

# Elevator Safety Advisory Committee Agenda

August 19, 2014 - 9 to 11 a.m.

Tukwila Service Location

Time	Topic	Facilitator	Comments
9 – 9:15 a.m.	<ul style="list-style-type: none"> <li>• Introductions/Purpose</li> <li>• Comments regarding May minutes</li> </ul>	<ul style="list-style-type: none"> <li>• Scott Cleary</li> <li>• Scott Cleary</li> </ul>	
9:30 – 9:50 a.m.	<p><b><u>Chief's Report</u></b></p> <ul style="list-style-type: none"> <li>• Scorecard/Accidents</li> <li>• Draft WAC 296-96</li> </ul>	<ul style="list-style-type: none"> <li>• Jack Day</li> <li>• Jack Day</li> </ul>	
9:50 – 9:55 a.m. 9:55 – 10:05 a.m. 10:05 – 10:20 a.m. 10:20 – 10:30 a.m.	<p><b><u>Old Business:</u></b></p> <ul style="list-style-type: none"> <li>• Testing FAID (Fire Alarm initiation Devices)</li> <li>• Existing machine room enclosure and access to the machine room (Attachment D)</li> <li>• Overview of progress on point of sale inspections of residential elevators. (17.1 &amp; 18.1 Equipment) (Attachment E)</li> <li>• Purpose and scope on Subcommittee for Class A Permits</li> <li>• Code Adoption Subcommittee and discussion of processes formed around subcommittee activities</li> </ul>	<ul style="list-style-type: none"> <li>• Rob McNeil &amp; David Gault</li> <li>• Keith Becker</li> <li>• Swen Larson</li> <li>• Jack Day</li> <li>• Bryan Wheeler</li> </ul>	
10:30 – 11:00 a.m.	<p><b><u>New Business:</u></b></p> <ul style="list-style-type: none"> <li>• Licensing Criteria</li> <li>• Proposal for Comb Impact Device</li> </ul>	<ul style="list-style-type: none"> <li>• Scott Cleary</li> <li>• Jack Day</li> </ul>	
11:00 a.m. – Noon	<p><b><u>Stakeholder meeting:</u></b> You are encouraged to stay for the meeting. It is an informal touch base with the stakeholders.</p>		
Future agenda	<p><b><u>Future Business:</u></b></p> <ul style="list-style-type: none"> <li>• Residential Maintenance Licensing</li> <li>• Acceptable LULA applications (limits to install)</li> <li>• ANSi A10.4 Maintenance</li> </ul>		

Elevator Safety Advisory Committee Meeting Agenda  
August 19, 2014

**The purpose** of the Elevator Safety Advisory Committee is to advise the department on the adoption of regulations that apply to conveyances; methods of enforcing and administering the elevator law, chapter 70.87 RCW; and matters of concern to the conveyance industry and to the individual installers, owners and users of conveyances. If a member is unable to fulfill his or her obligations, a new member may be appointed. An advisory committee member may appoint an alternate to attend meetings in case of conflict or illness.

- 1) Limit meetings to no more than two hours.
- 2) Please choose an alternate and submit their names and contact information.
- 3) Nominees, merits of why, Vote for the chair position.
- 4) Each of you represent a unique part of the industry, therefore you must be available for concerns and discussion with your represented piers and if necessary bring items forward to the table to be discussed.
- 5) All items to be discussed at the advisory level shall be included within the agenda. You will ensure any item relevant to the committee, be sent to the chair for inclusion into the agenda. Items not on agenda may not be decided at the meeting. This is to ensure public participation of the forum.
- 6) Review RCW and WAC and adopted standards, if there happens to be matters of concern, it is your obligation to bring them forward. Within each and every case decisions must be based upon public, worker and building safety.
- 7) L&I may not be the entity changing Statutes; you may need to become involved with your legislative representative in order to affect change.
- 8) The department thanks you for stepping up and volunteering, with that said the department needs to be assured of your participation. Please keep the meeting dates updated within your calendars. Your input is very important, and the department is at a great loss without your attendance.

