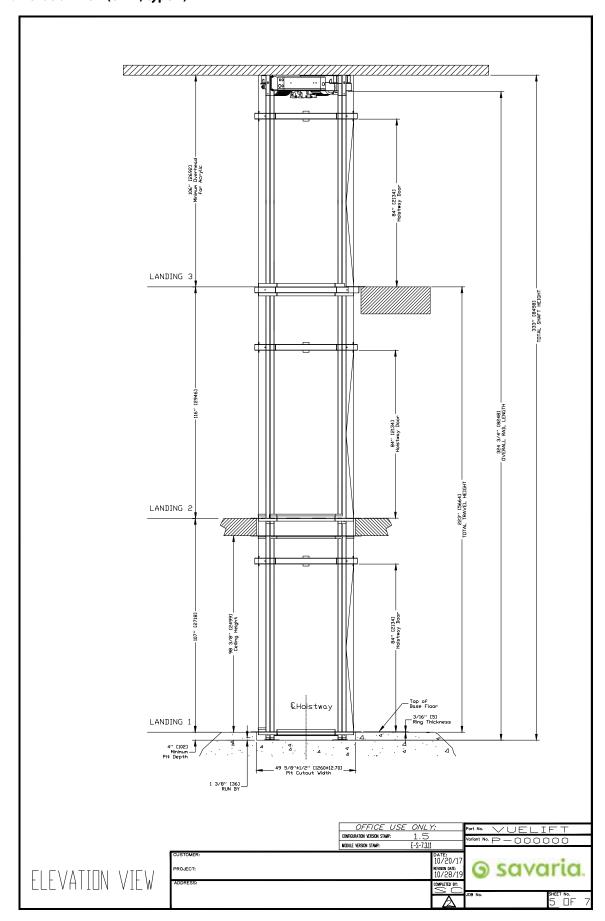
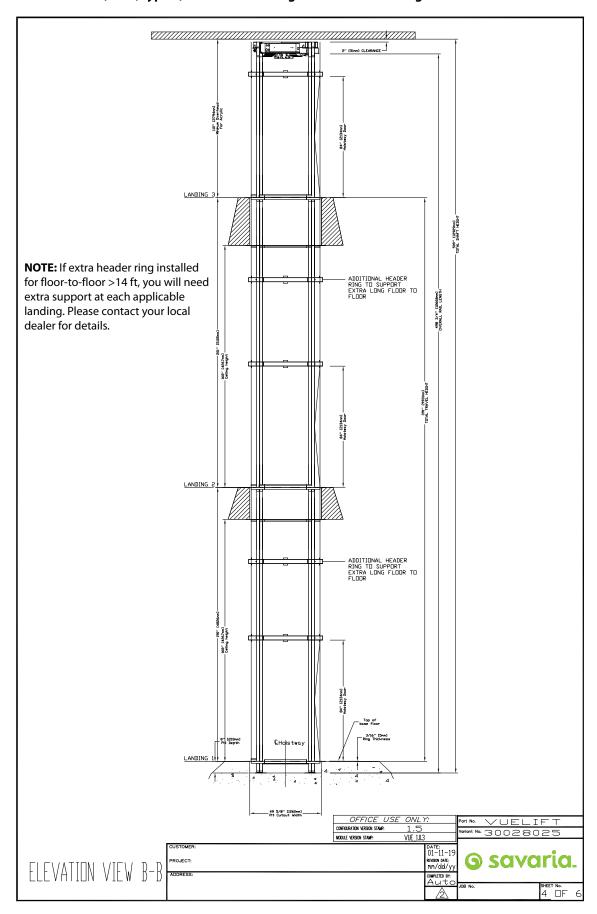


Figure 18: Elevation view (OAM, type 1) - extra header rings if floor-to-floor height > 14 ft



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Figure 19: Datasheet (OAM, type 1)

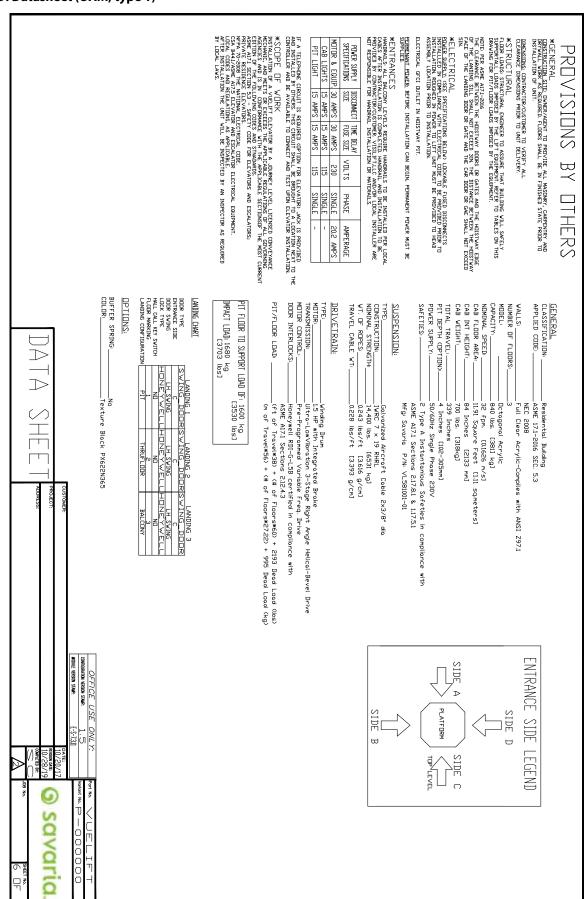
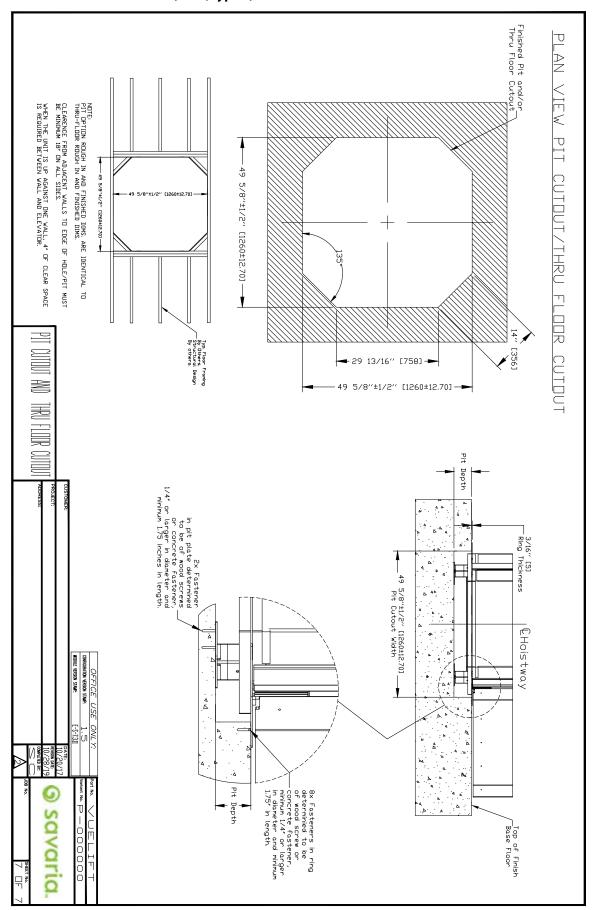


Figure 20: Pit cutout/thru-floor cutout (OAM, type 1)



# Model Specifications – Octagonal

## Octagonal (Glass)

Capacity: 432kg (950 lb)

• Cab Size: 1.19 sqm (12.83 sq. ft.)

• Clear Cab Size: 1118w x 1056d (44 x 41<sup>9</sup>/<sub>16</sub> in.)

Cab Height: 2134mm (84 in.)

Hoistway Footprint

- Glass: 1215 x 1215mm (48 x 48 in.)

- Pit/Thru Floor Cutout:  $1260 \times 1260 \text{mm} (49^{5}/_{8} \times 49^{5}/_{8} \text{ in}$ - **Balcony/Header Ring**:  $1304 \times 1304 \text{mm} (51^{3}/_{8} \times 51^{3}/_{8} \text{ in}$ 

- Pit/Thru Floor Ring:  $1407 \times 1407 \text{mm} (55^3/_8 \times 55^3/_8 \text{ in})$ 

• Minimum Overhead Clearance: 2743mm (108 in.)

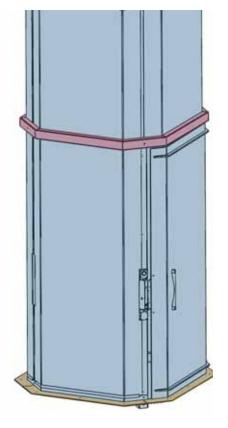


Figure 21: Plan view (OGM, type 1)

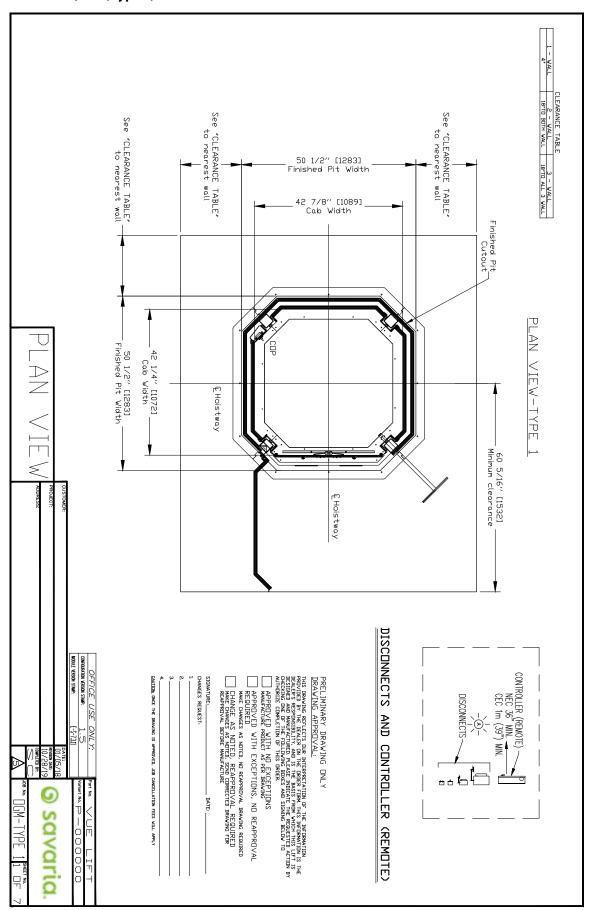


Figure 22: Pit/bottom floor/thru-floor view (OGM, type 1)

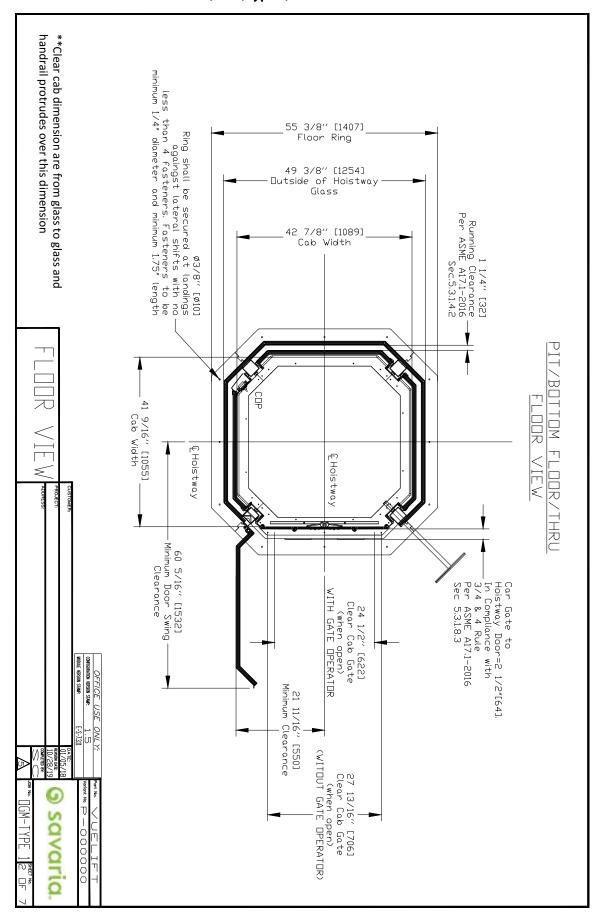


Figure 23: Balcony detail (OGM, type 1)

