SECTION 14 42 13 - Incline Wheelchair Lifts

INCLINE WHEELCHAIR LIFTS

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\*\* NOTE TO SPECIFIER \*\* Savaria; Incline Wheelchair Lifts.
 .
This section is based on the products of Savaria, which is located at:
2 Walker Dr.
Brampton, ON, Canada L6T 5E1
Toll Free Tel: 800-661-5112
Tel: 905-791-5555
Fax: 905-791-2222
Email: [request info (info@savaria.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Savaria&coid=31585&rep=&fax=905-791-2222&message=RE:%20Spec%20Question%20(14423sav):%20%20&mf=)
Web: <https://www.savaria.com>
 [ [Click Here](https://www.arcat.com/arcatcos/cos31/arc31585.html) ] for additional information.
Savaria is an international company specializing in the manufacturing of accessibility products. A world leader in the accessibility industry with a reputation for quality and reliability, Savaria has over 50,000 various products installations worldwide and many innovative products.
The Delta Stair Platform Lift is a platform wheelchair lift designed for straight stairways with two landings. The unique design of this lift makes it very cost-effective with short delivery and installations times. For design versatility, the Delta can be mounted on either side of the stairway depending on the stairway design and location with rail adjustment from 15 to 45 degrees. The Delta can be installed with little or no structural modifications to the building.
The Omega Inclined Platform Wheelchair Lift is able to travel along straight or curving stairways, up several flights of stairs and across horizontal landings. The Omega's simple control system allows for dependability and reliability. The Omega can travel on the inside or outside radius of the stairway, offering the optimum in design flexibility.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project. If A is selected sections 2.3 and 2.4 below can be deleted. If B is selected sections 2.2 and 2.4 below can be deleted. If C is selected sections 2.2 and 2.3 below can be deleted.

* + 1. Commercial inclined platform lift for straight stairways. (Delta).
		2. Residential inclined platform lift for straight stairways. (Delta).
		3. Inclined platform lift for straight and turning stairways. (Omega).
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
		2. Section 04 40 00 - Stone Assemblies.
		3. Section 06 10 00 - Rough Carpentry.
		4. Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies.
		5. Section 26 31 00 - Photovoltaic Collectors.
		6. Division 16 - Electrical: Electrical power service and wiring connections.
		7. Division 16 - Electrical: Concealed low voltage control wiring.
		8. Division 16 - Electrical: Intercom and wiring.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section. Use ASME references for installations in the United States. Use CSA references for installations in Canada. Add International references as required.

* + 1. ASME A17.5 - Elevator and Escalator Electrical Equipment.
		2. ASME A18.1 - Safety Standard for Platform Lifts and Stairway Chairlifts.
		3. ASME A18.1, Section 6, Private Residence Inclined Platforms.
		4. CSA B44.1 - Elevator and Escalator Electrical Equipment.
		5. CSA B355 - Lifts for Persons with Physical Disabilities.
		6. CSA B613 Private Residence Lifts for Persons with Physical Disabilities.
		7. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities.
		8. ADDAG - American with Disabilities Act & Architectural Barriers Act.
		9. NFPA 70 - National Electric Code.
		10. CSA - National Electric Code.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Submit manufacturer's installation instructions, including preparation, storage and handling requirements.
			2. Include complete description of performance and operating characteristics.
			3. Show maximum and average power demands.
		3. Shop Drawings:
			1. Show typical details of assembly, erection and anchorage.
			2. Include wiring diagrams for power, control, and signal systems.
			3. Show complete layout and location of equipment, including required clearances.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been submitted.

* + 1. Selection Samples: For each finished product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finished product specified, two samples, representing actual product, color, and patterns.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Firm with minimum 5 years documented experience in manufacturing of inclined wheelchair platform lifts.
		2. Installer Qualifications: Firm licensed to install equipment of this scope, with evidence of experience with specified equipment. Installer shall maintain an adequate stock of replacement parts and have qualified people available to ensure timely maintenance and call back service at the project site.
	2. REGULATORY REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Edit and delete one of the two following paragraphs to suit local requirements. First paragraph is for installations in the United States. Second paragraph is for installations in Canada.

* + 1. Provide platform lifts in compliance with:
			1. ASME A18.1 - Safety Standard for Platform Lifts and Stairway Chairlifts.
			2. ASME A17.5 - Elevator and Escalator Electrical Equipment.
			3. NFPA 70 - National Electric Code.
		2. Provide platform lifts in compliance with:
			1. CSA B355 - Lifts for Persons with Physical Disabilities.
			2. CSA B44.1/ASME A17.5 - Elevator and Escalator Electrical Equipment.
			3. CSA - National Electric Code.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Store components off the ground in a dry covered area, protected from adverse weather conditions.
	2. PROJECT CONDITIONS
		1. Do not use wheelchair lift for hoisting materials or personnel during construction period.
	3. WARRANTY
		1. Warranty: Provide a three year limited warranty covering replacement of defective parts and excluding labor. Preventive maintenance agreement required.
	4. MAINTENANCE SERVICE

\*\* NOTE TO SPECIFIER \*\* The manufacturer's basic warranty is a limited 3 year warranty for the replacement at no cost of defective parts but does not include the labor costs required to replace the defective parts. Warranty requires maintenance agreement during period of the warranty. Delete if not required.