**Stakeholder meeting:** You are encouraged to stay for the meeting. It is an informal touch base with the stakeholders.

### **Chief's Report**

#### **Draft WAC 296-96 – Jack Day**

Located within the elevator advisory section is a copy of our rules in electronic form. Its intended use is to update these draft rules with changes as they are created. Also attachments defining the rational will be captured and posted as well. Strategically the analysis document will more than likely become the attachment. You can find the 296.96 WAC copy by using the following link:

<http://www.lni.wa.gov/TradesLicensing/Elevators/CalNews/AgendaMeeting/Default.asp>.

**Old Business Notes:**

**Testing FAID (Fire Alarm Initiation Devices) – Rob McNeil (I need documentation to support)**

Discussion regarding the testing requirements for periodic smoke and heat detectors and the credentials required of the initiation device testers. Seattle certifies persons by confidence testing. Need to supply the NFPA 72 testing criteria. What is the rationale?

Concern: elevator inspectors only check FAID devices at acceptance. Who is qualified to perform the periodic tests?

- *Should we pursue confidence testing for smoke detectors?*
- *Should we pursue confidence testing for heat detectors and shunt trip devices?*
- *Should we pursue confidence testing for the pressurization of the hoistway?*
- *Should we document the alternate landing?*
- *Should documentation be provided on site regarding the specific design of the fire fighters emergency service?*
- *Who performs these tests: Licensed elevator mechanics and/or certified alarm technicians?*
- *Involvement of building and fire officials?*

**Existing machine room access – Keith Becker to report**

- See attachment D

**Overview of progress on point of sale inspections of residential elevators – Swen Larson**

Elevators, Platform lifts and Stairway Chairlifts located in a private residence, shall be inspected upon completion and at the transfer of title/deed to ensure code compliance.

**Purpose and scope on subcommittee for Class A Permits – Jack Day**

Means to allow companies to participate in a program that allows block permits for minor alterations and selected new installation permits. L&I will work with stakeholders to draft language for the Directors consideration for possible Legislation. Please place your names and contact information on the sign up sheet provided before leaving today. First meeting will be afternoon of June 11<sup>th</sup>.

- See Analysis

**Code Adoption Subcommittee and discussion of processes formed around subcommittee activities – Bryan Wheeler**

The Elevator Safety Advisory Committee (ESAC) is the statutorily-approved body used to advise the Department of Labor & Industries (L&I) on the adoption of rules, enforcement and administration of authorities and matters of concern to the manufacturers, installers, owners and users of the conveyances in Washington State. Unfortunately, the ESAC meets only 4 times each year and L&I's need for policy review and recommendation work is greater than what the ESAC is designed to provide.

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For that reason, on the agenda for consideration at our May 20 ESAC meeting is a proposal to create an ESAC subcommittee (Subcommittee) that would review and advise on matters related to the national standards, Washington Codes, Washington Administrative Codes (WACs), Revised Code of Washington (RCWs) and other policies. For example, the Subcommittee could pick a WAC section to review, analyze and make recommendations about in order to clean up outdated, inconsistent and/or unnecessary rule language. All stakeholders will be encouraged to actively participate in the Subcommittee and it will include L&I involvement. The Subcommittee should meet monthly, work fast and present its first report to the ESAC at its fall meeting.

On behalf of L&I, I believe the proposed Subcommittee will provide to the ESAC needed additional resources and expertise to assist the ESAC's work with the department. Please be prepared to discuss this important matter and opportunity at our May 20 meeting. I encourage you to support this effort.

**New Business Notes:**

**Licensing criteria – Scott Cleary**

Combining categories:

- Categories 02, 06, 07 combined and remove commercial dumbwaiters (cat 1)
- Combine categories 03 and 04 under industrial
- Combine category 08 with 01
- Incorporate only NEIP, CAT, CET for all categories except material lift
- Remove wording in WAC 296-96-00906:

*The applicant must provide acceptable proof to the department that shows the necessary combination of documented experience and education credits in the applicable license category (see WAC 296-96-00910) of not less than three years' work experience in the elevator industry performing conveyance work as verified by current and previous employers ~~licensed to do business in this state or as an employee of a public agency;~~*

**Proposal for Comb Impact Device – Jack Day**

- See Analysis

**Future Business Notes:**

**Residential Maintenance Licensing – Scott Cleary**

Only properly licensed individuals can perform maintenance and testing on residential installations.