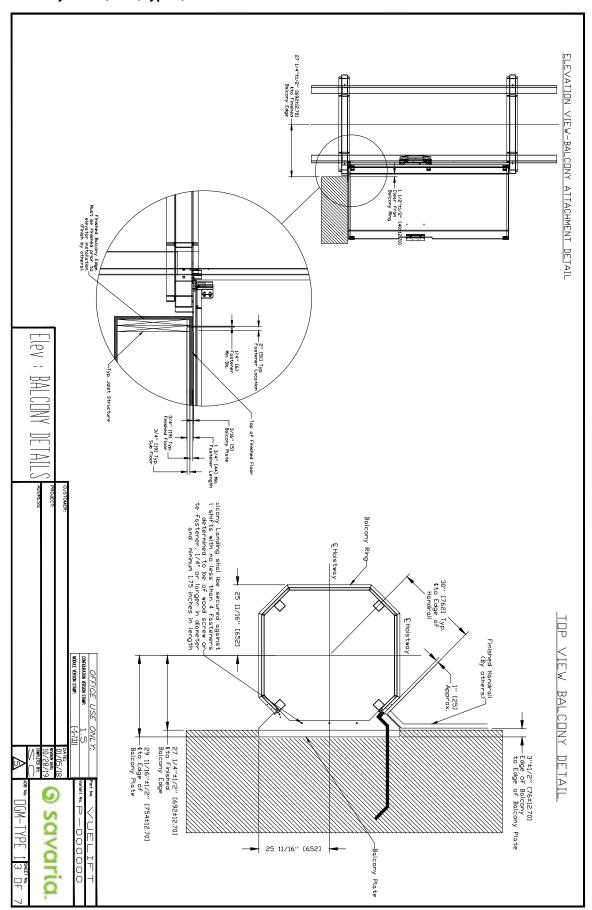
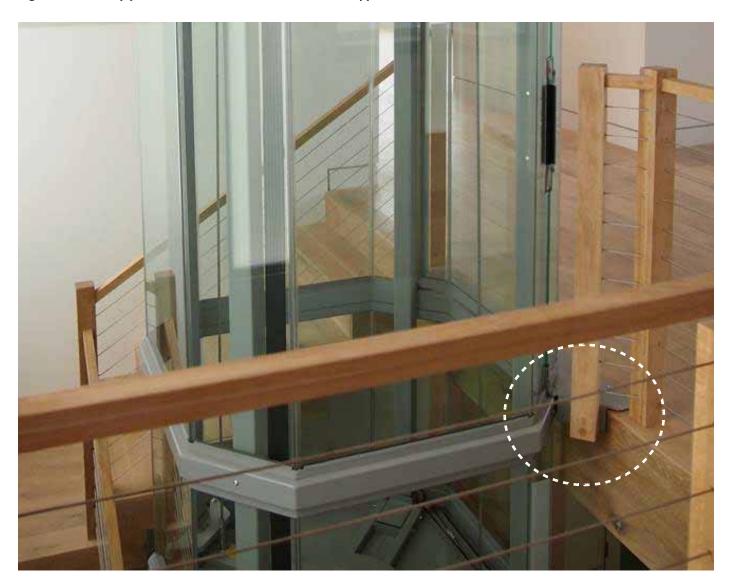


Figure 24: Balcony plate and handrail information (OGM, type 1)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 25: Thru-floor detail (OGM, type 1)

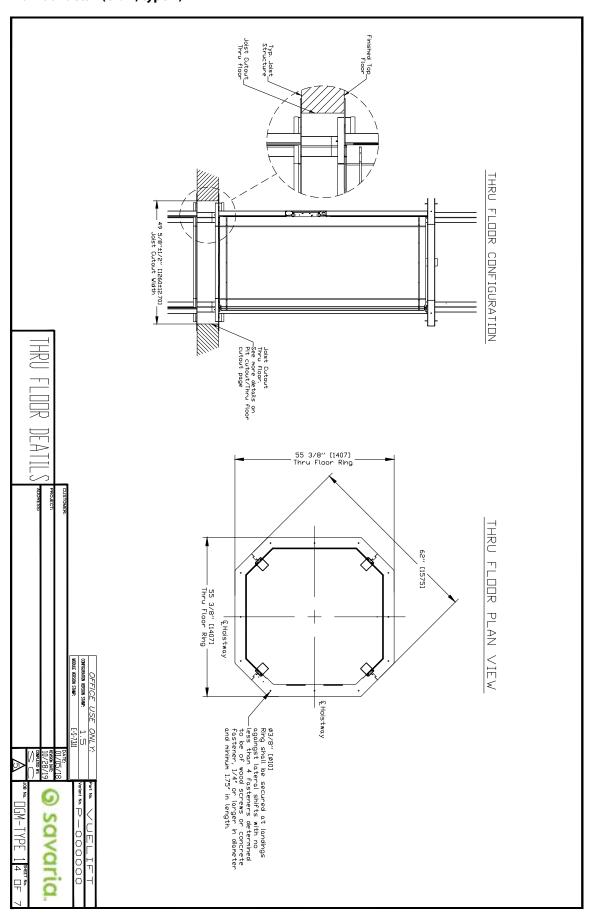


Figure 26: Elevation view (OGM, type 1)

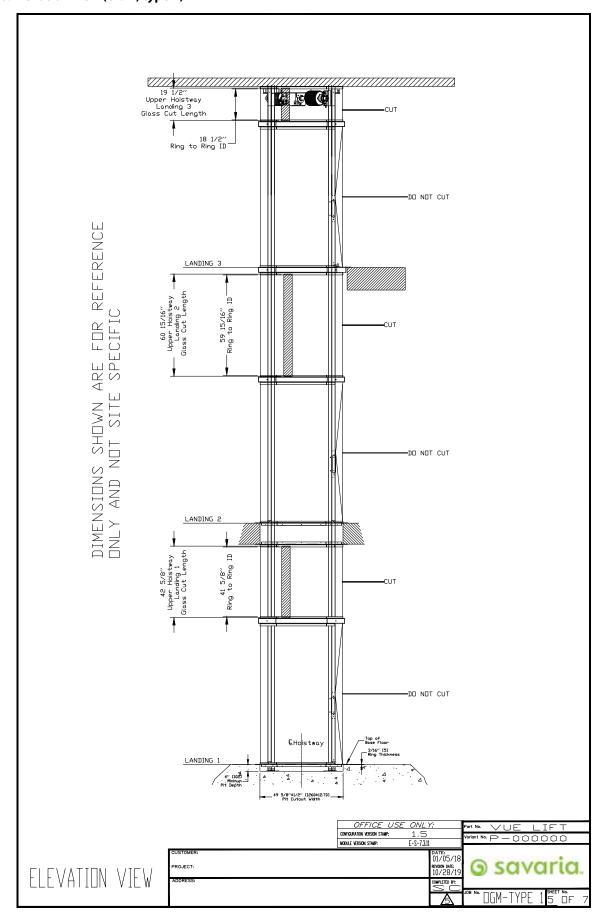
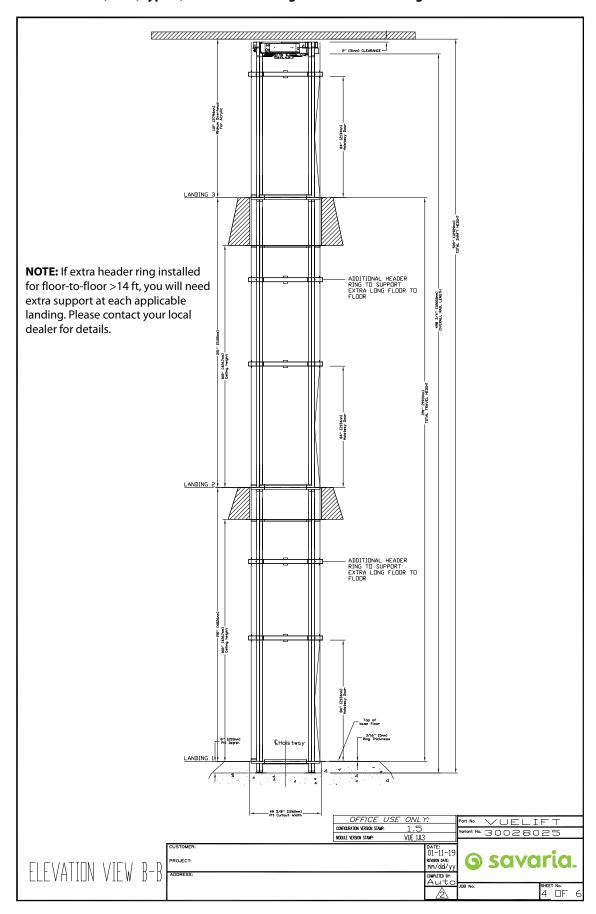


Figure 27: Elevation view (OGM, type 1) - extra header rings if floor-to-floor height > 14 ft



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Figure 28: Datasheet (OGM, type 1)

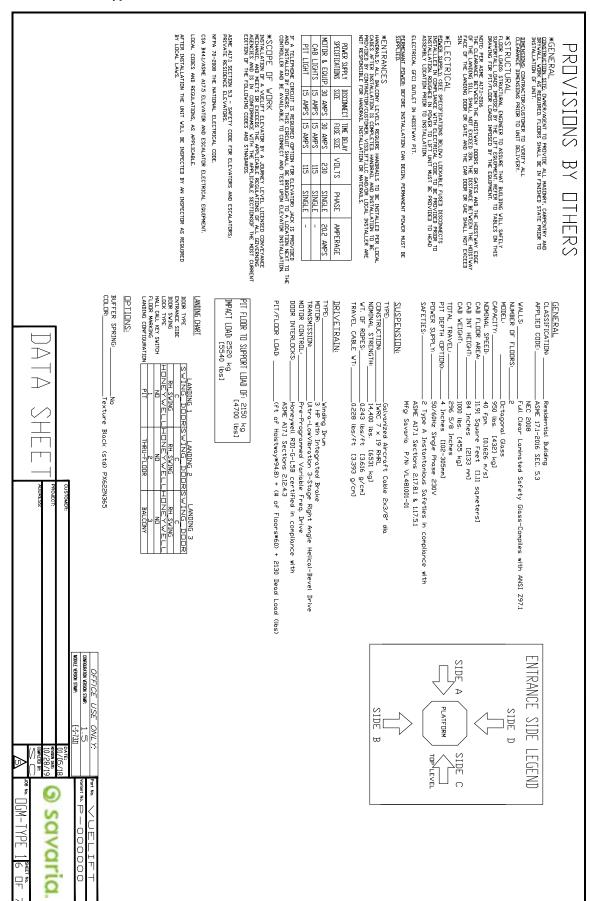


Figure 29: Pit cutout/thru-floor cutout (OGM, type 1)