* + 1. Furnish service and maintenance for elevator system and components for the following period from Date of Substantial Completion.
			1. One year.
			2. Two years.
			3. Three years.
			4. Four years.
			5. Five years.
		2. Include systematic examination, adjustment, and lubrication of elevator equipment. Repair or replace parts whenever required. Use parts produced by manufacturer of original equipment. Replace wire ropes when necessary to maintain required factor of safety.
		3. Provide emergency call back service for this maintenance period.
		4. Perform maintenance work using competent and qualified personnel approved by elevator manufacturer or original installer.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Savaria, which is located at: 2 Walker Dr.; Brampton, ON, Canada L6T 5E1; Toll Free Tel: 800-661-5112; Tel: 905-791-5555; Fax: 905-791-2222; Email: [request info (info@savaria.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Savaria&coid=31585&rep=&fax=905-791-2222&message=RE:%20Spec%20Question%20(14423sav):%20%20&mf=); Web: <https://www.savaria.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. COMMERCIAL INCLINED PLATFORM LIFT FOR STRAIGHT STAIRWAYS
		1. Inclined Platform Lift: Savaria Stair-Lift, Model Delta inclined platform lift for straight stairways. Lift consists of a universal tubular guide rail system, a power folding platform that is moved along the guide rails by a rack and pinion drive system, overspeed safety system and call stations at each landing. Conform to the following design requirements:
			1. Application: Indoor.

\*\* NOTE TO SPECIFIER \*\* Delete load rating not required. For installations in Canada only the 550 lb. platform is available.

* + - 1. Platform Load Rating: 550 lb (250 kg), with minimum safety factor of 5.
			2. Platform Load Rating: 660 lb (300 kg) (Optional in USA only).

\*\* NOTE TO SPECIFIER \*\* Enter travel distance below or insert ' As indicated on Drawings'.

* + - 1. Travel Distance (nose to floor): \_\_\_\_\_\_\_\_\_\_\_\_.
			2. Travel Speed: 20 fpm (0.1 m/s) nominal
			3. Platform Deck: Surface shall be slip resistant
			4. Platform Size: (ADA Compliant): 30.50 inches (775 mm) wide by 49.20 inches (1250 mm) long.

\*\* NOTE TO SPECIFIER \*\* Delete configuration not required.

* + - 1. Platform Configuration: Straight through platform.
			2. Platform Configuration: 90 degree platform (three sided).
			3. Platform Operation:
				1. Automatic Fold: Power folded and unfolded electrically from the call station.
				2. Emergency Manual Fold: When unit is left in the open position, platform may be manually folded in any location and retained in closed position.
			4. Under Platform Obstruction Sensing:
				1. Provide an under platform sensing device to stop the platform from traveling in the downward direction when encountering 15 lb (70 N) of pressure.
				2. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			5. Passenger Restraining Arms:
				1. Platform equipped with foldable passenger restraining arms in compliance with ASME A18.1a.
				2. Arms stop moving when an obstruction is encountered.
				3. Provide with means to manually unlock and open the restraining arms for passenger emergency evacuation.
				4. Arms are power folded and unfolded electrically from the call stations or platform controls.
				5. Arms mounted 39 inches (990 mm) above the platform deck. When in guarding position the arms are located above the perimeter of the platform.
				6. The gaps between ends of arms shall not exceed 4 inches (102 mm).
				7. When platform folds, passenger restraining arms shall fold down and be covered by the folded platform.
			6. Boarding Ramps:
				1. Provide boarding sides of platform with retractable ramps positioned for travel at a height of 6 inches (152 mm) measured vertically above the platform deck.
				2. Lock ramps in their guarding positions during travel. When the platform is at the landing, only the retractable ramp servicing the landing shall be operable.
				3. Ramps shall be power folded and unfolded mechanically.
				4. Retractable ramps, in the guarded position, shall withstand a force of 125 lb (556 N) applied on any 4 inches (102 mm) by 4 inches (100 mm) area. This force shall not cause the height of the ramp, at any point in its length, to be less than 6 inches (152 mm) measured vertically above the platform deck.
				5. Provide a means to manually unlock the ramps for emergency evacuation when platform is located at a landing.
				6. Provide with a directional obstruction sensitive device on the travel direction side end of the platform to stop lift when an obstacle of 15 lbf (70 N) is encountered. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			7. Platform Side Wall: Provide non-boarding and non-guide-rail side of the platform with a sidewall of not less than 6 inches (152 mm) in height, measured vertically from the platform deck.
			8. Hand Grips: Equip platform with one handgrip centered on the platform at 36.50 inches (925 mm) and 17 inches (432 mm) long.
			9. Clearance Dimensions:
				1. When folded platform shall not protrude more than 17.50 inches (445 mm) from mounting surface (Measurement based on a wall mounted unit).