**Acceptable LULA applications (limits to install) – Scott Cleary**

Permit-able applications: need to define where they can be installed.

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- WAC 296-96-02590: (1) LULAs may be permitted in churches, private clubs, and buildings listed on the historical register that are not required to comply with accessibility requirements. (2) Installation of LULAs in existing buildings that are not required to comply with accessibility requirements will be considered on a case-by-case basis by the department.
- The department is seeking advice and instruction of WAC 296-96-02590(2). We want to remove it, at the discretion of the department, and put in its place defined acceptable applications greater than those found in (1).
- Do we have any discussion regarding building occupancies, building type or use and rise limitations?

**ANSi A10.4 Maintenance**

- We need everyone to be on the same page with the maintenance items in A10.4 and mechanic licensing requirements.
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5-1-2014

Means of Access Sub Committee on (Machine room/control room access)

Sub-committee members; Keith Becker, Jack Day, David Spafford, Terry Rozell, Scott Cleary, Robert McNeill, Joseph McCann, Amber Quann.

What are we attempting to do?

REASONING: It is felt that there does not exist, adequate regulations regarding the safe means of access to the Machine Room or Machine Space for existing elevators.

SCOPE: If possible, develop safe machine room/ control room access requirements for existing buildings or structures. Provide instruction and guidelines for proper installation and maintenance of this access. Access should be considered fixed and permanent and non-combustible. Determine if the WAC's fall into existing or new requirements.

Proposal as of 5-5-2014

**Document being utilized to determine minimum access to all existing elevators is outlined in ASME A17.1-2010, Part 2, Section 2.7.3.1 through 2.7.3.4**

### **2.7.3 Access to Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms**

#### **2.7.3.1 General Requirements**

**2.7.3.1.1** A permanent and unobstructed means of access shall be provided to

- (a) machine rooms and control rooms
- (b) machinery spaces and control spaces outside the hoistway
- (c) machinery spaces and control spaces inside the hoistway that do not have a means of access to the space as specified in 2.7.3.1.2.

**2.7.3.1.2** Access to machinery spaces and control spaces inside the hoistway

**2.7.3.1.2(b)** from the car top shall comply with **2.12.6 and 2.12.7**

#### **2.12.6 Hoistway Door Unlocking Devices**

**2.12.6.1 General.** Except in jurisdictions that limit the use of hoistway door unlocking devices, they shall be provided for use by elevator and emergency personnel for each elevator at every landing where there is an entrance.

**2.12.6.2 Location and Design.** Hoistway door unlocking devices shall conform to 2.12.6.2.1 through

2.12.6.2.5.

**2.12.6.2.1** The device shall unlock and permit the opening of a hoistway door from a landing irrespective of the position of the car.

**2.12.6.2.2** The device shall be designed to prevent unlocking the door with common tools.

**2.12.6.2.3** Where a hoistway unlocking device consists of an arrangement whereby a releasing chain, permanently attached to a door locking mechanism, is kept under a locked panel adjacent to the landing door, such a panel shall be self-closing and self-locking and shall not have identifying markings on its face.

**2.12.6.2.4** The hoistway door unlocking device shall be Group 1 Security (see 8.1). The operating means shall also be made available to emergency personnel during an emergency.

**2.12.6.2.5** The unlocking device keyway and locked panel (see 2.12.6.2.3), if provided, shall be located at a height not greater than 2 100 mm (83 in.) above the landing.

**2.7.3.2 Passage Across Roofs.** The requirements of 2.7.3.2.1 and 2.7.3.2.2 shall be conformed to where passage over roofs is necessary to reach the means of access to machinery spaces, machine rooms, control spaces, and control rooms.

**2.7.3.2.1** A stairway with a swinging door and platform at the top level, conforming to 2.7.3.3, shall be provided from the top floor of the building to the roof level. Hatch covers, as a means of access to roofs, shall not be permitted.