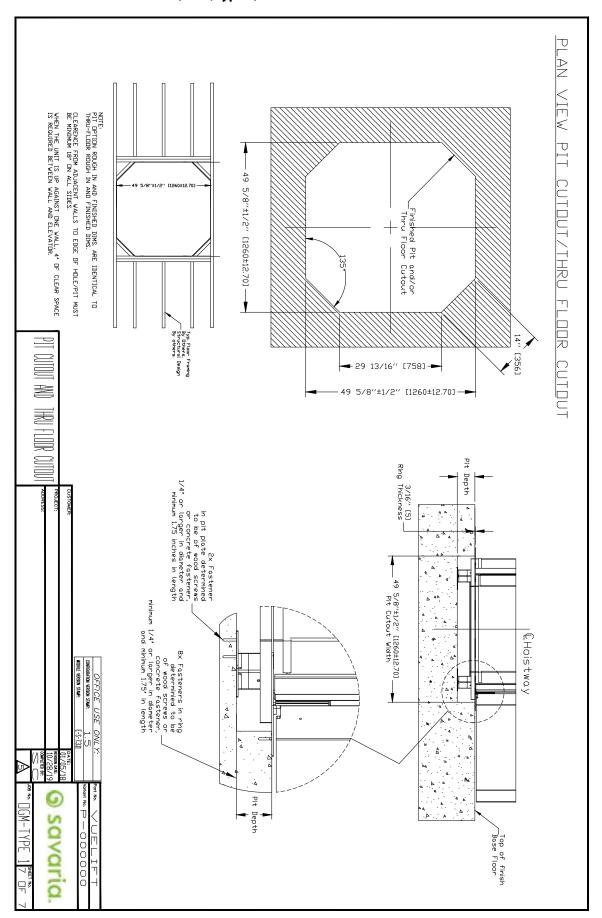


Figure 30: Plan view (OGM, type 2)

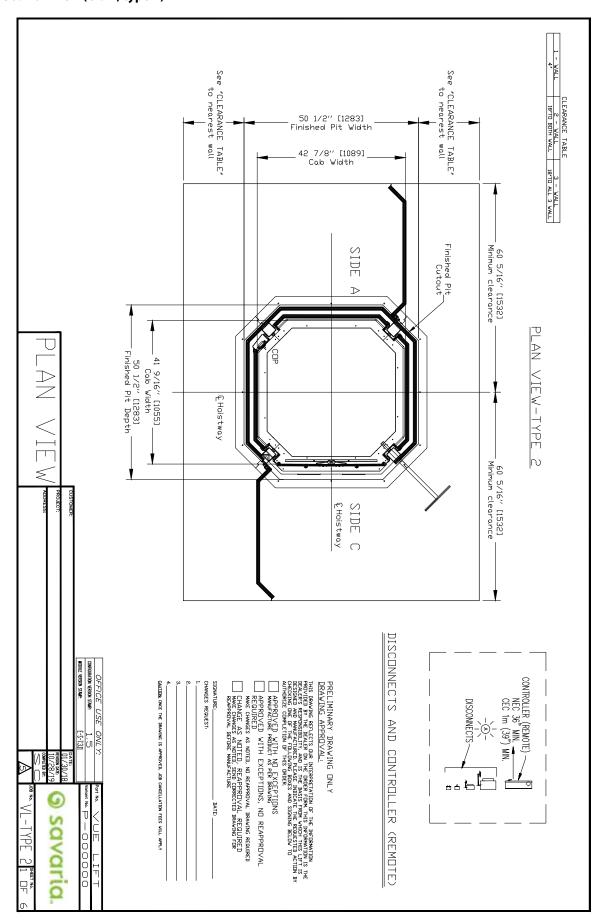


Figure 31: Pit/bottom floor/thru-floor view (OGM, type 2)

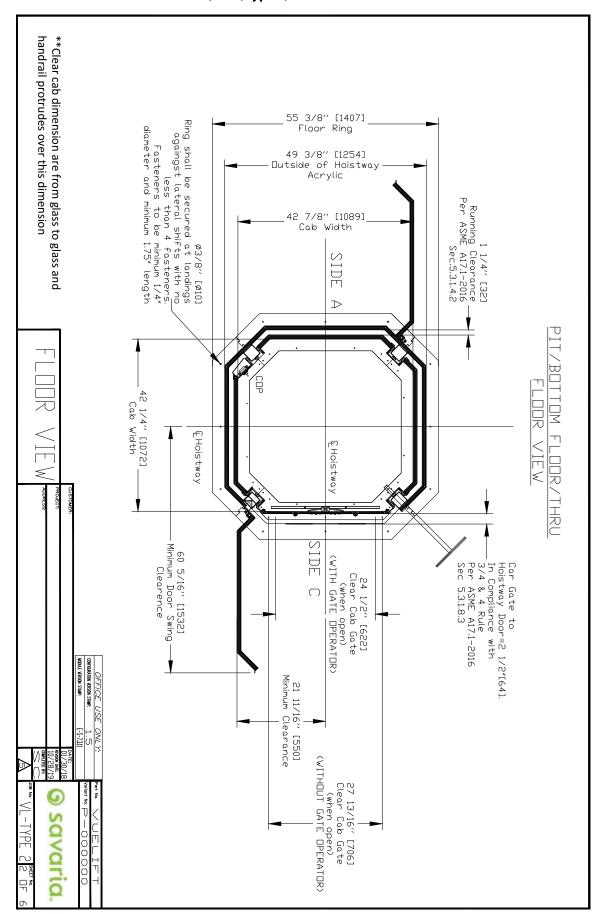


Figure 32: Balcony detail (OGM, type 2)

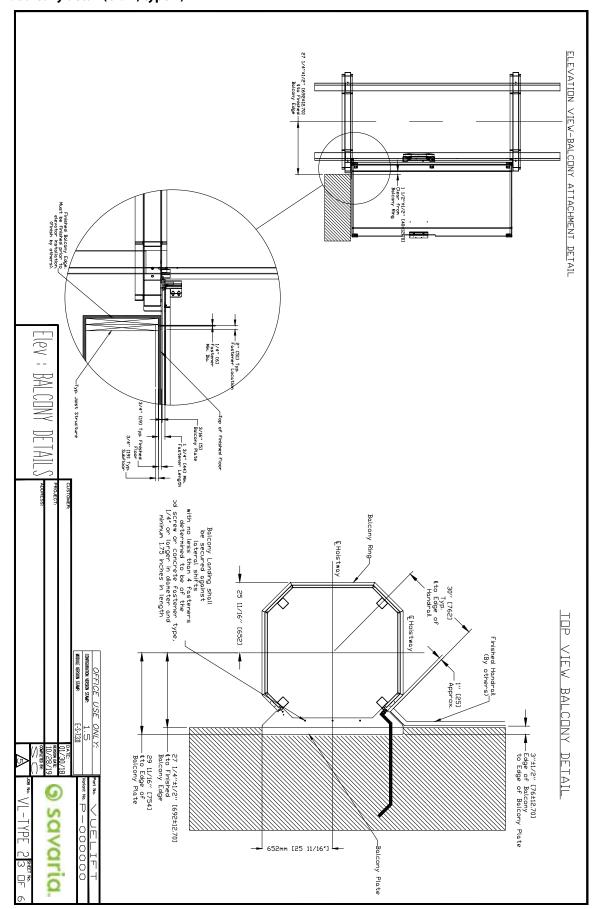
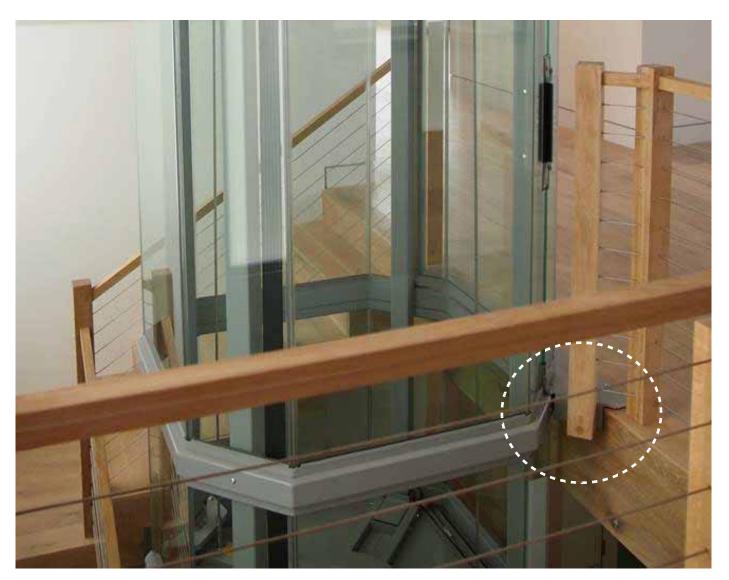


Figure 33: Balcony plate and handrail information (OGM, type 2)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 34: Elevation view (OGM, type 2)

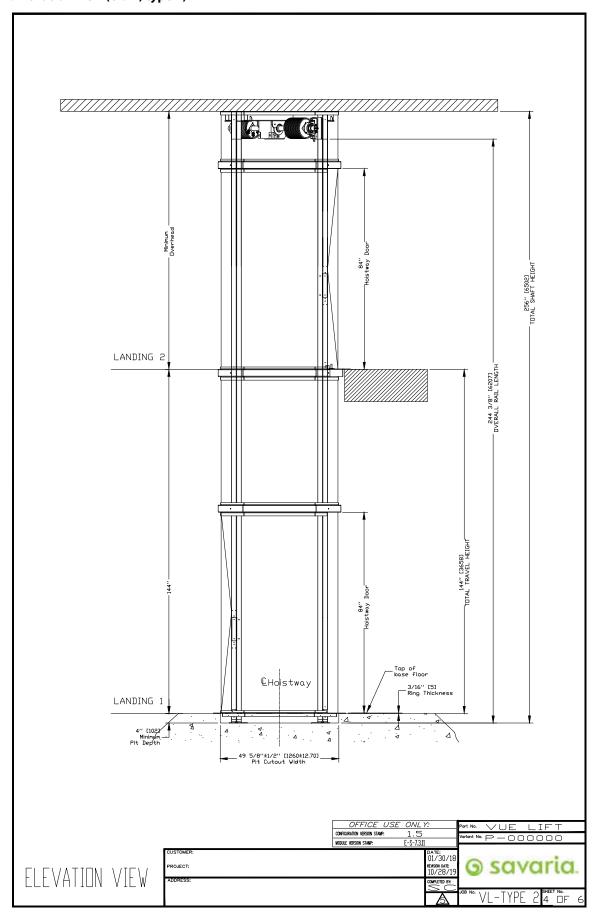
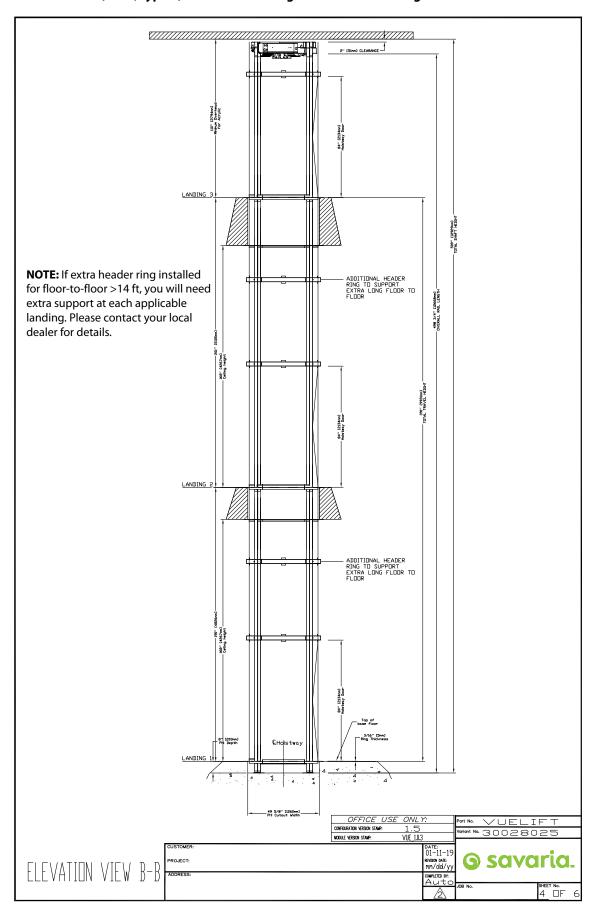