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following paragraphs to suit platform configuration. First paragraph is for a straight through platform. Second paragraph is for a 90 degree platform.

* + - * 1. When unfolded and in use straight platform shall not protrude more than 39.75 inches (1010 mm) from wall from mounting surface. (Measurement based on a wall mounted unit).
				2. When unfolded and in use 90 degree platform shall not protrude more than 44 inches (1120 mm) from wall from mounting surface. (Measurement based on a wall mounted unit.
			1. Controls:
				1. Platform Controls: 24 V Low Voltage type.
				2. Platform equipped with emergency stop switch located within reach of the passenger 43 inches (1090 mm) above platform deck. When activated emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
				3. Operating controls shall be two separate constant pressure buttons with directional arrows on a removable hand pendant device with emergency stop button.
				4. When platform arrives at landing the user keeps pressing the directional button and the passenger restraining arms and boarding ramp shall unfold automatically allowing passenger to disembark.
				5. Platform shall be equipped for:

\*\* NOTE TO SPECIFIER \*\* Select key switch or keyless operation. Delete paragraph not required for the project.

Keyed operation.

Keyless operation.

* + - 1. Passenger Seat: Fold-down type with safety belt. Minimum rated load of 250 lb (115 kg). The seat will fold up automatically when platform is being folded from call station.

\*\* NOTE TO SPECIFIER \*\* The paragraph below (side loading platform) is only available with the 90 degree platform configuration. Delete feature not required for the Project.

* + - 1. Side Loading Platform: Provide with automatic folding ramps at boarding sides of platform.
			2. Attendant Hand Held Pendant Control: Provide with plug-in socket on platform control panel.
			3. Carriage Mounted Audio-Visual Alert: Provide audio-visual alert that sound while the lift is in operation and are visible by pedestrian traffic from all flights and landings.
			4. Platform On Board Emergency Alarm: Provide platform with on board alarm that sounds when emergency stop button is pushed.
			5. Under Carriage Sensing: Provide bottom of platform hanger with a sensing plate to stop the platform from traveling in the downward direction when encountered with 15 lb (70 N) of pressure. It shall be possible to drive the platform away from the obstruction.
			6. Side of Carriage Obstruction Device: Provide a sensor that detects obstructions in the path of the side of the hanger. Lift shall stop immediately and not travel until the obstruction is removed. It shall be possible to drive the platform away from the obstruction
		1. Drive and Guide Rail System:
			1. Operation:
				1. Motor: 0.67 hp (0.50 kW) 24VDC electric motor with an integrated brake.
				2. Required power for battery charger: 100-240 VAC, single phase, 50/60 hz on a dedicated 15 amp circuit.
				3. Power Transmission: Worm gear reduction to a pinion moving on a fixed gear rack.
				4. Locate drive and associated control devices within the platform conveyance.
				5. Provide an upper final limit switch to stop the lift in the event of a failure of the normal limit switch.
			2. Guide Rail System:
				1. Universal guide rail system consisting of:

Upper Rail: Hollow circular tube 1.625 inches (41 mm) diameter with 5/32 inches (4 mm) thickness.

Lower Rail: Solid circular tube 1.625 inches (41 mm) diameter with integrally machined gear rack.

* + - * 1. Rail Mounting:

\*\*NOTE TO SPECIFIER\*\* Select one of the following rail mounting paragraphs and delete the one not required. Direct mounting is recommended only for solid concrete walls. Use of steel support posts is for installations where there is no wall to attach to or where wall construction does not provide enough strength. Consult the Savaria Delta Planning Guide for further rail mounting information and a loading diagram.

Rails directly mounted to the stairway wall.

Mount rails to steel support posts secured to the lower landing floor and stair treads. Support posts shall be 3 inches (76 mm) by 2 inches (50 mm) hollow structural steel.

* + - * 1. Provide a mechanical stop at the upper landing to prevent over-travel of the drive carriage in the event of a switch failure.
			1. Provide overspeed governor and brake on carriage drive, containing mechanical overspeed sensor and lock, with electrical drive cut-out protection.
			2. Equip drive with an emergency manual lowering system with safety switch when emergency manual lowering system is engaged.
			3. Battery Operation: Provide a battery system for normal up/down lift operation during a power failure for a minimum of 5 trips with rated load.
		1. Call Stations:
			1. Provide wireless surface mounted call stations at both landings.
			2. Call station operating voltage 3 V.
			3. Call stations low voltage with four control buttons: platform fold, platform unfold and two directional call and send buttons.
			4. Call stations shall be equipped for:

\*\*NOTE TO SPECIFIER\*\* Select key switch or keyless call station operation. Delete paragraph not requiring for the Project.