**2.7.3.2.2** Where the passage is over a roof having a slope exceeding 15 deg from the horizontal, or over a roof where there is no parapet or guardrail at least 1 070 mm (42 in.) high around the roof or passageway, a permanent, unobstructed and substantial walkway not less than 600 mm (24 in.) wide, equipped on the side sloping away from the walk with a railing conforming to 2.10.2.1, 2.10.2.2, and 2.10.2.3,

**2.10.2 Standard Railing**

**2.10.2.1 Top Rail.** The top rail shall have a smooth surface, and the upper surface shall be located at a vertical height of 1 070 mm (42 in.) from the working surface.

**2.10.2.2 Intermediate Rail, Member, or Panel.**

The intermediate rail or equivalent structural member or solid panel shall be located approximately centered between the top rail and the working surface.

**2.10.2.3 Toe-Board.**

The toe-board shall be securely fastened and have a height not less than 100 mm (4 in.) above the working surface.

shall be provided from the building exit door at the roof level to the means of access.

**2.7.3.3 Means of Access.** The means of access to the following shall conform to 2.7.3.3.1 through 2.7.3.3.6:

(a) machine rooms, control rooms, and machinery spaces and control spaces outside the hoistway, and machinery spaces and control spaces inside the hoistway that do not have a means of access to the space as specified in 2.7.3.1.2

(b) between different floor levels in machine rooms, in control rooms, and in machinery spaces or control spaces outside the hoistway

(c) from within machine rooms or control rooms to machinery spaces and control spaces

**2.7.3.3.1** A permanent, fixed, noncombustible ladder or stair shall be provided where the floor of the room or the space above or below the floor or roof from which the means of access leads, or where the distance between floor levels in the room or space, is more than 200 mm (8 in.).

**2.7.3.3.2** A permanent, noncombustible stair shall be provided where the floor of the room or the space above or below the floor or roof from which the means of access leads, or where the distance between floor levels in the room or space, is 900 mm (35 in.) or more. Vertical ladders with handgrips shall be permitted to be used in lieu of stairs for access to overhead machinery spaces, except those containing controllers and motor generators.

**2.7.3.3.3** Permanent, fixed, noncombustible ladders shall conform to ANSI A14.3.

**2.7.3.3.4** Permanent, noncombustible stairs shall have a maximum angle of 60 deg from the horizontal, and shall be equipped with a noncombustible railing conforming to 2.10.2.1, 2.10.2.2, and 2.10.2.3.

**2.10.2 Standard Railing**

**2.10.2.1 Top Rail.** The top rail shall have a smooth surface, and the upper surface shall be located at a vertical height of 1 070 mm (42 in.) from the working surface.

**2.10.2.2 Intermediate Rail, Member, or Panel.**

The intermediate rail or equivalent structural member or solid panel shall be located approximately centered between the top rail and the working surface.

**2.10.2.3 Toe-Board.**

The toe-board shall be securely fastened and have a height not less than 100 mm (4 in.) above the working surface.

**2.7.3.3.5** A permanent, noncombustible platform or floor shall be provided at the top of the stairs conforming with the following:

- (a) Railings conforming to 2.10.2 shall be provided on each open side.
- (b) The floor of the platform shall be at the level of not more than 200 mm (8 in.) below the level of the access-door sill.
- (c) The depth of the platform shall be not less than 750 mm (29.5 in.), and the width not less than the width of the door.
- (d) The size of the platform shall be sufficient to permit the full swing of the door plus 600 mm (24 in.) from the top riser to the swing line of the door.

**2.7.3.3.6** Where a ladder is provided, a permanent, noncombustible platform or floor shall be provided at the top of the ladder, conforming with the following:

- (a) Railings conforming to 2.10.2 shall be provided on each open side.
- (b) The floor of the platform shall be located below the level of the access-door sill by a vertical distance of not more than 200 mm (8 in.) where full bodily entry is required, and by a vertical distance of not more than 900 mm (35 in.) where full bodily entry is not required.
- (c) The depth of the platform shall be not less than 915 mm (36 in.) and the width not less than the width of the door or a minimum of 915 mm (36 in.), whichever is greater.
- (d) The size of the platform shall be sufficient to permit the full swing of the door plus 600 mm (24 in.) from the standard railing to the swing line of the door.
- (e) The ladder or handgrips shall extend a minimum of 1 220 mm (48 in.) above the platform floor level and shall be located on the access door/panel strike jamb side of the platform.
- (f) The railing on the access side shall be provided with a hinged section not less than 600 mm (24 in.) wide with a latchable end adjacent to the ladder.