Figure 35: Elevation view (OGM, type 2) - extra header rings if floor-to-floor height > 14 ft



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Figure 36: Datasheet (OGM, type 2)

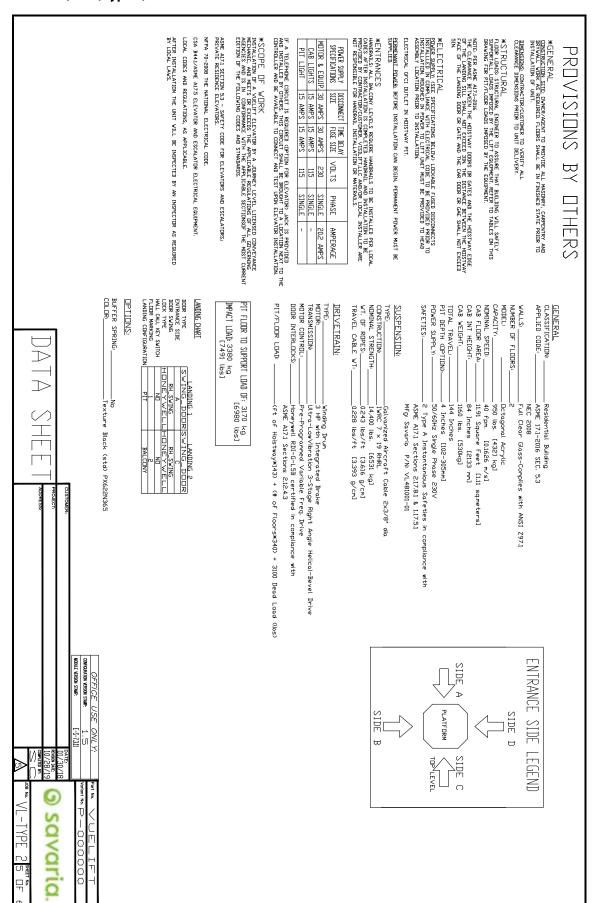


Figure 37: Pit cutout/thru-floor cutout (OGM, type 2)

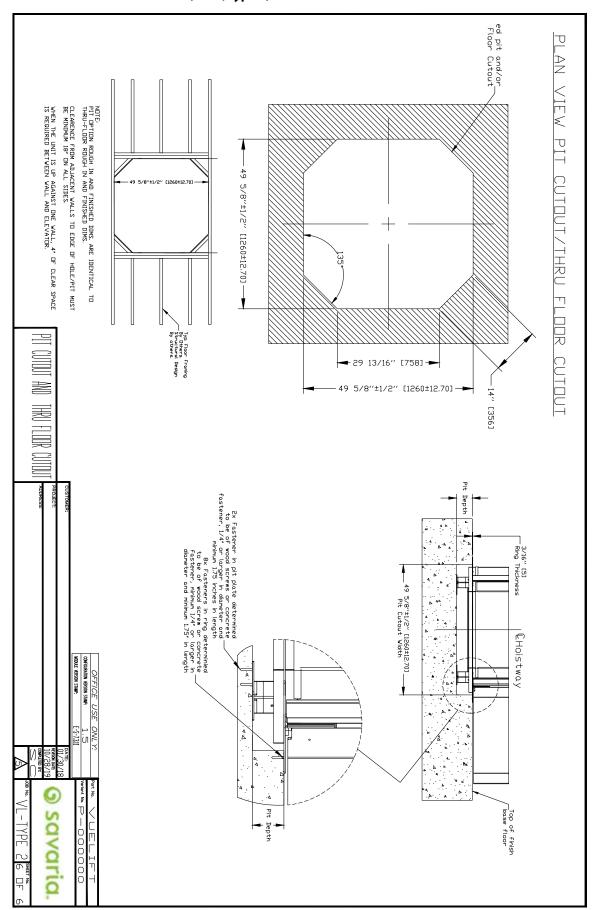
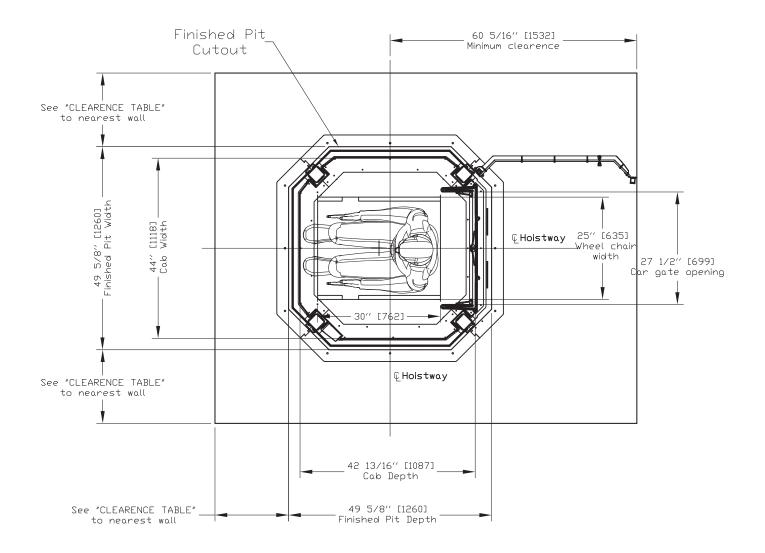


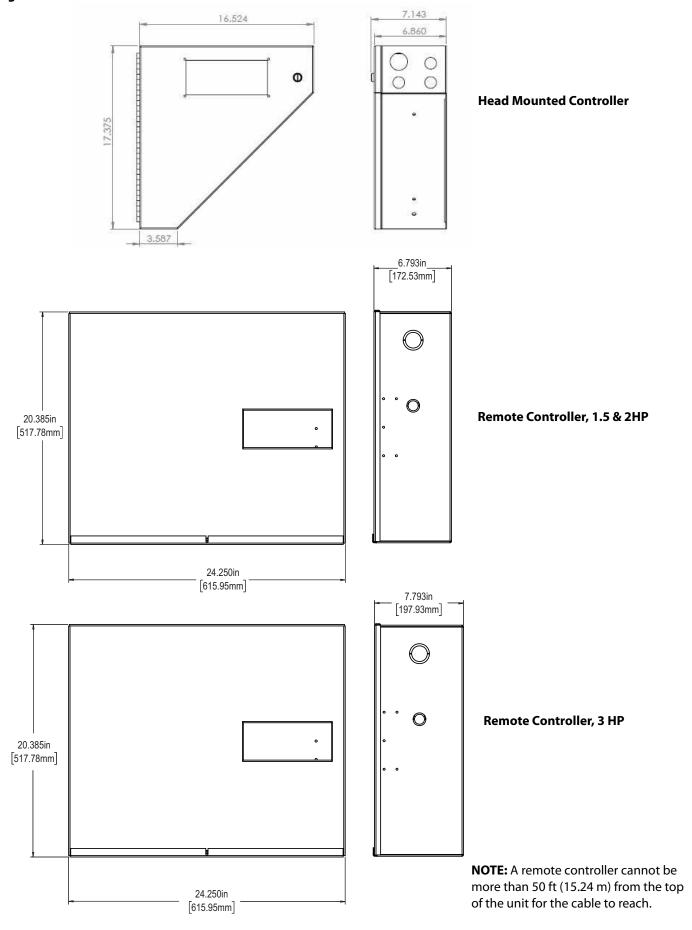
Figure 38: Wheelchair plan view (OAM and OGM)

## PLAN VIEW



Notes: \* No footrest used on wheelchair. \*\* Size may vary. Please review with your local dealer the availability of a true size template to review if chair will fit.

Figure 39: Controller box dimensions



# Chapter 3: Round Glass Large (RGL) & Octagonal Glass Large (OGL)





# **Specifications (RGL and OGL)**

Specification	Specification Data			
Load capacity	950 lb (432 kg)			
Maximum travel	42.5 ft (12.95 m)			
Travel speed	40 ft/min (0.20 m/s)			
Noise level (for typical installation)	65 dB			
Daily cycle	Normal: 40 Heavy: 80 Excessive: 150 Maximum starts in 1 hour on standard installation: 20 NOTE: Please consult your Sales Representative if there a chance you may exceed these amounts.			
Maximum levels serviced	6			
Minimum overhead	108" (2.74 m) 98 in (2.48 m) for optional short cab			
Cab	Cab interior height RGL: 108 in (2.74 m) Cab interior height OGL: 84 in (2.13 m) Cab interior height (Optional short cab): 76.5 in (1.94 m) Cab floor area RGL: 15.00 sq ft (1.4 sq m) Cab floor area OGL: 14.00 sq ft (1.31 m) Cab weight RGL: 850 lb (386 kg) Cab weight OGL: 1200 lb (544 kg)			
Footprint	48" x 48" (1.2 m x 1.2 m)			
Power supply	30A, 230V, single-phase, 50/60 Hz			
Cab lighting	15A, 115V, single-phase, 50/60 Hz			
Suspension	Type: Galvanized aircraft cable (2 x 3/8" diameter) Construction: IWRC 7 x 19 RHRL Nominal strength: 14,400 lb (6,545 kg) Weight of ropes: 0.243 lb/ft (3.616 g/cm) Travel cable weight: 0.228 lb/ft (3.393 g/cm)			
Drive train	Type: Winding drum Motor: 3.0 HP with integrated brake Transmission: Ultra-low vibration, 3-stage, right-angle, helical-bevel drive Motor control: Preprogrammed variable frequency drive Door interlocks: Honeywell RDI-G-L5B certified (compliant with ASME A17.1 Section 2.12.4.3)			
Pit/floor load	Refer to the section "Load Calculations"			
Distance between 2 landings	93" (2362 mm) minimum			
Pit depth	4" to 12" (102 mm to 305 mm)			
Temperature	−10 °C to +40 °C (14 °F to 104 °F)			

Specification	Specification Data		
Safety features	Pit run/stop switch and car top run/stop switch Emergency stop switch Safety brakes Electrical circuit overspeed Manual lowering Emergency battery back-up for cab lighting and lowering		
Options	Optional configurations: Type 1, 2, 3 Optional short cab (76.5 in (1.94 m) Optional colors:  • White (Texture White PX521W859)  • Silver (Texture Silver PX521S343)  • Custom powder-coat frame Note that Black is the standard color (Texture Black PX622N365) Other options: Up to 6 stops, panoramic car ceiling, balcony attachment		

# Safety First (RGL and OGL)

### 3 & 5 Rule (Code Prior to 2016)

The ASME A17.1/CSA-B44–Safety Code for Elevators and Escalators (**PRIOR TO 2016**) mandates the following maximum hoistway door clearances (see drawing on next page).