* + - * 1. Keyed operation.
				2. Keyless operation.
		1. Finish:
			1. Design and fabricate lift to manufacturer's standard design for indoor locations.
				1. Steel components shall be painted with electrostatically applied and baked powder coat as follows:

\*\*NOTE TO SPECIFIER\*\* Select the paragraph for standard or custom color and delete one not required.

Fine Light Grey (RAL 7035).

Custom color as selected by Architect from manufacture's color chart.

* + - * 1. Electrical printed circuit boards and control transformers to be treated with a conformal coating for resistance to ambient moisture.
	1. INCLINED PLATFORM LIFT FOR STRAIGHT STAIRWAYS
		1. Inclined Platform Lift: Savaria Stair-Lift, Model Delta inclined platform lift for straight stairways. Lift consists of a universal tubular guide rail system, a folding platform that is moved along the guide rails by a rack and pinion drive system, overspeed safety system and call stations at each landing. Conform to the following design requirements:
			1. Application: Indoor.

\*\* NOTE TO SPECIFIER \*\* Delete platform load rating not required. For installations in Canada only the 550 lb platform is available.

* + - 1. Platform Load Rating: 550 lb (250 kg), with minimum safety factor of 5.
			2. Platform Load Rating: 660 lb (300 kg), (Optional in USA only).

\*\* NOTE TO SPECIFIER \*\* Enter travel distance below or insert ' As indicated on Drawings.'

* + - 1. Travel Distance (nose to floor): \_\_\_\_\_\_\_\_\_\_\_.
			2. Travel Speed: 20 fpm (0.1 m/s) nominal.
			3. Platform Deck: Surface shall be slip resistant.

\*\* NOTE TO SPECIFIER \*\* Delete option for platform size not required.

* + - 1. Platform Size: Platform Size A: 27.00 inches (685 mm) wide by 36.00 inches (915 mm) long.
			2. Platform Size: Platform Size B: 28.35 inches (720 mm) wide by 35.30 inches (900 mm) long.
			3. Platform Size: Platform Size C: 28.50 inches (724 mm) wide by 44.00 inches (1118 mm) long.
			4. Platform Size: Platform Size D: 30.50 inches (775 mm) wide by 49.25 inches (1250 mm) long.

\*\* NOTE TO SPECIFIER \*\* Delete option for platform configuration not required.

* + - 1. Platform Configuration: Straight through platform.
			2. Platform Configuration: 90 degree platform (three sided).
			3. Platform Operation:

\*\* NOTE TO SPECIFIER \*\* Select the first paragraph below for a manual folding platform or the second and third paragraph for a power folding platform. Delete the one not required.

* + - * 1. Manual Fold: Platform will be equipped with a platform that will be opened and closed manually.
				2. Automatic Fold: Folded and unfolded electrically from the call station using a constant pressure push button.
				3. Emergency Manual Fold: When unit is left in the open position, platform may be manually folded and retained in closed position.
			1. Under Platform Obstruction Sensing:
				1. Provide an under platform sensing device to stop the platform from traveling in the downward direction when encountering 15 lb (70 N) of pressure.
				2. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			2. Passenger Restraining Arms:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two restraining arm configurations below and delete the one not required. If manual fold platform in section 8 above has been specified then manually operated arms must be selected. . If automatic fold platform in section 8 above has been specified then automatic operated arms must be selected.

* + - * 1. Manually Operated Arms:

Platform equipped with foldable passenger restraining arms in compliance with ASME A18.1.

Arms are folded and unfolded manually by the user

Arms mounted 39 inches (990 mm) above the platform deck. When in guarding position the arms are located above the perimeter of the platform.

The gaps between ends of arms shall not exceed 4 inches (102 mm).

When platform folds, passenger restraining arms shall fold down and be covered by the folded platform.

* + - * 1. Automatic Operated Arms:

Platform equipped with retractable passenger restraining arms in compliance with ASME A18.1.

Arms stop moving when an obstruction is encountered.

Provide with means to manually unlock and open the restraining arms for passenger emergency evacuation.

Arms are folded and unfolded electrically from the call stations or platform controls.

Arms mounted 39 inches (990 mm) above the platform deck. When in guarding position the arms are located above the perimeter of the platform.

The gaps between ends of arms shall not exceed 4 inches (102 mm).

When platform folds, passenger restraining arms shall fold down and be covered by the folded platform.