**NOTE: Any like-for-like repairs will be allowed to combustible ladders, stairs or platforms. If replacement is required due to inadequate structural integrity, then 2.7.3.3 must be followed in its entirety.**

Comment [kb1]: New language added.

#### **2.7.3.4 Access Doors and Openings. If provided.**

**2.7.3.4.1** Access doors shall be

- (a) self-closing and self-locking
- (b) kept closed and locked

**NOTE: 2.7.3.4.2 through 2.7.3.4.7 are not required to be followed unless existing doors are replaced, openings modified or new doors or openings added.**

Comment [kb2]: New language added.

**2.7.3.4.2** Access doors to machine rooms and control rooms shall be provided. They shall be of a minimum width of 750 mm (29.5 in.) and a minimum height of 2 030 mm (80 in.). Keys to unlock the access doors shall be Group 2 Security (see 8.1).

**2.7.3.4.3** Access doors for spaces specified in 2.7.4.2, 2.7.4.3, and 2.7.4.4 other than those for machine rooms or control rooms shall be a minimum width and height of 750 mm (29.5 in.). Keys to unlock the access doors shall be Group 2 Security (see 8.1).

**2.7.3.4.4** Access doors for control spaces outside the hoistway shall be a minimum width

and height of 750 mm (29.5 in.). Keys to unlock the access doors shall be Group 2 Security (see 8.1).

**2.7.3.4.5** Doors are not required at openings in machine room or control room floors for access to machinery spaces outside the hoistway, provided the access opening is provided on all four sides with a standard railing conforming to 2.10.2, one side of which is arranged to slide or swing to provide access to the ladder or stairs leading to the space. Trap doors, where provided, shall have a standard railing conforming to 2.10.2 or guard wings on all open non-access sides.

**2.7.3.4.6** Access openings located in the machinery space floor, secondary level floor, machine room floor, control space floor, or control room floor for access into the hoistway shall be provided with doors that shall be kept closed and locked. Keys to unlock the access doors shall be of Group 1 Security (see 8.1).

**2.7.3.4.7** Access openings in elevator hoistway enclosures where full bodily entry is not necessary for maintenance and inspection of components shall be

(a) located to permit the required maintenance and inspection

(b) of maximum width of 600 mm (24 in.) and a maximum height of 600 mm (24 in.).

These dimensions shall be permitted to be increased, provided that any resultant opening through the access opening into the hoistway shall reject a 300 mm (12 in.) diameter ball.

(c) provided with doors that shall be kept closed and locked. Keys to unlock the access doors to the elevator hoistways shall be of Group 1 Security (see 8.1).