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 3" (76 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 5" (127 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

### 3/4 & 4 Rule (Code 2016 and After)

The ASME A17.1-2016/CSA B44-16 Safety Code for Elevators and Escalators (2016 AND AFTER) mandates the following maximum hoistway door clearances (see drawing on next page):

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 0.75" (19 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 4" (102 mm).
- Vuelift Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

# **Electrical Requirements (RGL and OGL)**

Your electrician and phone installer must supply the following connections:

- Main Disconnect One 230V single-phase, 30 Amp fused disconnect box with 20 Amp fuse/breaker. If voltage is not 230V minimum, a buck-boost transformer is required.
- Lighting Disconnect One 120V, 15 Amp fused disconnect or circuit breaker for cab lighting.
- Telephone Line One telephone line jack in close proximity to the controller.
- Electrical Outlet One 15A GFCI outlet shall be installed near the pit or base ring.

**NOTE:** Savaria does not provide power cable to main disconnect.

# Recommended Manufacturers for Fused Disconnect Square D

- Main disconnect: 230V single-phase disconnect model # H221N.
   240V, 30 Amp with Interlock Kit ELK031 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### Siemens

- Main disconnect: 230V single-phase disconnect model #HF221N.
   240V, 30 Amp with Interlock Kit-HA 161234 Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

#### G.E.

- Main disconnect: 230V single-phase disconnect model # TH3221.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect 120V, 15 Amp fused disconnect or circuit breaker.

#### **Cutler Hammer**

- Main disconnect: 230V single-phase disconnect model # DH221NGK.
   240V, 30 Amp with Interlock Kit THAUX21D Aux Contacts (normally opened/normally closed).
   In addition, two each 250V, 20 Amp, RK5 fuses.
- Lighting disconnect: 120V, 15 Amp fused disconnect or circuit breaker.

Recommended manufacturers for circuit breakers at the distribution panel (and the distribution panel itself): Square D or Siemens only.

# **Provisions By Others (RGL and OGL)**

### **General**

#### **Construction Site**

The owner/agent is required to provide all masonry, carpentry, and drywall work as required. Floors shall be in a finished state prior to installation of the unit. Refer to the section, Site Preparation on the next page.

### **Dimensions**

The contractor/customer must verify all clearance dimensions prior to delivery of the unit.

# Structural Floor Loads

A structural engineer is required to ensure that the building will safely support all loads imposed by the lift equipment. Refer to the tables on the installation drawings (shop drawings) for pit/floor loads imposed by the equipment. Refer to the section, Load Calculations.

# Electrical Power Supply

See the following table. Lockable fused disconnects must be installed in compliance with electrical code and are to be provided prior to installation of the unit. Roughed in power to the lift must be provided to the head assembly location prior to installation of the unit.

Power Supply Specifications	Disconnect Size	Time Delay Fuse Size	Volts	Phase
Motor and equipment	30 Amps	30 Amps	230 Volts	Single
Cab lights	15 Amps	15 Amps	115 Volts	Single
Pit light	15 Amps	15 Amps	115 Volts	Single

### **Telephone**

If a telephone circuit is required, the jack is to be provided and installed by others. This circuit shall be brought to a location next to the controller and be available to connect and test upon elevator installation.

#### **Electrical Outlet**

One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### **Permanent Power**

Before installation can begin, permanent power must be supplied.

### Entrances Handrails

All balcony levels require handrails to be installed per local codes after installation is completed. The handrail and installation is to be provided by the contractor/customer. Savaria Concord Lifts Inc. and/or local installer are not responsible for handrail installation or materials.

## **Site Preparation (RGL and OGL)**

The following items MUST be completed prior to installation of the elevator.

#### **Finished Floors**

Finished floors be installed at all landing levels.

## 230V Power (with Switched Disconnect)

- Permanent 230V, single-phase, 30-Ampere dedicated power to a lockable fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted in a location within line of sight of the elevator or controller.
- 230V source must be run from the disconnect switch to a junction box in a discrete location at the top of the elevator hoistway location.
- Disconnect must be installed according to all applicable local codes.

### 110V Power (with Switched Disconnect)

- Permanent 110V, single-phase, 15-Ampere dedicated power to a lockable, fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted near the 230V disconnect switch.

## **Telephone Works**

• Telephone jack must be provided next to the electrical disconnects. This can be the common house line in most jurisdictions. Please check with your local installer or building contractor for code requirements.

#### **Electrical Outlet**

One 15-Amp GFCI outlet shall be installed near the pit or base ring.

#### Floor Built for Load

• Smooth level surface for installing the elevator, with floor load bearing capacity for the elevator plus rated load. An exact specification can be provided by contacting Savaria.

## **Floor and Pit Cutouts Complete**

- If a pit is to be used, a smooth, level surface of at least 4" must be provided. For pit depths greater than 12", contact Savaria to ensure proper equipment will be provided.
- It is recommended that any pit floor and walls be finished prior to installation. Pit floor and walls are visible after elevator installation is completed.
- Hole in floor, or modified balcony rail as directed by drawings.

#### **Check Floor to Floor Maximum and Minimum Distances**

- 106" (2692 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for standard cab configuration.
- 96" (2438 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for modified short cab configuration.
- 108" (2743 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for silica glass model.

## **Drywall and Painting**

All drywall and painting must be complete.

## **Load Calculations (RGL)**

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Each middle floor carries a separate Mid Floor Load supporting only that floor's metal floor rings, while the main cab/hoistway load (Lower Floor Total Load) is transferred fully to the bottom floor.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 2.0, doubling the loads shown here.
- To reiterate, the figures below DO NOT include your factor of safety for floor loads.

  Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Lower Floor Dead Load (lbf) = (107.1 x feet of hoistway) + (276 x number of floors) + 3020

Lower Floor Impact Load (lbf) = 7845

Lower Floor Total Load (lbf) = Dead Load + Impact Load

Mid Floor Load (lbf) = 318

Shipping Weight (lb) =  $(1226 \times number of floors) + 2040$ 

**Note:** Shipping weight includes all actual part weights for lower and mid floor loads using 12' per floor, plus shipping packaging weight.

#### **Example**

Lower Floor Dead Load 5,605 Lower Floor Impact Load 7,845 Lower Floor Total Load 13,450

Total Load is distributed as follows:

- At any point in time, two opposing columns may have up to 12,000 lbf (6000 lbf/column)
- However, the max load carried by all four column combined will not exceed 16,759 lbf before addition of factor of safety required by local building code.

Mid Floor Loads (on each mid floor) 318
Shipping Weight 4, 492

## **Load Calculations (OGL)**

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Each middle floor carries a separate Mid Floor Load supporting only that floor's metal floor rings, while the main cab/hoistway load (Lower Floor Total Load) is transferred fully to the bottom floor.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 2.0, doubling the loads shown here.
- To reiterate, the figures below DO NOT include your factor of safety for floor loads. Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Lower Floor Dead Load (lbf) = (107.1 x feet of hoistway) + (276 x number of floors) + 3020

Lower Floor Impact Load (lbf) = 7845

Lower Floor Total Load (lbf) = Dead Load + Impact Load

Mid Floor Load (lbf) = 318

Shipping Weight (lb) =  $(1226 \times number of floors) + 2040$ 

**Note:** Shipping weight includes all actual part weights for lower and mid floor loads using 12' per floor, plus shipping packaging weight.

#### **Example**

2 Stop With 15 Holstway III		2 stop with 19' hoistway min
Lower Floor Dead Load 5,605 Lower Floor Impact Load 7,845 Lower Floor Total Load 13,450	Lower Floor Impact Load	<u>7,845</u>

Total Load is distributed as follows:

- At any point in time, two opposing columns may have up to 12,000 lbf (6000 lbf/column)
- However, the max load carried by all four column combined will not exceed 16,759 lbf before addition of factor of safety required by local building code.

Mid Floor Loads (on each mid floor) 318 Shipping Weight 4, 492

## **Drawings (RGL and OGL)**

## **RGL**

- Plan view
- Pit/bottom floor/thru-floor view
- Balcony details
- Balcony plate and handrail information
- Thru-floor details
- Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout/thru-floor cutout

## **OGL, TYPE 1**

- Plan view
- Pit/bottom floor/thru-floor view
- Balcony details
- Balcony plate and handrail information
- Thru-floor details
- Elevation view
- Elevation view (showing extra header rings for floor-to-floor height >14 ft)
- Provisions by others
- Pit cutout/thru-floor cutout

## **Controller box dimensions**

# Model Specifications - Round+

## Round+ (Glass)

Capacity: 432kg (950 lb)
Cab Size: 1.4 sqm (15 sq. ft.)
Clear Cab Size: 1397mm (54 in.)
Cab Height: 2134mm (84 in.)

Hoistway Footprint

Glass: 1474mm (58 in.)
 Pit/Thru Floor Cutout: 1502mm (59 <sup>1</sup>/<sub>8</sub> in.)
 Balcony/Header Ring: 1543mm (60 <sup>3</sup>/<sub>4</sub> in.)
 Pit/Thru Floor Ring: 1654mm (65 <sup>1</sup>/<sub>8</sub> in.)

• Minimum Overhead Clearance: 2743mm (108 in.)

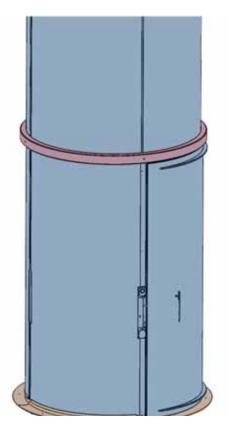


Figure 40: Plan view (RGL)

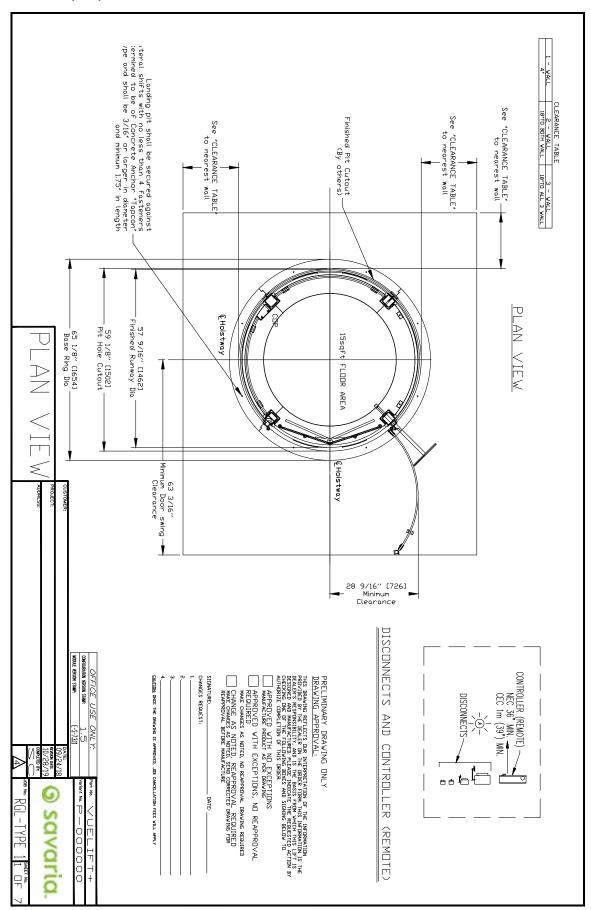


Figure 41: Pit/bottom floor/thru-floor view (RGL)