* + - 1. Boarding Ramps:
				1. Provide boarding sides of platform with retractable ramps positioned for travel at a height of 6 inches (152 mm) measured vertically above the platform deck.
				2. Lock ramps in their guarding positions during travel. When the platform is at the landing, only the retractable ramp servicing the landing shall be operable.
				3. Ramps shall be folded and unfolded electrically.
				4. Retractable ramps, in the guarded position, shall withstand a force of 125 lb (556 N) applied on any 4 inches (102 mm) by 4 inches (102 mm) area. This force shall not cause the height of the ramp, at any point in its length, to be less than 6 inches (152 mm) measured vertically above the platform deck.
				5. Provide a means to manually unlock the ramps for emergency evacuation when platform is located at a landing.
				6. Provide with a directional obstruction sensitive device on the travel direction side end of the platform to stop lift when an obstacle of 15 lbf (70 N) is encountered. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			2. Platform Side Wall:
				1. Provide non-boarding and non-guide-rail side of the platform with a sidewall of not less than 6 inches (152 mm) inches height, measured vertically from the platform deck.
			3. Hand Grips:
				1. Equip platform with one handgrip centered on the platform at 36.50 inches (925mm) and 17 inches (432 mm) long.
			4. Clearance Dimensions:
				1. When folded platform shall not protrude more than 17.50 inches (445 mm) from mounting surface. (Measurement based on a wall mounted unit)

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following paragraphs to suit platform configuration. First paragraph is for a straight through platform. Second paragraph is for a 90 degree platform.

* + - * 1. When unfolded and in use platform shall not protrude more than 39.75 inches (1010 mm) from wall from mounting surface. (Measurement based on a wall mounted unit).
				2. When unfolded and in use platform shall not protrude more than 44 inches (1120 mm) from wall from mounting surface. (Measurement based on a wall mounted unit).
			1. Controls:
				1. Platform Controls: 24 V Low Voltage type.
				2. Platform equipped with emergency stop switch located within reach of the passenger 43 inches (1090 mm) above platform deck. When activated emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
				3. Operating controls shall be two separate constant pressure buttons with directional arrows on a removable hand pendant device with emergency stop button.
				4. When platform arrives at landing the user keeps pressing the directional button and the passenger restraining arms and boarding ramp shall unfold automatically allowing passenger to disembark.
				5. Platform shall be equipped for:

\*\* NOTE TO SPECIFIER \*\* Select key switch or keyless operation. Delete paragraph not required for the Project.

Keyed operation.

Keyless operation.

* + - 1. Passenger Seat (optional): Fold-down type with safety belt. Minimum rated load of 250 lb (115 kg). The seat will fold up automatically when platform is being folded from call station.

\*\* NOTE TO SPECIFIER \*\* The paragraph below (side loading platform) is only available with the 90 platform configuration. Delete if feature is not required for the project.

* + - 1. Side Loading Platform: Provide with automatic folding ramps and kickplates at boarding sides of platform.
			2. Attendant Hand Held Pendant Control: Provide with plug-in socket on platform control panel.
			3. Under Carriage Sensing: Provide bottom of platform hanger with a sensing plate to stop the platform from traveling in the downward direction when encountered with 15 lb (70 N) of pressure. It shall be possible to drive the platform away from the obstruction.
			4. Side of Carriage Obstruction Device: Provide a sensor that detects obstructions in the path of the side of the hanger. Lift shall stop immediately and not travel until the obstruction is removed. It shall be possible to drive the platform away from the obstruction
		1. Drive and Guide Rail System:
			1. Operation:
				1. Motor: 0.67 hp (0.50 kW) 24VDC electric motor with an integrated brake.
				2. Required power for battery charger: 100-240 VAC single phase 50/60 hz on a dedicated 15 amp circuit.
				3. Power Transmission: Worm gear reduction to a pinion moving on a fixed gear rack.
				4. Locate drive and associated control devices within the platform conveyance.
				5. Provide an upper final limit switch to stop the lift in the event of a failure of the normal limit switch.
			2. Guide Rail System:
				1. Universal guide rail system consisting of:

Upper Rail: Hollow circular tube 1.625 inches (41 mm) diameter with 5/32 inch (4 mm) thickness.

Lower Rail: Solid circular tube 1.625 inches (41 mm) diameter with integrally machined gear rack.

* + - * 1. Rail Mounting:

\*\*NOTE TO SPECIFIER\*\* Select one of the following rail mounting paragraphs and delete the ones not required. Direct mounting is recommended only for solid concrete walls. Use of steel support posts is for installations where there is no wall to attach to or where wall construction does not provide enough strength. See the Savaria Inc Planning Guide for further rail mounting information and a loading diagram.

Rails directly mounted to the stairway wall.

Mount rails to steel support posts secured to the lower landing floor and stair treads. Support posts shall be 3 inches (75 mm) by 2 inches (50 mm) hollow structural steel.