## Elevator Advisory Analysis Form – 2014

<b>PROPOSAL NUMBER</b>		<b>DATE:</b>	
<b>TITLE OF PROPOSAL:</b>	Class A permits		
<b>PREPARED BY:</b>	Jack Day		
<b>PHONE NO. &amp; EMAIL:</b>	(360) 902-6128 / DAYL235@lni.wa.gov		
<b>Brief summary of what this proposal does and its purpose:</b>			
Sets a statute in place to allow minor conveyance alteration and installation work to be installed and place the conveyance into operation without the work being inspected by a state employee. Also, places restrictions on the elevator companies that would stipulate “in good standing” before being allowed to perform minor alteration and installation work.			
<b>1. Does the proposal promote Public, Building or Worker Safety?</b>			
<input type="checkbox"/> Public <input type="checkbox"/> Building <input type="checkbox"/> Worker Not in a direct sense, however companies striving to obtain and stay in good standing may perform much better through their regular business opportunities.			
<b>2. The effect of this proposal would be:</b>			
<input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor <input type="checkbox"/> None If there is no effect or impact, should we continue to propose this change? <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>3. If the proposal has an effect on the program, (major, minor, uncertain) briefly describe (effects) below.</b>			
This program has the capability of reducing our inspection workload by: 1) ? alteration per year 2) ? new installation per year			
<b>4. If enacted, what type of fiscal impact would this proposal have on the owners, elevator companies or agency?</b>			
<b>5. If the proposal has fiscal impact, how much?</b>			
<input type="checkbox"/> Less than \$50,000 <input type="checkbox"/> More than \$50,000 <input type="checkbox"/> None			
<b>6. What other stakeholders would be impacted by this proposal? List, if any, and briefly summarize the impact for each affected group and their positions:</b>			
Owners/property managers Elevator companies			
<b>7. If enacted, would this proposal require a new rule or revise an existing rule?</b>			
<input checked="" type="checkbox"/> New rule <input checked="" type="checkbox"/> Revise existing rule <input type="checkbox"/> No rule change If revises or repeals an existing rule/Statute, provide WAC/RCW number and title: <b>RCW 70.87.100</b> Conveyance work to be performed by elevator contractors — Acceptance tests — Inspections.			

(1) All conveyance installations, relocations, or alterations must be performed by an elevator contractor employing an elevator mechanic.

(2) The elevator contractor employing an elevator mechanic performing such conveyance work shall notify the department before completion of the work, and shall subject the new, moved, or altered portions of the conveyance to the acceptance tests.

(3) All new, altered, or relocated conveyances for which a permit has been issued, shall be inspected for compliance with the requirements of this chapter by an authorized representative of the department. The authorized representative shall also witness the test specified.

(4) The department has the authority to sell class A permits for minor alternations and accessibility equipment for new installations (residential incline and vertical lists). Class A permits shall be randomly inspected for compliance with the requirements of this chapter by an authorized representative of the department. The authorized representative shall also witness the test specified.

Class A permits will be sold to licensed elevator contractors who demonstrate good standing with the department beginning XX.

**8. Does the rule impact permits, licenses, and/or inspections (the word “license” includes both registration and certification)? Identify all that apply.**

Permits  Licenses  Inspections  N/A

**Comments:**

**9. If the rule impacts permits, licenses, and/or inspections, could the rule be amended to improve timeliness or simplify the application, approval, or other process?**

Improve Timeliness  Simplify Process  Specify your own (explain)

**Comments:**

**10. Identify the purpose for the proposal, based on need, clarity and consistency:**

**Need:** Does the rule need to be amended or repealed because the rule is obsolete, duplicative or unnecessary to a degree that warrants repeal or revision?

**Clarity:** Does the rule need to be amended or repealed because the rule is written and/or organized in a manner that is not easily understood by those to whom it applies?

**Consistency:** Does the rule need to be amended or repealed because of any of the following:

- The rule is inconsistent with the legislative intent of the authorizing statute?
- There is more specific legislative authority needed in order to protect the health, safety and welfare of Washington’s citizens?
- Laws or other circumstances have changed which requires the rule to be amended or repealed?

**Comments/Other Issues (if any):**

**11. General comments on this proposal (Please include any additional background that would be helpful or comments on any similar proposals that you are aware of):**

## Elevator Advisory Analysis Form – 2014

<b>PROPOSAL NUMBER</b>	001-b-2014	<b>DATE:</b>	May 28, 2014
<b>TITLE OF PROPOSAL:</b>	Retroactive requirement to install Comb <del>Impact</del> <b>Stop</b> devices		
<b>PREPARED BY:</b>	Jack Day		
<b>PHONE #: &amp; e mail</b>	360 902-6128 / dayl235@lni.wa.gov		
<b>Brief summary of what this proposal does and its purpose:</b>	Escalator and moving walks installed prior to 1993 were not equipped with comb impact devices. The intent would be to follow New York in requiring these devices which will reduce the severity of injuries to the public that become entrapped between the comb plate and the moving step.		
<b>Does the proposal promote Public, Building or Worker Safety?</b>			
<input checked="" type="checkbox"/> Public <input type="checkbox"/> Building <input type="checkbox"/> Worker			
<b>1. The effect of this proposal would be:</b>			
<input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor <input type="checkbox"/> None			
<b>If there is no effect or impact, should we continue to propose this change?</b>			
<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>2. If the proposal has an effect on the program, (major, minor, uncertain) briefly describe (effects) below.</b>			
Of the 509 total counts (not counting Seattle and Spokane) there may be as many as 226 escalators and moving walks without the device. None of the 509 devices are calibrated to 65 PSI vertical. Some of the 226 may have been upgraded with the safety device; it is unknown at this time?  Permitting and inspection impact will be high so we may propose to phase this in over time.			
<b>3. If enacted, what type of fiscal impact would this proposal have on the owners, elevator companies or agency?</b>			
Agency: communication with requirements and inspection staff to accommodate. Owner: upfront costs and reoccurring maintenance and testing Elevator companies: 1) Concerned over nuisance calls, need to determine if there is validity to this concern. 2) If so, what the expected occurrence? 3) Concern is it one or just a few escalators entrapments are happening on? Create a list of the effected comb entrapments with building names and if it has a impact device already installed.			
<b>4. If the proposal has fiscal impact, how much?</b>			
<input type="checkbox"/> Less than \$499 <input checked="" type="checkbox"/> More than \$500 <input type="checkbox"/> None			
Unknown at this time, we need proposal estimates from the elevator companies			
<b>5. What other stakeholders would be impacted by this proposal? List, if any, and briefly</b>			

**Comment [jsd1]:** To be accurate with the criteria it should be called a stop device. Impact would presume both vertical and horizontal requirement.

summarize the impact for each affected group and their positions:

**6. If enacted, would this proposal require a new rule or revise an existing rule?**

New rule  Revise existing rule  No rule change

If this proposal has an effect on rules, identify the section of the proposal and cite the affected rules: This would go into the existing section of WAC part "D" Subpart IV section 3. Propose it reads as follows: For all existing and newly installed escalators a device shall be provided that will cause the opening of the power circuit to the escalator driving machine motor and brake where a resilient vertical force not greater than 268 N (60) LBS) in the upward direction is applied at the center of the front of the comb-plate.

**7. General comments on this proposal: (Please include any additional background that would be helpful or comments on any similar proposals that you are aware of)**

121 escalator accidents or the last four years, approximately 17 affected by entrapments at the comb teeth with one death.

Mr. Franklin from New York reports:

The comb-stop switch has decreased the amount of lost toes and fingers being ripped off due to escalators continuing to run while person is entrapped. Comb-entrapment of digits, sneakers and all forms of footwear on devices equipped with a comb-stop switch will cause the escalator to shut down instead of running continuously and pulling the entrapped item and the person further into the escalator landing plate area. The comb-stop switch is also instrumental in serious preventing injury and strangulation due to clothing being pulled into the comb area. Once again this layer of safety is accomplished by the Comb-Stop switch shutting the escalator down instead of allowing the device to run continually. All types of escalators in NYC have been retrofit with the comb-plate stop switches including the wooden 1919 vintage units at Macy's flagship store at Herald Square. These units are Otis L and ML units. At present all escalators in New York City have been retrofitted with the comb-stop switch.

*Donald J Franklin*  
*Deputy Dir. Field Ops. & Training*



**280 Broadway, 4<sup>th</sup> Floor**  
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✉: [dfranklin@buildings.nyc.gov](mailto:dfranklin@buildings.nyc.gov)

ASME A17.1-2010 currently states:

**6.1.6.3.13 Comb-Step Impact Devices.**

Devices shall be provided that will cause the opening of the power circuit to the escalator driving-machine motor

and brake if either

(a) a horizontal force not greater than 1 780N(400 lbf) in the direction of travel is applied at either side, or not greater than 3 560 N (800 lbf) at the center of the front edge of the comb-plate; or

(b) a resultant vertical force not greater than 670 N (150 lbf) in the upward direction is applied at the center of the front of the combplate. These devices shall be of the manual-reset type.

**8. Elevator Advisory recommendations:**