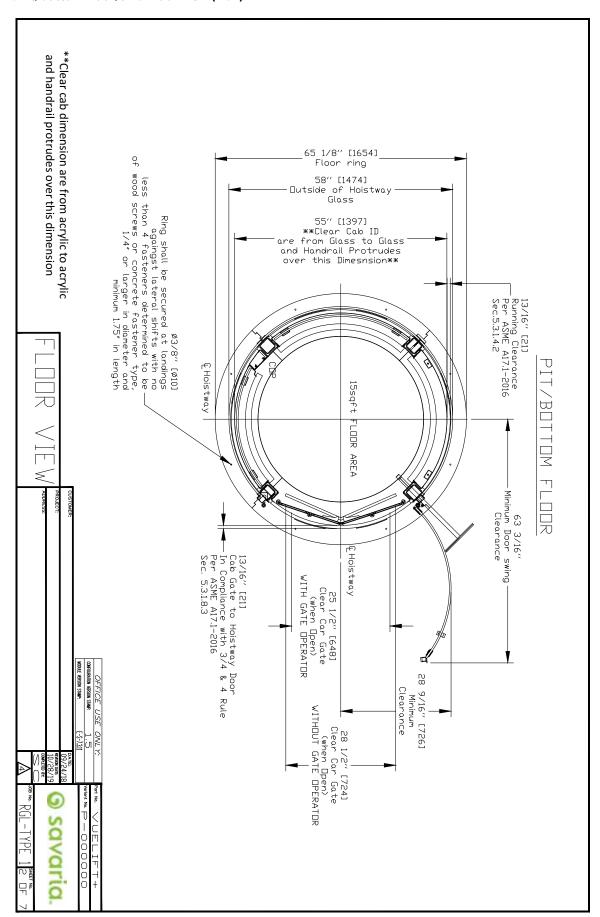


Figure 42: Balcony detail (RGL)

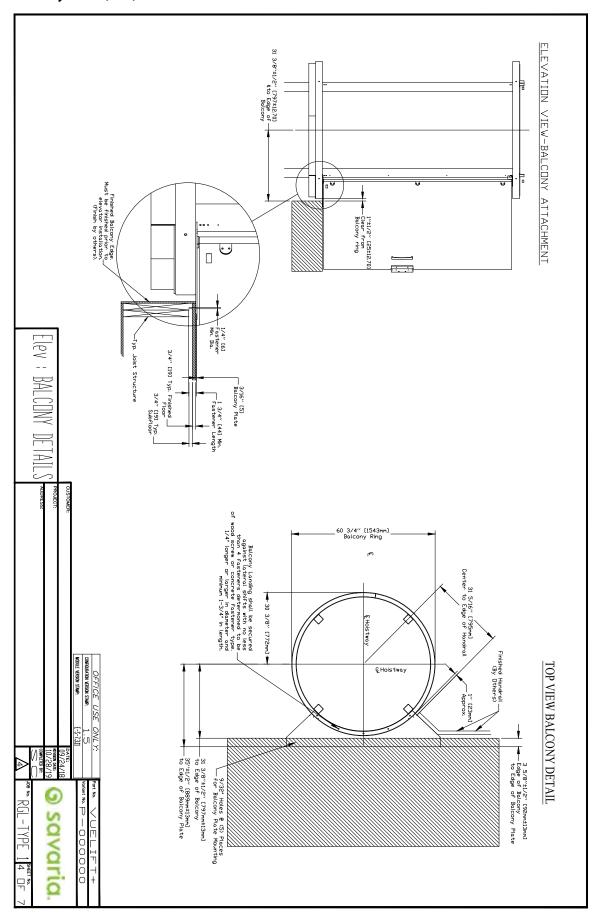
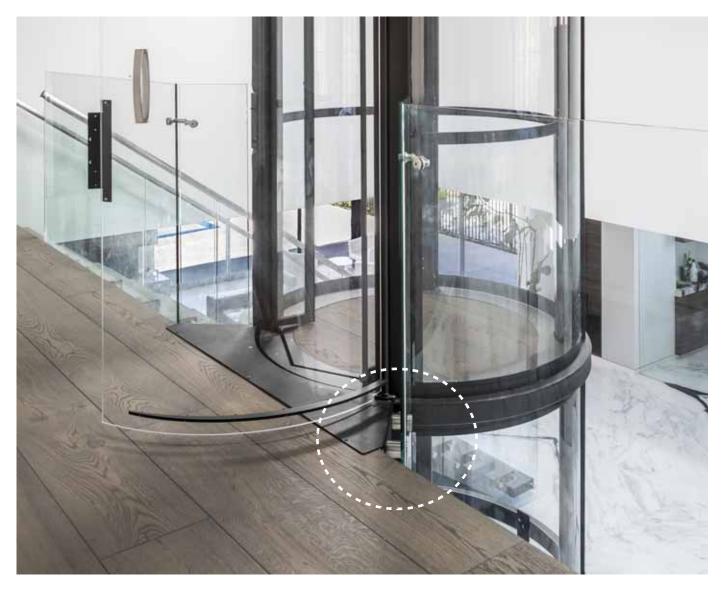


Figure 43: Balcony plate and handrail information (RGL)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 44: Thru-floor detail (RGL)

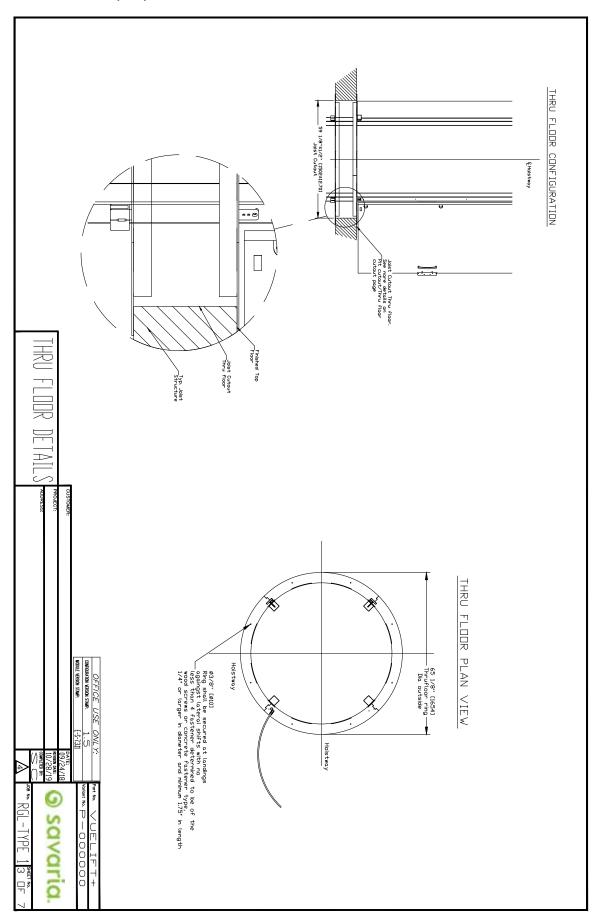


Figure 45: Elevation view (RGL)

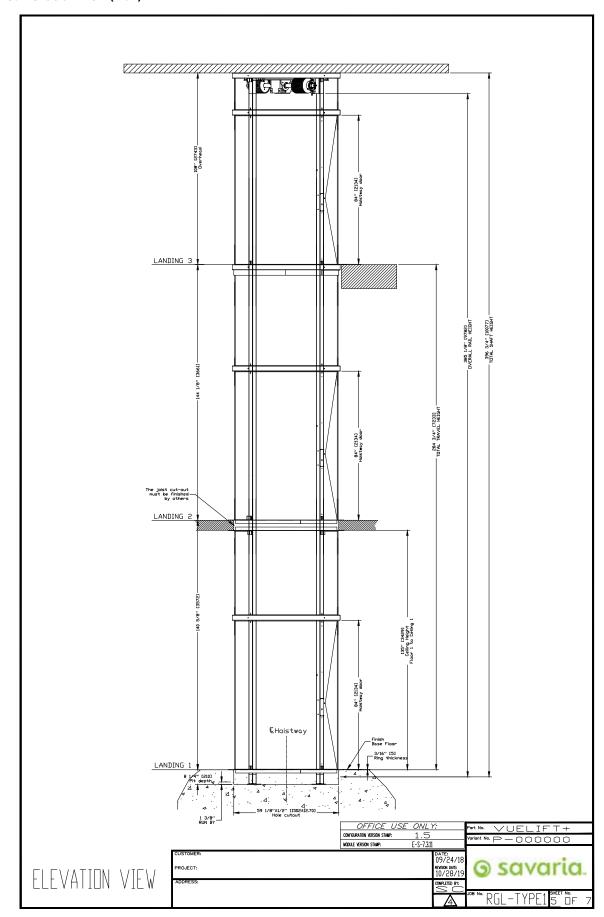
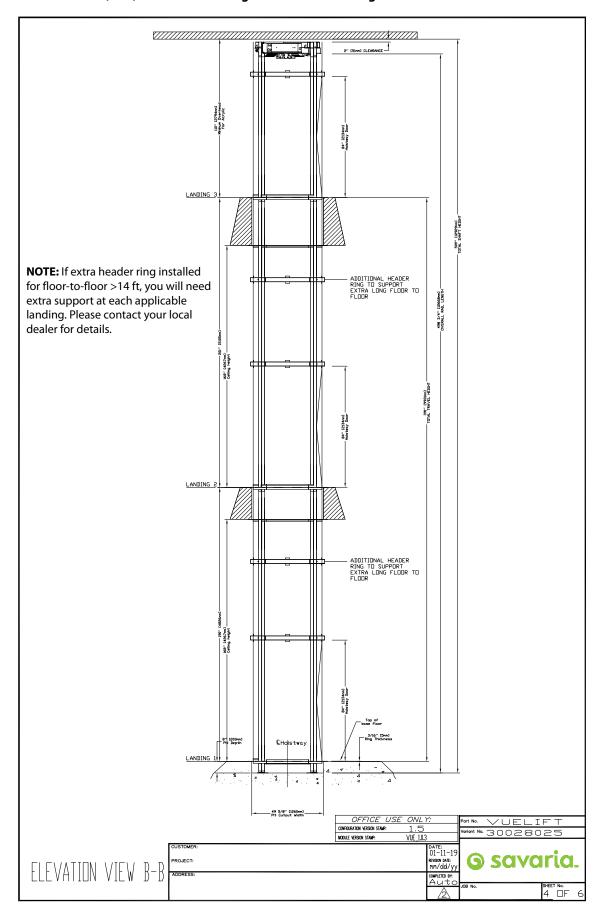


Figure 46: Elevation view (RGL) - extra header rings if floor-to-floor height > 14 ft



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Figure 47: Datasheet (RGL)

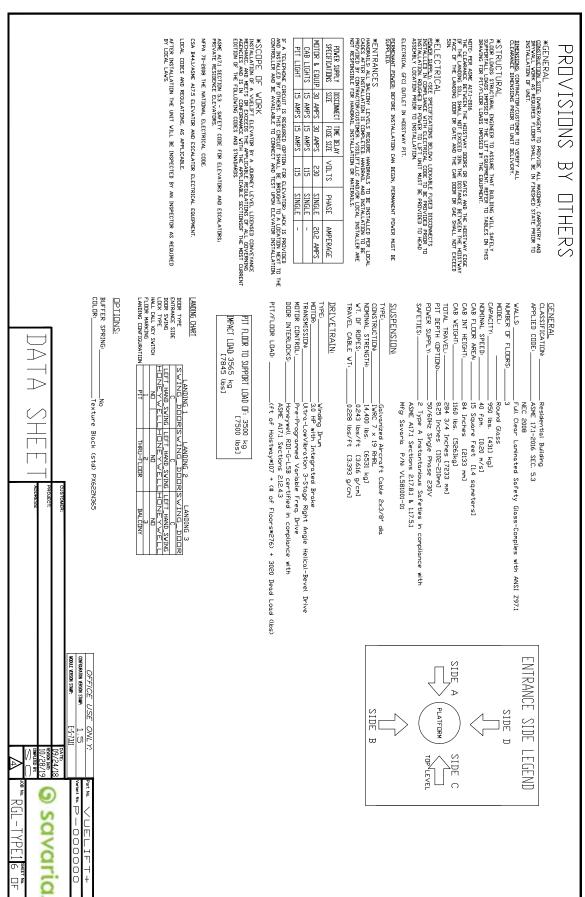
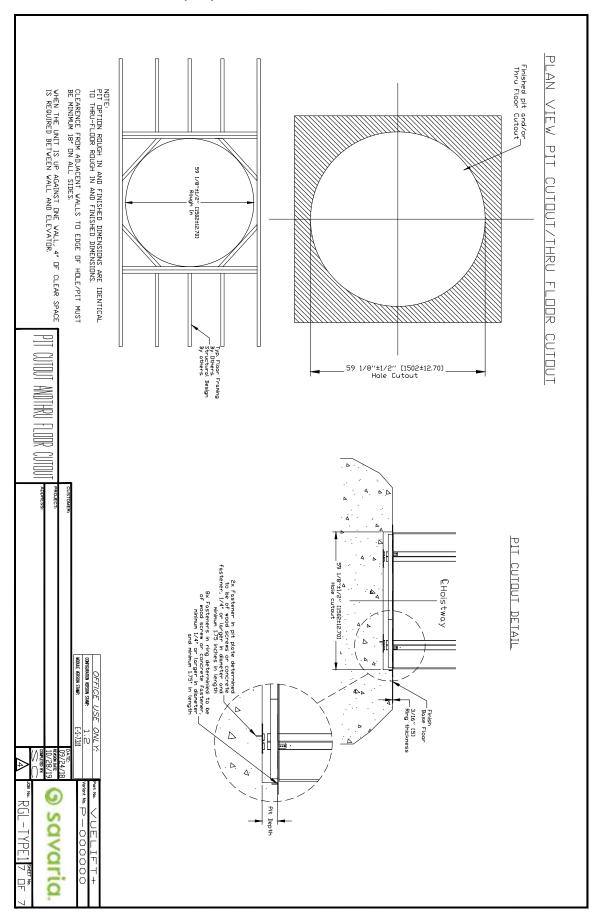


Figure 48: Pit cutout/thru-floor cutout (RGL)



## Model Specifications - Octagonal+

## Octagonal+ (Glass)

• Capacity: 432kg (950 lb)

• Cab Size: 1.31 sqm (14 sq. ft.)

• Clear Cab Size:  $1156w \times 1253d (45^{1}/_{2} \times 49^{5}/_{16} in.)$ 

• Cab Height: 2134mm (84 in.)

Hoistway Footprint

- Glass: 1421 x 1421mm (56 x 56 in.)

- Pit/Thru Floor Cutout:  $1432x \ 1432mm \ (56^{3}/_{8} \ x \ 56^{3}/_{8} \ in.$ 

- **Balcony/Header Ring**: 1473 x 1473mm (58 x 58in.)

- **Pit/Thru Floor Ring**: 1574 x 1574mm (62 x 62 in.)

• Minimum Overhead Clearance: 2743mm (108 in.)

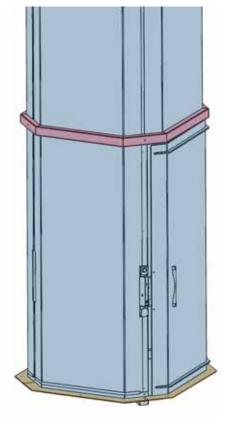


Figure 49: Plan view (OGL, type 1)

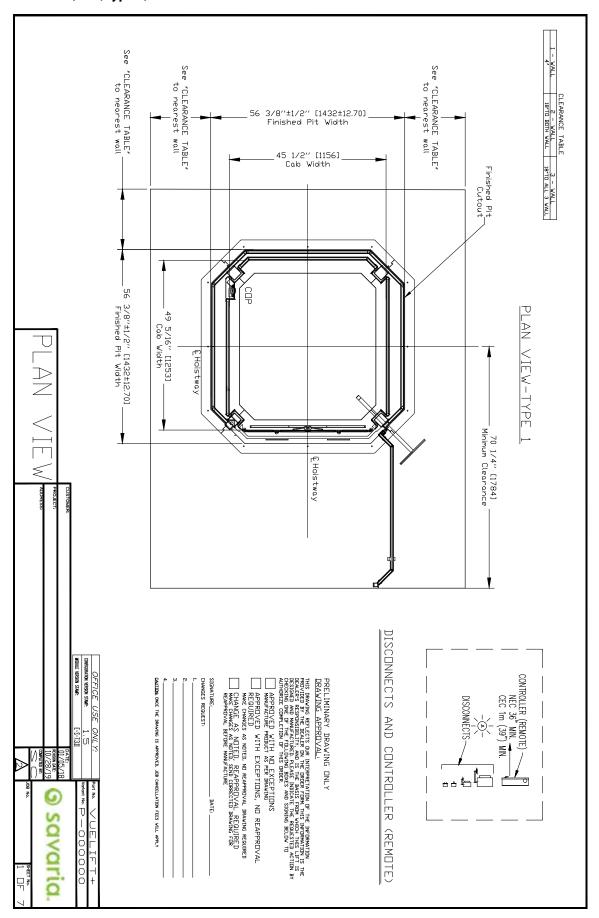


Figure 50: Pit/bottom floor/thru-floor view (OGL, type 1)

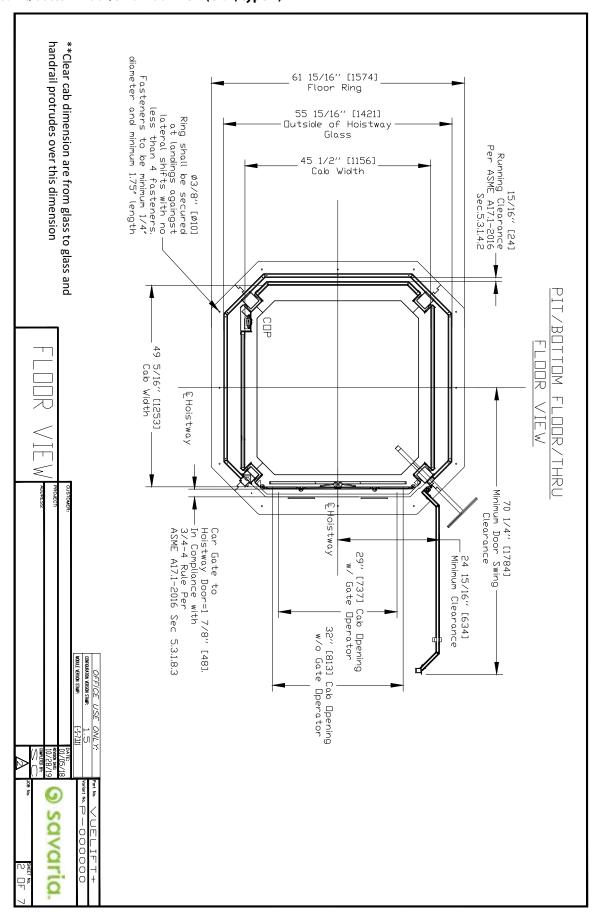


Figure 51: Balcony detail (OGL, type 1)

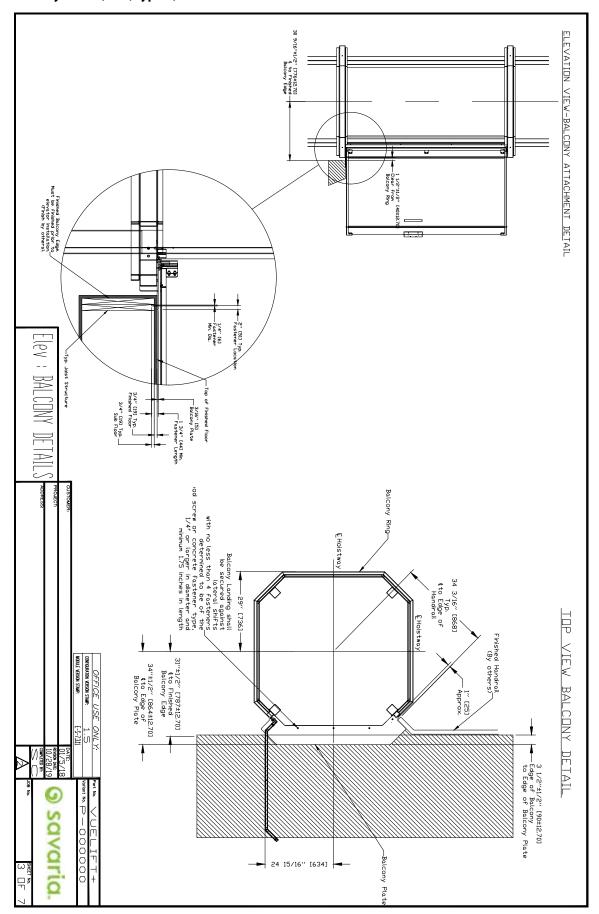
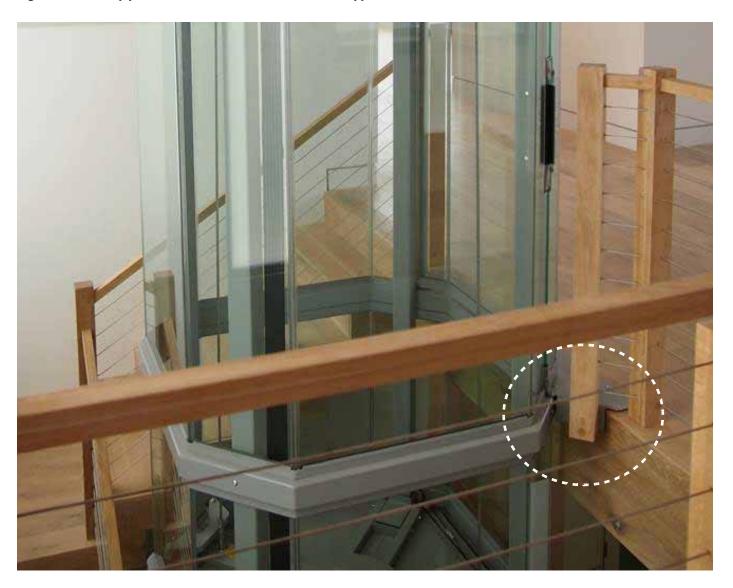


Figure 52: Balcony plate and handrail information (OGL, type 1)



The Vuelift balcony plate provides a vertical flange on either side that can be used to mount the adjacent handrail. This plate is made of 3/16" steel and is designed to support the handrail loading and forces.

The photo above shows a finished handrail view. It is important to note that the spacing between the handrail post and the elevator shaft should be between 2" (51 mm) and 3" (76 mm) to allow sufficient clearance for the operation of the hoistway door and the hall call button.

**NOTE**: Installing the handrail on top of the balcony plate is NOT permitted as it will interfere with the door opening operation and door clearances.