* + - * 1. Provide a mechanical stop at the upper landing to prevent over-travel of the drive carriage in the event of a switch failure.
			1. Provide overspeed governor and brake on carriage drive, containing mechanical overspeed sensor and lock, with electrical drive cut-out protection.
			2. Equip drive with an emergency manual lowering system with safety switch when emergency manual lowering system is engaged.
			3. Battery Operation:
				1. Provide a battery back-up system for normal up/down lift operation during a power failure for a minimum of five (5) trips with rated load.
		1. Call Stations:
			1. Provide wireless surface mounted call stations at both landings.
			2. Call station operating voltage 3V.
			3. Call stations low voltage with four control buttons: platform fold, platform unfold and two directional call and send buttons.
			4. Call stations shall be equipped for:

\*\*NOTE TO SPECIFIER\*\* Select key switch or keyless call station operation. Delete paragraph not requiring for the Project.

* + - * 1. Keyed operation.
				2. Keyless operation.
		1. Finish:
			1. Design and fabricate lift to manufacturer's standard design for indoor locations.
				1. Steel components shall be painted with electrostatically applied and baked powder coat as follows:

\*\*NOTE TO SPECIFIER\*\* Select the paragraph for standard or custom color and delete one not required.

Fine Textured Light Grey (RAL 7035).

Custom color as selected by Architect from a manufacturer's color chart.

* + - * 1. Electrical printed circuit boards and control transformers to be treated with a conformal coating for resistance to ambient moisture.
	1. INCLINED PLATFORM LIFT FOR STRAIGHT OR TURNING STAIRWAYS
		1. Inclined Platform Lift: Savaria Stair-Lift, Model Omega inclined platform lift for straight and turning stairways. Lift consists of a tubular guide rail system, a folding platform that is moved along the guide rails by a rope sprocket drive system, overspeed safety system and call stations at each landing. Conform to the following design requirements:

\*\* NOTE TO SPECIFIER \*\* Delete application if not required.

* + - 1. Application: Indoor.
			2. Application: Outdoor.

\*\* NOTE TO SPECIFIER \*\* Delete option for load rating not required. For installations in Canada only the 550 lb platform is available.

* + - 1. Platform Load Rating: 550 lb (250 kg) with minimum safety factor of 5.
			2. Platform Load Rating: 660 lb (300 kg) (capacity in USA).
			3. Travel Speed: 14 fpm (0.07 m/s) nominal.
			4. Platform Deck: 16 gauge (1.6 mm) sheet metal coated with electrostatically applied and baked anti-skid paint.
			5. Platform Size: (ADA Compliant): 30.50 inches (775 mm) wide by 49.20 inches (1250 mm) long.

\*\* NOTE TO SPECIFIER \*\* Delete option for configuration not required.

* + - 1. Platform Configuration: Straight through platform.
			2. Platform Configuration: 90 degree platform (three sided).
			3. Platform Operation:
				1. Automatic Fold: Power folded and unfolded electrically from the call station.
				2. Emergency Manual Fold: When unit is left in the open position, platform may be manually folded and retained in closed position.
			4. Under Platform Obstruction Sensing:
				1. Provide an under platform sensing device to stop the platform from traveling in the downward direction when encountering 15 lb (70 N) of pressure.
				2. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			5. Passenger Restraining Arms:
				1. Platform equipped with retractable passenger restraining arms in compliance with ASME A18.1.
				2. Arms stop moving when an obstruction is encountered.
				3. Provide with means to manually unlock and open the restraining arms for passenger emergency evacuation.
				4. Arms are folded and unfolded electrically from the call stations or platform controls.
				5. Arms mounted 39 inches (990 mm) above the platform deck. When in guarding position the arms are located above the perimeter of the platform.
				6. The gaps between ends of arms shall not exceed 4 inches (102 mm).
				7. When platform folds, passenger restraining arms shall fold down and be covered by the folded platform.
			6. Boarding Ramps:
				1. Provide boarding sides of platform with retractable ramps positioned for travel at a height of 6 inches (152 mm) measured vertically above the platform deck.
				2. Lock ramps in their guarding positions during travel. When the platform is at the landing, only the retractable ramp servicing the landing shall be operable.
				3. Ramps shall be folded and unfolded electrically.
				4. Retractable ramps, in the guarded position, shall withstand a force of 125 lb (556 N) applied on any 4 inches (102 mm) by 4 inches (102 mm) area. This force shall not cause the height of the ramp, at any point in its length, to be less than 6 inches (152 mm) measured vertically above the platform deck.
				5. Provide a means to manually unlock the ramps for emergency evacuation when platform is located at a landing.
				6. Provide with a directional obstruction sensitive device on the travel direction side end of the platform to stop lift when an obstacle of 15 lbf (70 N) is encountered. Platform is permitted to travel in the opposite direction of obstruction to allow clearing.
			7. Platform Side Wall:
				1. Provide non-boarding and non-guide-rail side of the platform with a sidewall of not less than 6 inches (152 mm) in height, measured vertically from the platform deck.
			8. Hand Grips:
				1. Equip platform with one handgrip centered on the platform at 36.50 inches (925mm) and 17 inches (432 mm) long
			9. Clearance Dimensions:
				1. When folded platform shall not protrude more than 17.50 inches (445 mm) from mounting surface (Measurement based on a wall mounted unit).

