

RESIDENTIAL STAIRWAY CHAIRLIFT
ASME 18.1b (2001)

Site: _____

Date: _____

DESCRIPTION	ITEM #	COMMENTS	P	F	NA
Runways	7.1	<ul style="list-style-type: none"> ⊗ Minimum of 508 mm (20") free passage must be maintained. (Measured with the seat in folded position). ⊗ Adequate structural support must be provided. 			
Rails & Tracks	7.2	<ul style="list-style-type: none"> <input type="checkbox"/> Must be securely fastened to the supporting structure. <input type="checkbox"/> Provide for a safety factor of 5 based on rated load. 			
Driving Means & Sheaves	7.3	<ul style="list-style-type: none"> ➤ Must be one of the following types: <ul style="list-style-type: none"> <input type="checkbox"/> winding drum <input type="checkbox"/> traction <input type="checkbox"/> roped sprocket <input type="checkbox"/> chain sprocket <input type="checkbox"/> screw <input type="checkbox"/> rack & pinion <input type="checkbox"/> direct-plunger hydraulic <input type="checkbox"/> roped-hydraulic <input type="checkbox"/> lever hydraulic <input type="checkbox"/> friction <input type="checkbox"/> Sheaves & sprockets must have a design factor of 5 based on rated load. <input type="checkbox"/> Chains and sprockets must conform to ANSI B29.1 <ul style="list-style-type: none"> ➤ Winding drum machines and sheaves: <ul style="list-style-type: none"> <input type="checkbox"/> must be of cast iron or steel <ul style="list-style-type: none"> ➤ pitch diameter equal to a minimum of <ul style="list-style-type: none"> <input type="checkbox"/> 30 times the rope diameter <input type="checkbox"/> 21 times the rope diameter for 8x19 wire rope & 7x19 aircraft cable <input type="checkbox"/> machined rope grooves <input type="checkbox"/> Hydraulic driving machines: <ul style="list-style-type: none"> <input type="checkbox"/> must conform to paragraph 8.1, except 8.1.2 <input type="checkbox"/> roped hydraulic must conform to para. 8.1 except for paras. 8.1.1, 8.1.3, 8.1.4.3 & 8.1.4.7. <input type="checkbox"/> Screw machines must conform to para. 8.2 <input type="checkbox"/> Friction machines: <ul style="list-style-type: none"> <input type="checkbox"/> Shall conform to para. 8.2. <input type="checkbox"/> Power unit may be located on the carriage or remote location. <input type="checkbox"/> Remote locations require that all sheaves & sprockets be guarded. 			
Indirect-Drive Machines	7.3.6	<p>Indirect-drive Machines must conform to the following:</p> <p>Belts, chains and sprockets shall comply with paras. 7.3.6.1-3</p> <ul style="list-style-type: none"> ⊗ guard shall be provided to prevent incidental contact with equipment ⊗ sprockets are to be provided on a common hub and teeth properly positioned to provide alignment for belts and chains <p>Broken chain or belt monitoring must conform to para. 7.3.6.2</p> <ul style="list-style-type: none"> ⊗ device must stop operation of the unit if a chain or belt is broken ⊗ driving machine brake must be located on the drive sheave assembly side of the machine 			
Requirements of para. 7.3.6.2 may be omitted when a self-locking (lead screw, worm, positive gearing) systems are employed.					
Driving Machine Brakes	7.4	<ul style="list-style-type: none"> <input type="checkbox"/> Must be electrically released and mechanically set. 			

		<p>➤ Brake not required when unit is provided with:</p> <ul style="list-style-type: none"><input type="checkbox"/> self-locking drive with lead screw<input type="checkbox"/> positive gearing to stop carriage within 102 mm (4") with rated load.			
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DESCRIPTION	ITEM #	COMMENTS	P	F	NA
Suspension Means	7.5	<ul style="list-style-type: none"> ➤ At least one of the following types of suspension means shall be provided: <ul style="list-style-type: none"> <input type="checkbox"/> steel or iron wire rope <input type="checkbox"/> steel aircraft cable <input type="checkbox"/> roller chain <input type="checkbox"/> direct-plunger hydraulic <input type="checkbox"/> roped-hydraulic <input type="checkbox"/> rack & pinion <input type="checkbox"/> screw drive <input type="checkbox"/> friction machine guides & rollers <input type="checkbox"/> Steel tapes or welded links are prohibited. <input type="checkbox"/> Wire ropes must be a minimum of 6.4 mm (1/4") diameter <input type="checkbox"/> Aircraft cable must be a minimum of 3.2 mm (1/8") diameter <input type="checkbox"/> Must have a safety factor of 7. <input type="checkbox"/> Endless roller chain configuration must have a safety factor of 8. 			
Chairs & Seats	7.6 7.6.1 7.6.2 7.6.3 7.6.4	<ul style="list-style-type: none"> <input type="checkbox"/> Foot platform required. <input type="checkbox"/> Seat belt required. <input type="checkbox"/> Chair truck shall be securely restrained in the guide rails. <input type="checkbox"/> Factor of safety for the carriage design shall not be less than 5 based on rated load. <input type="checkbox"/> Footrest obstruction device required: <ul style="list-style-type: none"> <input type="checkbox"/> Located within 152 mm (6") of the nose of the step. <input type="checkbox"/> Stop the unit in its upward travel if obstructed. <input type="checkbox"/> Cannot exceed 610 mm (24") above the step on the upper edge (measured vertically) 			
Capacity, Speed & Angle if Incline	7.7 7.7.2	<ul style="list-style-type: none"> <input type="checkbox"/> Maximum 2 persons <input type="checkbox"/> Minimum 113 kg (250 lbs) for one-seat unit. <input type="checkbox"/> Minimum 181 kg (400 lbs) for two-seat unit. <input type="checkbox"/> Maximum 0.20 /s (40 fpm.) <input type="checkbox"/> Maximum angle of incline, 45°. 			
Capacity & Data Plates	7.7.3 7.7.4	<ul style="list-style-type: none"> <input type="checkbox"/> Capacity plate required with lettering not less than 6.3 mm (1/4") high. <input type="checkbox"/> Data plate required and shall indicate: <ul style="list-style-type: none"> <input type="checkbox"/> Lettering a minimum of 6.3 mm (1/4") high. <input type="checkbox"/> rated speed <input type="checkbox"/> rated load <input type="checkbox"/> suspension or support means <input type="checkbox"/> date of manufacture <input type="checkbox"/> manufacturer's name 			
Safeties & Governors	7.8 7.8.2 7.8.1.4	<ul style="list-style-type: none"> <input type="checkbox"/> Safety device is required (except for direct plunger hydraulic and self locking drives) <input type="checkbox"/> Actuated by a speed governor set at a maximum of 0.38 m/s (75 fpm.) <input type="checkbox"/> Governor rope shall be a minimum of 6.3 mm (1/4") diameter. <input type="checkbox"/> Rope connection from safety device to the governor rope shall be a minimum of 3.2 mm (1/8") diameter. 			
Terminal Stopping Devices	7.9	<ul style="list-style-type: none"> <input type="checkbox"/> Limits shall comply with Rule 7.9.2-6 			