Figure 53: Thru-floor detail (OGL, type 1)

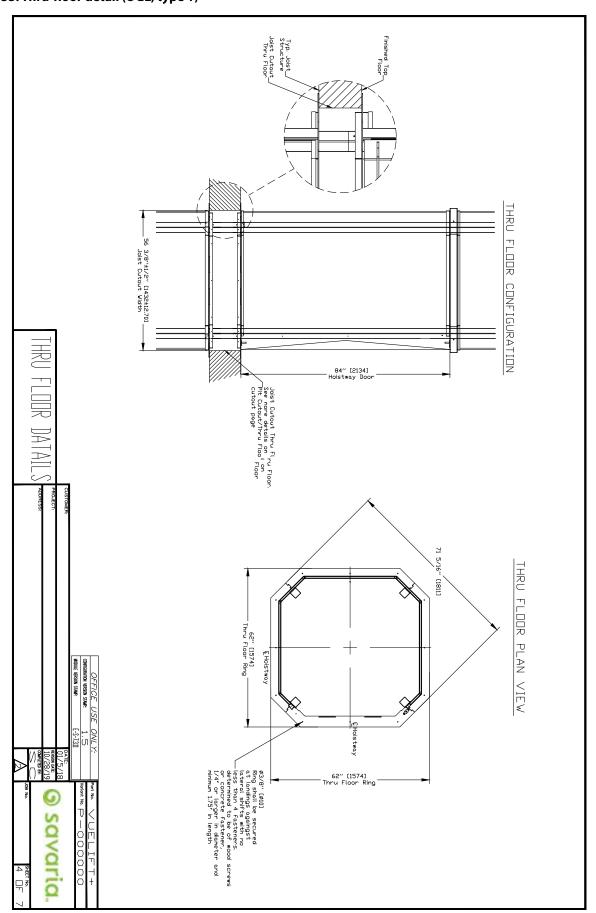


Figure 54: Elevation view (OGL, type 1)

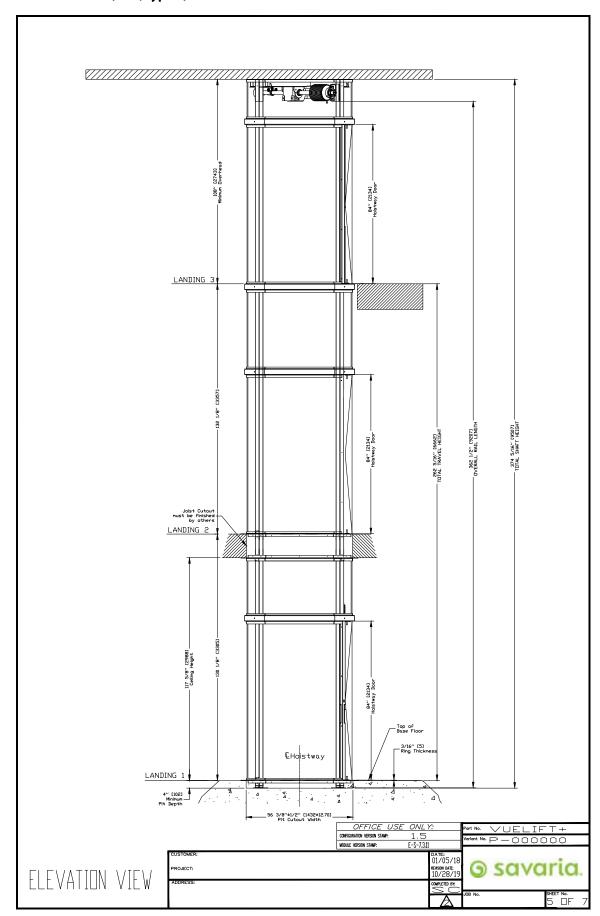
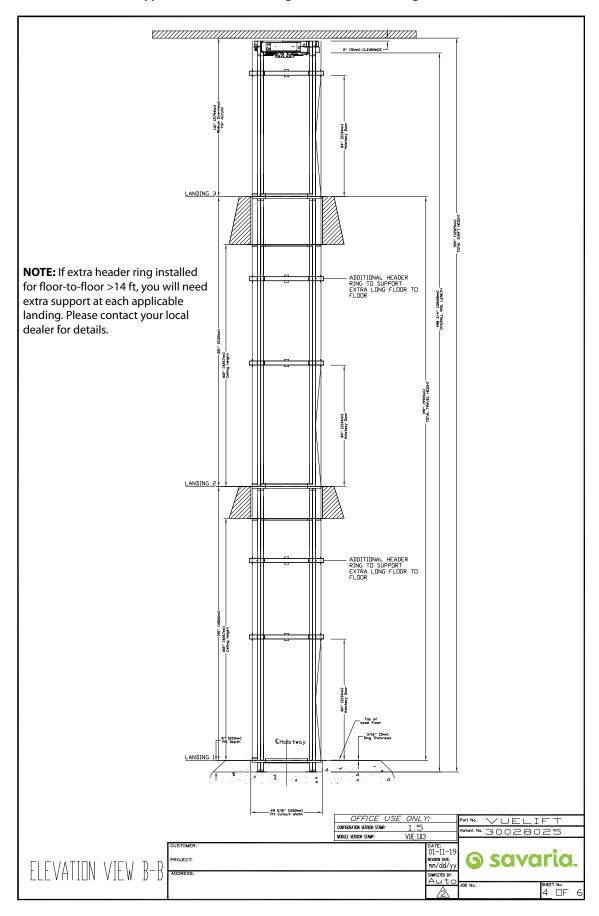


Figure 55: Elevation view (OGL, type 1) - extra header rings if floor-to-floor height > 14 ft



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Figure 56: Datasheet (OGL, type 1)

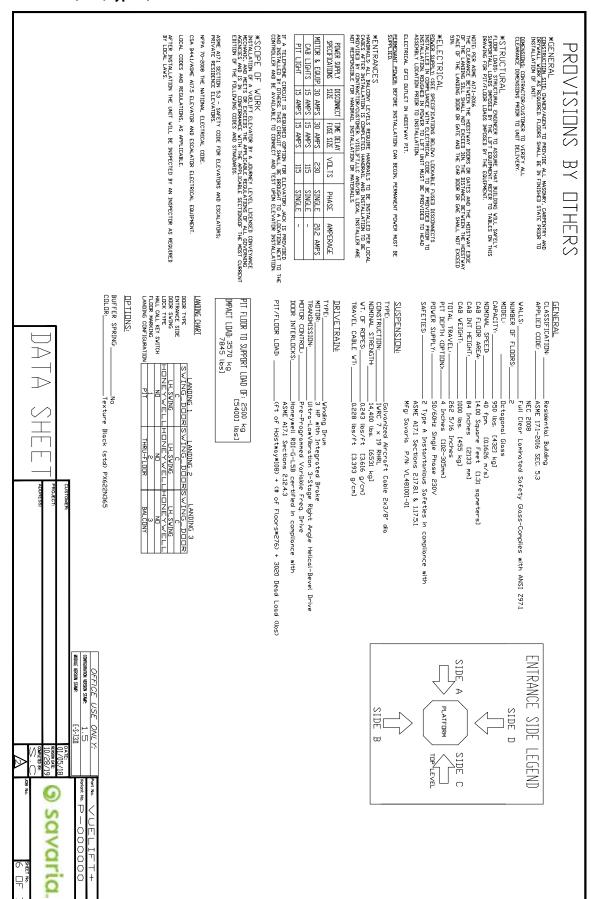


Figure 57: Pit cutout/thru-floor cutout (OGL, type 1)

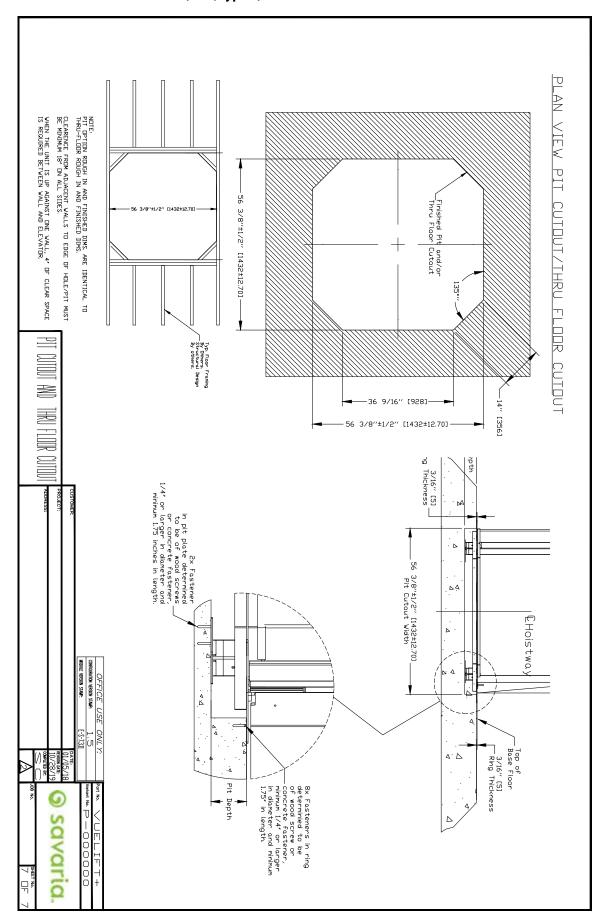
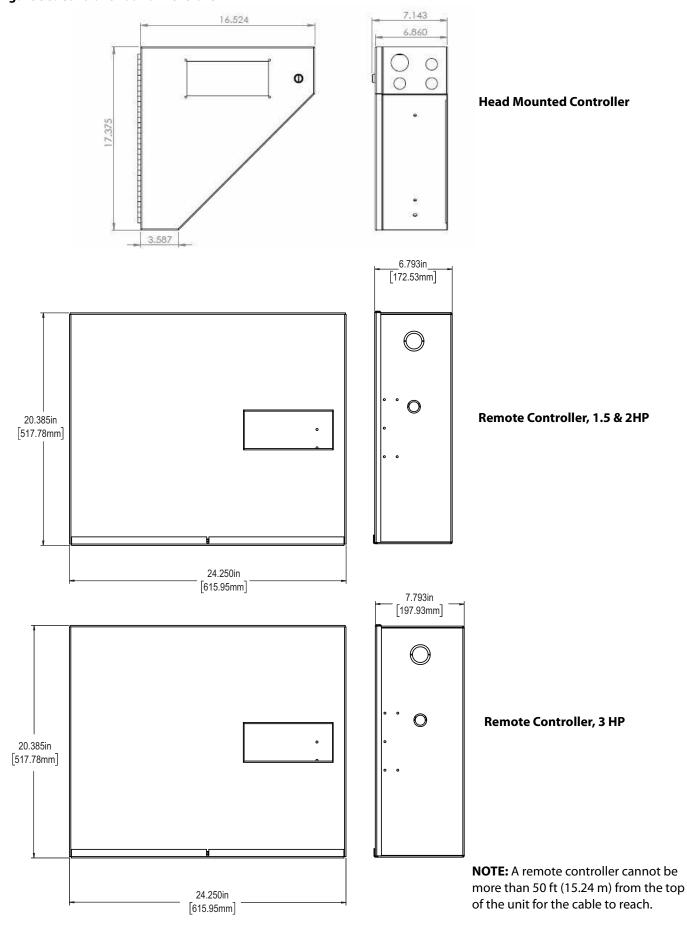


Figure 58: Controller box dimensions



# Vuelift Residential Elevator PLANNING GUIDE

Part No. 001123 Rev. 28-m10-2019

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