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following paragraphs to suit platform configuration. First paragraph is for a straight through platform. Second paragraph is for a 90 degree platform.

* + - * 1. When unfolded and in use platform shall not protrude more than 39.25 inches (1000 mm) from wall from mounting surface. (Measurement based on a wall mounted unit).
				2. When unfolded and in use platform shall not protrude more than 46.75 inches (1188 mm) from wall from mounting surface. (Measurement based on a wall mounted unit.
			1. Controls:
				1. Platform Controls: 24 V Low Voltage type.
				2. Platform equipped with emergency stop switch located within reach of the passenger 43 inches (1090 mm) above platform deck. When activated emergency stop button shall cause electric power to be removed from the drive system stopping lift immediately.
				3. Operating controls shall be two separate constant pressure buttons with directional arrows on a removable hand pendant device with emergency stop button.
				4. When platform arrives at landing the user keeps pressing the directional button and the passenger restraining arms and boarding ramp shall unfold automatically allowing passenger to disembark.
				5. Platform shall be equipped for:

\*\* NOTE TO SPECIFIER \*\* Select key switch or keyless operation. Delete paragraph not required for the Project.

Keyed operation.

Keyless operation.

* + - 1. Passenger Seat: Fold-down type with safety belt. Minimum rated load of 250 lb (115 kg). The seat will fold up automatically when platform is being folded from call station.

\*\* NOTE TO SPECIFIER \*\* The paragraph below (side loading platform) is only available with the 90 platform configuration. Delete if feature is not required for the project.

* + - 1. Side Loading Platform: Provide with automatic folding ramps at boarding sides of platform.
			2. Attendant Hand Held Pendant Control: Provide with plug-in socket on platform control panel.
			3. Audio Visual Alerts: Wall Mounted audio-visual alerts will be provided to indicate when platform is in motion and traveling on stairway. The alert will be visible by pedestrian traffic from all flights and landings.
			4. Platform On Board Emergency Alarm: Provide platform with on board alarm that sounds when emergency stop button is pushed.
			5. Side of Carriage Obstruction Device: Provide a sensor that detects obstructions in the path of the side of the carriage. Lift shall stop immediately and not travel until the obstruction is removed. It shall be possible to drive the platform away from the obstruction.
		1. Drive and Guide Rail System:
			1. Operation:
				1. Motor: 1.0 hp (0.75kW) electric motor with an integrated brake (Up to 3.0 hp (2.2 kW) over 100 ft (30m) of travel).
				2. Required power: 208-240 VAC, single phase, 60 hz. on a dedicated 20 amp circuit. Rated current shall be up to 9 amps (for 2.2kW motor) for operation with rated load.
				3. Locate roped sprocket drive system consisting of a motor, gearbox and controller (variable frequency drive) at the upper end of the tubes.
				4. Equip drive with an emergency manual lowering system with kill switch when emergency manual lowering system is engaged.

\*\* NOTE TO SPECIFIER \*\* Select one of the following two drive cabinet paragraphs. The first paragraph is optional and the second paragraph is a space saving alternative which is standard. Delete paragraph not required for the project.

* + - 1. Full enclosed Drive Cabinet:
				1. Cabinet: 22 inches (560 mm) wide by 55 inches (1400 mm) high by 11.50 inches (290 mm) deep located at top landing.
				2. Cabinet door is key locked.
				3. Provide an integrated lockable main disconnect switch and breaker remotely located and separate from the drive cabinet.
			2. Compact Drive Cabinet with Separate Control Box:
				1. Compact drive cabinet will house all mechanical drive system components and shall be located at the end of the tube system at or near the top landing.
				2. Controller box will contain all the electrical components of the drive system and be located up to 50 feet (15 m) linear away from the compact drive. Control box dimensions are 20 inches (510 mm) wide by 20 inches (510 mm) high by 11.50 inches (290 mm) deep.
				3. Provide an integrated lockable main disconnect and breaker in the compact drive control box.
			3. Guide Rail:
				1. Constructed of two 2 inches (51 mm) diameter steel tubes spaced approximately 22 inches (560 mm) apart vertically at right angle from rail. Tubes will run parallel to the stairs and horizontal to landings throughout the length of travel.
				2. When negotiating a horizontal landing a third 2 inches (51 mm) diameter steel tube shall be added to the tube system to guide and stabilize platform.
				3. Tube system shall not protrude more than 7.50 inches (190 mm) from the wall with support posts.
				4. Suspension means contained in the tubes shall be a 3/8 inch (9 mm) diameter galvanized steel core rope sprocket/chain with a minimum breaking strength of 12 540 lb (5700 kg).
				5. Locate overspeed safety at the bottom of the tube assembly and shall consist of a mechanical overspeed sensor and brake with electrical drive cut-out protection.
				6. Provide a final limit switch at the upper and lower end of the tubes to stop the platform if it travels past the normal terminal stopping device.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is optional. Delete if not required for the project.

