

## SECTION 14 20 00 - Elevators

Document revision history: 08/2019 – Original Publication

Date	Section	Description of Change

### PART 1 – GENERAL

#### 1.1 Summary

- a. Not applicable.

#### 1.2 Submittals

- a. Any manufacturers or materials not in compliance with these standards must be submitted for approval through a UO Substitution Request.

#### 1.3 Qualifications

- a. Recommended elevator design consultant: (Used to develop these standards)

Elevator Consulting Services, Inc.  
 15600 NE 8<sup>th</sup> Street  
 Suite B1, PMB 148  
 Bellevue, WA 98008  
 Phone: (425) 957-4641

### PART 2 – PRODUCTS

- a. ALL/ANY item that requires special tools and/or test equipment must be brought to the attention of the pertinent Owner’s Representative through the process of a UO Substitution Request prior to specification and/or installation.
- b. Elevator Finishes:
  - Wall finishes can be either Stainless Steel and/or Plastic-Laminate; a combination is preferred.
    - i. All gluing of Stainless Steel or Plastic-Laminate shall be by Contract Cement that has been applied to 100% uniformly to all areas of the material. (All items provided shall comply with ASME A17.1--2.14.2)
  - Smooth and flat rubber flooring only; NO raised round sections.
- c. Elevator Equipment Standards:

Elevator Component	NEW CONSTRUCTION	MODERNIZATION
<b>Controls</b>	Motion Control Engineering, Inc.	Motion Control Engineering, Inc
	Otis	Otis
	ThyssenKrupp	ThyssenKrupp
	Provide as part of the Elevator Controls: <ul style="list-style-type: none"> <li>a. Surge Suppressor</li> <li>b. Brown Out Circuit</li> <li>c. Regenerative Drive</li> <li>d. Isolation Transformer</li> </ul>	Provide as part of the Elevator Controls: <ul style="list-style-type: none"> <li>a. Surge Suppressor</li> <li>b. Brown Out Circuit</li> <li>c. Regenerative Drive</li> <li>d. Isolation Transformer</li> </ul>

Car Exhaust Fan	Elevator Products (High-Low-Off controls)	Elevator Products (High-Low-Off controls)
Cab Lighting	Kendall Vandal Resistant-Round with 26W CFL Lamps	Kendall Vandal Resistant-Round with 26W CFL Lamps
Hall/Car/Position Indicators Lighting	LED	LED
Cab Protective Pad Hooks & Pad	Pad and Pad Hooks: Provide stainless steel pad hooks on all walls. Pad hooks shall be through bolted to cab walls. Pad hook and mounting stud shall be one piece. Provide three-section fire retardant pad with metal grommet holes for the pad hooks fastening. Mark on backside of pad the left, right or back wall side.	Pad and Pad Hooks: Provide stainless steel pad hooks on all walls. Pad hooks shall be through bolted to cab walls. Pad hook and mounting stud shall be one piece. Provide three-section fire retardant pad with metal grommet holes for the pad hooks fastening. Mark on backside of pad the left, right or back wall side.
Cab Handrails	<p>One and one-half (1-1/2") inch diameter round stainless steel handrails shall be provided on the cab two sides and rear wall.</p> <p>Handrail shall be spaced 1-1/2" off walls and at a height of 32" from cab floor to the handrail top.</p> <p>Steel backing plates, a minimum of 4", square x 1/4" thick, shall be provided on the hoistway side of the cab walls to fasten the handrails.</p> <p>No fastening device, set screw-etc, shall be allowed inside the cab. Handrail, standoff section and mountings stud shall all be as one unit.</p> <p>All handrail ends shall be curved into the cab walls.</p>	<p>One and one-half (1-1/2") inch diameter round stainless steel handrails shall be provided on the cab two sides and rear wall.</p> <p>Handrail shall be spaced 1-1/2" off walls and at a height of 32" from cab floor to the handrail top.</p> <p>Steel backing plates, a minimum of 4", square x 1/4" thick, shall be provided on the hoistway side of the cab walls to fasten the handrails.</p> <p>No fastening device, set screw-etc, shall be allowed inside the cab. Handrail, standoff section and mountings stud shall all be as one unit.</p> <p>All handrail ends shall be curved into the cab walls</p>
<b>Door Equipment</b>	G. A. L. Manufacturing	G. A. L. Manufacturing
	Otis	
	ThyssenKrupp	
<b>Hoistway and Car Door Gibs</b>	Southern Elevator & Electric Supply (SEES)-The Enforcer	Southern Elevator & Electric Supply (SEES)-The Enforcer
<b>Hoistway Door Escutcheons</b>	Tri-Lok Mfg. & Maintenance Corp.	Tri-Lok Mfg. & Maintenance Corp.
<b>Hoistway &amp; Car Sills</b>	Provide holes for water/debris removal	Provide holes for water/debris removal
<b>Hoist Machines</b>		

MRL-Gearless	Motion Control Engineering, Inc	Motion Control Engineering, Inc
	Otis	Otis
	ThyssenKrupp	ThyssenKrupp
	Imperial Electric	Imperial Electric
Overhead/Basement Set		Hollister-Whitney
		Imperial Electric
<b>Hoist Rope Gripper</b>	Hollister-Whitney	Hollister-Whitney
	Otis	
	ThyssenKrupp	
<b>Overspeed Governor/Pit Sheave</b>	Hollister-Whitney	Hollister-Whitney
	Otis	
	ThyssenKrupp	
<b>Hydraulic Pump Unit</b>	Canton Elevator	Canton Elevator
	Elevator Equipment Company	Elevator Equipment Company
	MEI (Minnesota Elevator)	MEI (Minnesota Elevator)
<b>Hydraulic Valve</b>	Maxton	Maxton
<b>Hydraulic Pump Motor Starter</b>	Siemens-Solid State-Reduced Voltage	Siemens-Solid State-Reduced Voltage
<b>Hydraulic Cylinder/Plunger</b>	Canton Elevator	Canton Elevator
	Elevator Equipment Company	Elevator Equipment Company
	MEI (Minnesota Elevator)	MEI (Minnesota Elevator)
<b>Hydraulic Oil</b>	ISO 32	ISO 32
<b>Operating Fixtures</b>	Innovation Industries (Vandal Resistant)	Innovation Industries (Vandal Resistant)
	ThyssenKrupp (Vandal Resistant)	
	Otis (Vandal Resistant)	
<b>Operating Keys-Barrel Type</b>	Firefighters Service-Phase I & II-FEO-K1 Light Key-same type for all elevators Fan Key-same type for all elevators Independent Service-same type for all elevators Car top inspection-same type for all elevators Door Hold-same type for all elevators Emergency Stop Switch-same type for all elevators Hoistway Access Key-same type for all elevators	Firefighters Service-Phase I & II-FEO-K1 Light Key-same type for all elevators Fan Key-same type for all elevators Independent Service-same type for all elevators Car top inspection-same type for all elevators Door Hold-same type for all elevators Emergency Stop Switch-same type for all elevators Hoistway Access Key-same type for all elevators
<b>Car Door Detector</b>	Janus-3D	Janus-3D

<b>Car/Hall Position Indicators</b>	C. E. Electronics, Inc	C. E. Electronics, Inc
<b>Car/Counterweight Roller/Slide Guides</b>	Elevator Safety Company (ELSCO)	Elevator Safety Company (ELSCO)
	Otis	
	ThyssenKrupp	
<b>Seismic Switch</b>	Seismic Switch, Inc	Seismic Switch, Inc
<b>Intercoms/ADA Phones</b>	Electronic Micro Systems (EMS)	Electronic Micro Systems (EMS)
<b>Car Top Inspection Station</b>	Elevator Products Corp.	Elevator Products Corp.
	Otis	
	ThyssenKrupp	
<b>Elevator Traveling Cables</b>	<p>Provide flame and moisture-resistant outer cover. Prevent traveling cables from rubbing or chafing against hoistway or elevator equipment within hoistway.</p> <p>Provide ten percent (10%) spare conductors in each traveling cable.</p> <p>Provide an extra four (4) spare pair of shielded wires with two (2) number 22 AWG Coax cables in a separate traveling cable.</p> <p>Provide an extra two (2) pair of #14 conductors for car lighting.</p> <p>All spare wire ends shall be turned back or protected against accidental exposure to any live electrical circuit or electrical ground. Tag all spare conductors indicating termination points at each end.</p> <p>Provide all wiring for car lighting, fan and emergency communication from elevator controller to car.</p>	<p>Provide flame and moisture-resistant outer cover. Prevent traveling cables from rubbing or chafing against hoistway or elevator equipment within hoistway.</p> <p>Provide ten percent (10%) spare conductors in each traveling cable.</p> <p>Provide an extra four (4) spare pair of shielded wires with two (2) number 22 AWG Coax cables in a separate traveling cable.</p> <p>Provide an extra two (2) pair of #14 conductors for car lighting.</p> <p>All spare wire ends shall be turned back or protected against accidental exposure to any live electrical circuit or electrical ground. Tag all spare conductors indicating termination points at each end.</p> <p>Provide all wiring for car lighting, fan and emergency communication from elevator controller to car.</p>
<b>Remote Monitoring</b>	By Elevator Contractor	By Elevator Contractor
<b>Freight Elevators</b>	The Peelle Company	The Peelle Company

## **PART 3 – EXECUTION**

### **3.1 Installation**

- a. Elevator access is required to rooftops and penthouses where major mechanical equipment is located.
- b. Wiring of elevator shunt shall trip heat detectors; NOT activation of elevator shunt only when the heat detector is activated.
- c. Elevator Subcontractor will install coax cable in elevator traveling cable.

### **3.2 Interface with other products**

- a. See also Division 22 piping and pump requirements.
- b. If there is a building security system, mini-dome cameras are to be used at elevator cab ceilings.
- c. Closed Circuit TV (CCTV) Contractor shall run cable from elevator machine rooms to DVR and monitor.
- d. Elevator sump pumps and pits are to be alarmed to the DDC.
- e. Coordinate camera installation in elevators with elevator installer.

### **3.3 Testing**

- a. Per Manufacturer's Requirements

### **3.4 Training**

- a. Training is to be provided to FS Elevator Maintenance personnel to a technician & service level.

**End of Section**

### **Section 14 80 00 – Scaffolding**

1. Use qualified and certified erectors following OSHA 1910.28 guidelines.

**End of Section**