

**INCLINED STAIRWAY CHAIR LIFTS
COMMERCIAL INSTALLATIONS
ASME 18.1b (2001)**

Site Name: _____ Date: ____/____/____

| STAIRWAY CHAIR LIFTS | A18.1b PART 4 | COMMENTS | Passed |
|--|------------------|--|--------------------------|
| Runways | 4.1.1 | 1) EGRESS; Stairway clearances must be maintained as required by the OSSC. | <input type="checkbox"/> |
| | 4.1.2 | 2) SUPPORT; The chair must be adequately supported for loads imposed. | <input type="checkbox"/> |
| | 4.1.3 | 3) WIRING; Must be according to NFPA 70, Article 620. (Battery powered units shall comply with Article 480) | <input type="checkbox"/> |
| | | a) Article 620-51(4) Disconnecting means must be provided within 1830 mm (6') of unit. (ref. OAR 918-305-0250) | <input type="checkbox"/> |
| | | 4) 620-11(c) All wiring shall be flame retardant. | <input type="checkbox"/> |
| | | 5) 620-21(c) 9.53 mm (3/8") flex allowed in lengths not more than 1830 mm (6'.) | <input type="checkbox"/> |
| | | 6) All wiring to be in conduit or approved raceway. | <input type="checkbox"/> |
| | | 7) 620-51(4) Amended by OAR 918-305-0250(3) to require that the disconnect switch be located within 1829 mm (6') of unit and within sight of controller. | <input type="checkbox"/> |
| | | 8) 620-51(d) A sign is required to indicate the location of the supply side over-current protection. | <input type="checkbox"/> |
| | | <u>Electrical conduit , fittings and covers must be as follows:</u> | |
| | 4.1.4 | 9) (348-12) Conduit Supports every 3048 mm (10') & within 914 mm (3') of boxes. | <input type="checkbox"/> |
| | | 10) (370-18) Plug Open "knockouts" | <input type="checkbox"/> |
| | | 11) (370-25) Outlet box covers must be provided. | <input type="checkbox"/> |
| | | 12) (370-28c) J-box covers required | <input type="checkbox"/> |
| 13) (250-91(b)) Grounding methods and conductor types shall comply with this article | | <input type="checkbox"/> | |
| 14) Certification/Listing; CSA B44.1/ASME A17.5 | | <input type="checkbox"/> | |
| Guide Rails & Tracks | 4.2 | 1) Rails & tracks must be securely fastened. | <input type="checkbox"/> |
| | | 2) Safety factor of 5 based on rated load required. | <input type="checkbox"/> |
| Driving Machines & Sheaves | 4.3 | 1) <input type="checkbox"/> winding drum 2) <input type="checkbox"/> traction 3) <input type="checkbox"/> rope sprocket 4) <input type="checkbox"/> chair sprocket 5) <input type="checkbox"/> screw drive 6) <input type="checkbox"/> rack & pinion 7) <input type="checkbox"/> direct plunger hydraulic 8) <input type="checkbox"/> roped hydraulic 9) <input type="checkbox"/> lever hydraulic 10) <input type="checkbox"/> friction | <input type="checkbox"/> |
| General Design Requirements | 4.3.1.1 | 1) Safety factor of 5 based on rated load required | <input type="checkbox"/> |
| | 4.3.1.2 | 2) Chains & sprockets must conform to ANSI B29.1 | <input type="checkbox"/> |
| | 4.3.1.3 | 3) Winding drums & sheaves: a) diameter not less than 30 times rope diameter b) 8x19 rope allows 21 times rope diameter c) 7x19 aircraft cable allows 21 times rope diameter | <input type="checkbox"/> |
| Hydraulic Machines | 4.3.2 | 1) Direct-plunger systems must comply with paragraph 8.1 2) Roped-hydraulic systems must comply with paragraph 8.2 except for paragraph 8.1.1, 8.1.3, 8.1.4.3, & 8.1.4.7 | <input type="checkbox"/> |

| STAIRWAY CHAIR LIFTS | A18.1b PART 4 | COMMENTS | Passed |
|--|---|---|--|
| Screw Drive Machines | 4.3.3 | 1) Must comply with paragraph 8.2 2) Rated speed can not exceed 15 m/s (30 ft/min) | <input type="checkbox"/> <input type="checkbox"/> |
| Power Unit Location | 4.3.5 | 1) Power unit may be located on unit. 2) Chains and sprocket assemblies must be properly aligned. 3) Sheaves and sprockets must be guarded. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Indirect-Drive Machines <i>Requirements of paragraph 4.4.2 may be omitted when a self-locking (lead screw, worm, positive gearing) systems are employed.</i> | 4.3.6 | 1) Indirect-drive machines must conform to the following: 2) Belts, chains and sprockets shall comply with paragraph 4.3.6.1-3. 3) Guard shall be provided to prevent incidental contact with equipment 4) sprockets are to be provided on a common hub and teeth properly positioned to provide alignment for belts and chains 5) Broken chain or belt monitoring must conform to paragraph 4.3.6.2 6) Device must stop operation of the unit if a chain or belt is broken 7) Driving machine brake must be located on the drive sheave assembly side of the machine | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Driving-Machine Brakes | 4.4.1 | 1) Electrically released and mechanically set. Not required with screw, worm or positive gear systems | <input type="checkbox"/> |
| Suspension Means Steel tapes or welded link can not be used. | 2002.5 4.5.2 | 2) steel or iron wire rope (minimum 6.35 mm (1/4") diameter) 3) steel aircraft cable (minimum 3.18 mm (1/8") diameter) 4) roller chain 5) direct-plunger hydraulic 6) roped-hydraulic 7) rack & pinion 8) screw drive 9) Suspension and support shall have a safety factor of 7 10) Endless roller chain systems shall have a safety factor of 8 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Chairs & Seats | 4.6 4.6.1 4.6.2 | 1) Two hand grips or arms 2) Swivel Seat: a) swivel seat required if chair stops less than 508 mm (20") beyond top step (measured from nose of step) b) swivel seats shall have a locking mechanism with an electric contact to prevent operation if not in the operating position c) must be securely fastened to supporting truck 3) Safety factor of 5 for the carriage & truck | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Footrest | 4.6.3 4.6.4 | 1) Obstruction device required if footrest is within 152 mm (6") of step nose or riser. 2) Device must be provided to stop upward motion if footrest is obstructed 3) Footrest can not be greater than 610 mm (24") vertically above the step or landing at any point in its travel. (measured from the upper end of the footrest) | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Capacity | 4.7.1 | 1) Maximum 2 person 2) Minimum 113 kg (250 lbs.) for one seat lift 3) Minimum 181 kg (400 lbs.) for two seat lift | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Rated Speed | 4.7.1 | Maximum speed 0.20 m/s (40 ft/min.) | <input type="checkbox"/> |
| Angle of Incline | 4.7.2 | Maximum 45 degrees | <input type="checkbox"/> |
| Capacity & Data Plates | 4.7.3/4.7.4 | 1) Capacity plate must be located conspicuously on device 2) Data plate shall be located conspicuously on device with minimum 6.3 mm (1/4") high letters a) Rated speed b) Rated load c) Suspension or support means d) Date of manufacture e) Manufacturer's name | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