* + - 1. Auxiliary Power (Optional): Provide battery back-up system (UPS) for normal up / down lift operation during power failure for a minimum of five (5) trips with rated load.

\*\* NOTE TO SPECIFIER \*\* Select the following paragraph where required to keep stairway clear when lift is not in use. Delete if not required.

* + - 1. Platform Storage Beyond Upper/Lower Landings:
				1. Platform shall travel in the folded position beyond the upper landing at the top stair nose to a remote parking position away from the stairs.
				2. Platform shall travel in the folded position beyond the lower landing to a remote parking position. Provide with a ramp extension for this configuration.

\*\* NOTE TO SPECIFIER \*\* Select one of the following rail mounting paragraphs and delete the ones not required. Direct mounting is recommended only for solid concrete walls. Use of steel support posts is for installations where there is no wall to attach to or where wall construction does not provide enough strength. Consult the Savaria Omega Planning Guide for further rail mounting information and a loading diagram.

* + - 1. Rail Mounting:
				1. Direct Mount Solid Walls: Rails directly mounted to the stairway wall.
				2. Tower Mount Struts: Provide with 3 inches (76 mm) by 2 inches (51 mm) hollow structural steel tubular posts to support the guide rails.

\*\* NOTE TO SPECIFIER \*\* With the installation of guide rails existing handrails are often obstructed or removed. The following paragraphs represent the minimum requirements for adding optional pedestrian handrails. Edit as required for the Project.

* + 1. Pedestrian Handrail Integrated with Guide Rail:
			1. A third rail acting as a handrail shall be added where existing handrails are either removed or blocked by the lifting equipment (when possible).
			2. The handrail gripping surface shall have a smooth gripping surface 1.50 inches (38 mm) inches diameter.
			3. Handrails shall be mounted to the tube assembly.
		2. Call Stations:
			1. Provide a call station at each serviced landing.
			2. Call stations, 24 V low voltage with four control buttons: power platform fold, power platform unfold and two directional call and send buttons.
			3. Call stations shall be equipped for:

\*\* NOTE TO SPECIFIER \*\* Select key switch or keyless operation. Delete paragraph not required for the Project.

* + - * 1. Keyed operation.
				2. Keyless operation.
		1. Finish Environment Requirements:

\*\* NOTE TO SPECIFIER \*\* Delete options for indoor or outdoor location not required.

* + - 1. Design and fabricate lift to manufacturer's standard design for indoor location.
			2. Design and fabricate lift to manufacturer's standard design for outdoor location.
				1. Lift to include all modifications recommended by manufacturer for reliable performance in outdoor climate of lift installation site.
				2. Provide an outdoor weatherproofing package including zinc rich primer on steel surfaces, weather-resistant sealant on the electrical components, stainless steel or plated fasteners and a weatherproofed stainless steel or zinc plated drive box.
				3. Platform control cover shall be fabricated of a Silver Grey injection-molded polymer.
			3. Stainless Steel Components (for both indoor and outdoor locations): Design and fabricate lift using the following:
				1. Guide rails shall be supplied in stainless steel.
				2. Handrails shall be supplied in stainless steel.
				3. Support towers shall be supplied in stainless steel.
				4. Drive box shall be supplied in stainless steel.
				5. Wall mounted visuals shall be supplied in stainless steel.
				6. Platform sensing plate shall be supplied in stainless steel.
				7. Fasteners for rail assembly and anchoring shall be supplied in stainless steel.
			4. Painting: Painted components shall be painted with electrostatically applied and baked powder coat as follows:

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with custom RAL color designation or delete line as applicable.

* + - * 1. Color: Custom, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
				2. Color: As indicated on Drawings.
				3. Color: Fine Light Grey (RAL 7035).
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. Verify required supports are correct.
		3. Verify electrical rough-in is at correct locations.
		4. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install units in accordance with in compliance with regulatory requirements specified and the manufacturer's instructions.
		2. Install system components and connect to building utilities.
		3. Accommodate equipment in space indicated.
		4. Startup equipment in accordance with manufacturer's instructions.
		5. Adjust for smooth operation.
	4. FIELD QUALITY CONTROL
		1. Perform tests in compliance with regulatory requirements specified and as required by authorities having jurisdiction.
		2. Schedule tests with agencies and Architect, Owner, and Contractor present.
	5. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION