This policy outlines the requirements for shop/layout drawing submittal for any conveyance installation or alteration in the City and County of Denver. Prior to commencing work, a licensed elevator contractor is required to submit plans for approval and shall obtain an Installation or Alteration Permit from the Denver Fire Department, Fire Prevention Division (FPD), 745 West Colfax Avenue, Denver, CO 80204. These requirements can be found in the Denver Fire Code N103.10.

Questions can be addressed by contacting the Fire Prevention Division between 7:00 a.m. and 4:00 p.m. Monday thru Friday at 720-913-3474. Walk-in hours are 7:00 a.m. to 9:30 a.m. ONLY, Monday - Friday, at 745 W. Colfax Ave.

I. WHAT TO SUBMIT

New Conveyance Installations

The following items must be included in the plan review submittal to the FPD:

A. A completed **Conveyance Installation or Alteration Permit Application**. (See the following pages for specific requirements on different types of applications)

B. Layout Drawings and related documentation i.e. car interior, flooring information, Elevator Emergency/Standby Power confirmation letter shall be emailed to DFDconveyancepermits@denvergov.org.

C. **One Complete Set of Layout Drawing(s).** Drawings are required to be electronically signed in PDF format.
   1. All drawings must be electronically signed bear the signature and seal of a Colorado registered architect and/or professional engineer responsible for the conveyance design.
   2. Letter bearing the wet seal and signature from the Electrical Engineer of Record specifying quantity of elevators able to operate simultaneously on Emergency/Standby power.
   3. Layout drawings shall be scalable and indicate that the conveyance meets the requirements set out in the currently adopted edition of ASME A17.1 or ASME A18.1. Any drawings not indicating the proper code edition will be returned immediately to the contractor.
   4. Approved layout drawings are the property of the building owner and shall remain on site at all times.
5. Documentation stating that material for the car enclosure, enclosure linings and floor coverings (other than metal or glass) conform to the following:
   a. ASTM E 84, ANSI/UL 723, NFPA 252 for car enclosure and the enclosure lining with a flame spread rating of 0 to 75, and smoke development of 0 to 450.
   b. ASTM E 648 with a critical radiant flux of not less than 0.45 W/cm² for floor covering and underlayment.

6. If, at the time of application, the interior car material is unknown, FPD may issue an Initial Installation Permit to install the conveyance. An Alteration Permit must be obtained before the car interior is installed.

7. Layout drawing shall have one page that details the following information in “Table format”
   a. Applicable Code Reference (Current adopted code or standard ASME A17.1, A18.1, ASCE 21)
   b. Building Address
   c. Job/Contract Number
   d. Rated Capacity
   e. Rated Speed
   f. Total Travel
   g. Landings Front/Rear
   h. Suspension Means Type (Wire Ropes, Coated Steel Belts)
   i. Suspension Means Size
   j. For elevators that travel 60ft or more a communication system that conforms to ASME A17.1 currently adopted edition. If a Fire Command Center (FCC) is present this communication system shall be located in the FCC. If an FCC is not provided, the location shall be field approved.
   k. Emergency/Standby Power (Generator, specify quantity of elevators able to operate simultaneously)
   l. Hoistway Pressurized
   m. Elevator Designated as Fire Service Access Elevator
   n. Elevator platform sized to accommodate an Ambulance Stretcher per currently adopted International Building Code
   o. Top of Car Handrail Provided

Table Example

<table>
<thead>
<tr>
<th>ASME A17.1</th>
<th>Currently adopted Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Address</td>
<td>123 Main St</td>
</tr>
<tr>
<td>Job/Contract Number</td>
<td>123456</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>3500lbs</td>
</tr>
</tbody>
</table>
### Rated Speed
500fpm

### Total Travel
90ft

### Landings Front/Rear
12 8f/4r

### Suspension Means Type
Steel Wire

### Suspension Means Size
8mm

### Communication system provided for elevators that travel 60ft
Yes – located in FCC

### Emergency/Standby Power Provided
Yes – all simultaneously

### Hoistway Pressurized
Yes

### Fire Service Access Elevator
No

### Accommodate an Ambulance Stretcher
Yes

### Top of Car Handrail Provided
Yes

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8. The Layout drawing shall also include the following information on this “Table” or provide a “Legend” that indicates where this information is located on the layout drawings.

**All Elevators** (including LU/LA’s, dumbwaiters/material lifts):

- **a.** Building name, address and conveyance State registration number
- **b.** Required clearances and basic dimensions
- **c.** Indicate whether a Fire Command Center is present
- **d.** Layout of the elevator annunciator panel (if Fire Command Center is present)
- **e.** Layout of the car operating panel and hall call stations
- **f.** Indicate whether elevator(s) are operational on emergency power (generator); also, indicate the sequence of operation and how many elevators can be operated simultaneously
- **g.** Primary and alternate floor locations (as determined by FPD)
- **h.** Indicate that the “Flashing Fire Hat” signal conforms to Denver Fire Code
- **i.** Indicate that the Fire Emergency Operation conforms to Denver Building Code for pressurized shafts
- **j.** Maximum bracket spacing (see 2.23 or 3.23)
- **k.** Estimated maximum vertical forces on the guide rails on application of the safety or other retarding device (see 2.23 and 2.19.3 or 3.23)
<table>
<thead>
<tr>
<th>Subject:</th>
<th>SUBMITTAL OF CONVEYANCE PLANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number:</td>
<td>N103.10</td>
</tr>
<tr>
<td>Effective Date:</td>
<td>June 20, 2018</td>
</tr>
</tbody>
</table>

i. In the case of freight elevators for Class B or C loading (see 2.16.2.2), the horizontal forces on the guiderail faces during loading and unloading, and the estimated maximum horizontal forces in a post-wise direction on the guiderail faces on the application of the safety device (see 2.23 or 3.23)

m. Size and linear weight kg/m (lb/ft) of any rail reinforcement, where provided (see 2.23 or 3.23)

n. Total static and impact loads imposed on machinery and sheave beams, supports, and floors or foundations (see 2.9)

o. Impact load on buffer supports due to buffer engagement at the maximum permissible speed and load (see 8.2.3)

p. Total static and dynamic loads from the governor, ropes, and tension system

q. Horizontal forces on the building structure stipulated by 2.11.11.8 and 2.11.11.9

r. Rated speed and operating speed in the down direction

s. Identification of welding in conjunction with work. Hot work permit is required (other than for tack welds) or may be included in elevator permit when approved; include in elevator permit scope

t. Identification if hoistway is pressurized

**Electric Elevators** (including LU/LA’s, dumbwaiters/material lifts):

a. Where compensation tie-down is applied (see 2.21.4.2), the load on the compensation tie-down supports

b. Maximum upward movement (see 2.4.6)

**Hydraulic Elevators** (including LU/LA’s, Dumbwaiters/Material Lifts):

a. Net vertical load from the elevator system, which includes the total car weight and rated load; plunger, cylinder, and oil; and any structural supports

b. Outside diameter and wall thickness of the cylinder, plunger and piping, and the working pressure

c. Minimum “grade” of pipe (ASTM or recognized standard) required to fulfill the installation requirements for pressure piping, or in lieu of a specific "grade" of pipe, the minimum tensile strength of pipe to be used for the installation (see 3.19)

d. Length of the plunger and cylinder

e. Clearance between the bottom of the plunger and the bottom head of the cylinder as required by 3.18.3.3
Escalators/Moving Walks

Layout drawings shall, in addition to other data, indicate the following: *(All references are to ASME A17.1 current adopted edition)*

- a. Building name, address and State registration number
- b. Whether escalator to be installed indoors or outdoors
- c. Maximum speed (escalators 100 fpm; moving walks up to 180 fpm depending on angle of inclination)
- d. Angle of inclination (escalators not to exceed 30°; moving walks not to exceed 12°)
- e. Rise and length

Vertical Platform Lift (VPL) and Inclined Platform Lift (IPL)

Layout drawings shall, in addition to other data, indicate the following: *(All references are to ASME A18.1 current adopted edition)*

- a. Building name, address and State registration number
- b. Number for landings (stops)
- c. Whether the lift is to be installed indoors or outdoors
- d. Type of drive
- e. Total travel (not to exceed 14ft, VPL)
- f. Speed (not to exceed 30ft/min)
- g. Capacity (not to exceed 750lbs)
- h. Clear platform width and length (not to exceed 18ft² for VPL and 12ft² for IPL)
- i. Type of lift controls
- j. Power supply

Altered Conveyances (all conveyances):

- a. A detailed list of the components that are to be altered.
- b. A scope of work shall be attached to the permit application form.
- c. If the scope of work includes altering of Fire Emergency Operation, the elevator contractor shall provide documentation that the current fire alarm panel is capable of fire recall or that a #3A permit to alter/install a new fire alarm panel has been issued.
- d. If the scope of work includes the interior of the car enclosure, documentation as stated above shall be provided.

**D. Equipment Manufacturer’s Specification Sheets** showing that all equipment is listed and labeled for the intended application.
E. Onsite Conveyance Layouts. The Conveyance Contractor is responsible for printing one full size hard copy set (22x34 or 24x36) of the approved conveyance Layouts. These drawings are known as the Contractor’s Set as per the 2016 DBC Section 132.5 and shall be available onsite at all times for inspection. The Conveyance Contractor is also required to place a printed copy of the Approved Installation/Alteration permit in the elevator machine room/space in accordance with State and Local regulations.

If any of the above items are missing or incomplete, the review of the plans will not begin until complete information is received.

II. Temporary Certificate of Operation

A Temporary Certificate of Operation (TCO) may be issued at the discretion of the Fire Prevention Division for operation of a conveyance in such cases as the following:

A. A new conveyance with minor issues awaiting resolution where extenuating circumstances (e.g., certification needed for construction deadline, conveyance needed for move-in, etc.) make a TCO the best solution. (Subsequent Fire Department inspections will be required).

B. An existing conveyance with minor issues awaiting resolution and where there is no consideration requiring shut-down. (Subsequent inspections will be required but may be conducted by a third-party private inspector with FPD approval).

No TCO shall be issued with any discrepancy affecting the safe operation of any conveyance. If a Temporary Certificate of Operation has been issued, all noted items shall be resolved to the satisfaction of the Conveyance Program Manager or fire official prior to issuance of the Acceptance Certificate of Operation.

III. FEES

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Installations/Replacements</td>
<td>$300 per conveyance</td>
</tr>
<tr>
<td>Alterations</td>
<td>$150 per conveyance</td>
</tr>
<tr>
<td>Re-Submittal Fees</td>
<td></td>
</tr>
<tr>
<td>New Installations/Replacements</td>
<td>$300 per conveyance</td>
</tr>
<tr>
<td>Alterations</td>
<td>$150 per conveyance</td>
</tr>
<tr>
<td>2nd and subsequent Re-Submittal Fees</td>
<td></td>
</tr>
<tr>
<td>New Installations/Replacements</td>
<td>$125/per hr. – 2 hr. minimum</td>
</tr>
<tr>
<td>Alterations</td>
<td>$125/per hr. – 1 hr. minimum</td>
</tr>
</tbody>
</table>

New Installation/Major Alteration

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Certificate of Operation</td>
<td>$250 per conveyance</td>
</tr>
</tbody>
</table>
Temporary Certificates of Operation are valid for 90 days. A TCO may be re-issued one-time, for an additional 90 days as approved by the Department and upon payment of an additional TCO fee. Failure to comply with the conditions of operation and to rectify all outstanding discrepancies of the TCO shall subject the responsible party to penalties as described in Denver Municipal Code Section 1-13.

**Fee for work without a permit**

Double applicable permit fee

All permit fees will be collected when plans are submitted—no exceptions. Permit fees are non-refundable. Make checks payable to “Manager of Finance.” Permit fees cover plan review, QCQA inspection, initial inspection for fire service operation and processing and issuance of certificate of operation. Re-inspection fees for failed fire service operation shall be determined by FPD Systems Acceptance Testing unit.

All permit fees will be collected when plans are submitted—no exceptions. Permit fees are non-refundable. Make payment to “Denver Manager of Finance.”

**IV. WHERE TO SUBMIT**

All plan documents shall be submitted to:

Denver Fire Department  
Fire Prevention – 1st Floor  
745 W. Colfax Avenue  
Denver CO 80204

**V. TURNAROUND TIME**

Denver Fire Department Fire Prevention Division’s goal for completion of the plan review process is no more than 20 working days; however, we reserve the option of a longer completion time depending upon the complexity and size of the project being reviewed and requirement for additional information or resubmittal(s). Remember, the review process does not begin until all components of the submittal are received and complete.

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END OF DOCUMENT