

**The Florida Senate**  
**BILL ANALYSIS AND FISCAL IMPACT STATEMENT**

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

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Prepared By: The Professional Staff of the Committee on Rules

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BILL: CS/SB 1634

INTRODUCER: Rules Committee and Senator Steube

SUBJECT: Residential Elevators

DATE: April 6, 2017

REVISED: \_\_\_\_\_

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Present	Yeatman	CA	<b>Favorable</b>
2.	Present	Phelps	RC	<b>Fav/CS</b>

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**Please see Section IX. for Additional Information:**

COMMITTEE SUBSTITUTE - Substantial Changes

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**I. Summary:**

CS/SB 1634 removes the requirement that the underside of the platform of an elevator car be equipped with a device that, if the platform of the elevator car is obstructed anywhere on its underside in its downward travel, interrupts the electric power to the driving machine motor and brake and stops the elevator car's downward motion. The bill replaces the current requirement with a new requirement that all new elevator controllers in private residences must:

- Monitor the closed and locked contacts of the hoistway door locking device.
- Cut off any power to the elevator motor and brake if the closed and locked contacts of the landing locks are open while the elevator car is not in the unlocking zone for the hoistway door.
- Not allow the elevator car to restart until the owner or the owner's agent has checked for obstructions above and below the elevator car, returned the hoistway door locking device contacts to normal operating position, and manually reset the elevator controller with the master elevator key.

The bill provides that a visual indicator must be visible at all landings until the hoistway door locking device has been returned to the normal operating position and the elevator has been manually reset.

The bill also requires the Florida Building Commission to adopt a provision for a hoistway door space guard.

## II. Present Situation:

Chapter 399, F.S., on elevator safety, is enforced by the Division of Hotels and Restaurants within the Department of Business and Professional Regulation (DBPR). Section 399.02(3)(u), F.S., lists elevators located in private residences as equipment not covered by the chapter. However, s. 399.031, F.S., sets forth building requirements for new elevators in private residences.

The Florida Building Code (Code) provides the requirements for “the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height...”<sup>1</sup> The Code provides that private residence elevators shall comply with American Society of Mechanical Engineers (ASME) requirements, and shall comply with the requirements set forth in s. 399.031, F.S.<sup>2</sup>

ASME develops and maintains major codes addressing safety in design, construction, installation, operation, inspection, testing, maintenance, alteration, and repair of elevators, dumbwaiters, escalators, moving walks, material lifts, and dumbwaiters with automatic transfer devices, wheelchair lifts, or inclined-stairway chair lifts.<sup>3</sup>

In the last few years, the media reported several private residential elevator accidents involving children.<sup>4</sup> A major concern is that many residential elevators have a dangerous gap between the elevator and hoistway door which allows children as old as 12 to fit between them. The hoistway door is the door that opens to reveal the elevator car or elevator shaft. When the elevator is called to another floor, the hoistway door automatically locks, and the child’s body is carried along with the elevator car, often crushing the child, leading to death or permanent injuries.<sup>5</sup>

In January 2015, 12-year-old Maxwell Erik “Max” Grablin crawled into the elevator shaft in his home in Bradenton to find his pet hamster. The elevator’s hoistway door locked behind him, trapping him in the elevator shaft. The elevator was lowered and crushed him.

The owner of the elevator company indicated to Mrs. Grablin that the accident that resulted in Max’s death would not have happened if the elevator had an inexpensive sensor.<sup>6</sup>

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<sup>1</sup> Section R101.2 of the 5th edition of the Florida Building Code (Residential).

<sup>2</sup> Section R321.1 of the 5th edition of the Florida Building Code (Residential) and s. 399.031, F.S.

<sup>3</sup> ASME, Safety Codes and Standards, available at <https://www.asme.org/about-asme/standards/safety-codes-for-elevators-and-escalators> (last visited March 16, 2017).

<sup>4</sup> See The Safety Institute, Safety Advocates Petition CPSC for Mandatory Residential Elevator Standard Citing Numerous at Deaths <http://www.thesafetyinstitute.org/safety-advocates-petition-cpsc-for-mandatory-residential-elevator-standard-citing-numerous-deaths/> (last visited March 16, 2017), and CBS News, In-home elevator accidents causing catastrophic harm to kids at <http://www.cbsnews.com/news/in-home-elevator-accidents-causing-catastrophic-harm-to-kids/> (last visited March 16, 2017).

<sup>5</sup> *Id.*

<sup>6</sup> Kate Irby, After Florida boy suffocates in elevator shaft chasing pet hamster, his parents on safety mission, Jan. 18, 2016, <http://www.miamiherald.com/news/state/florida/article55252190.html> (last visited March 16, 2017).

As a result, the Legislature enacted the Erik “Max” Grablin Act.<sup>7</sup> The act requires that the underside of the platform of an elevator car be equipped with a device that, if the platform of the elevator car is obstructed anywhere on its underside in its downward travel, interrupts the electric power to the driving machine motor and brake and stops the elevator car's downward motion within two inches. The downward motion can only be resumed after the elevator has been manually reset. The section also provides specific measurements for clearances and requires specified force amounts for doors and gates of elevators.

The Legislature also required the Florida Building Commission to adopt s. 399.031, F.S., into the Code. The Code is implemented by the Florida Building Commission within DBPR.<sup>8</sup>

In order to comply with the Legislature, the Florida Building Commission enacted section R321.4.1 of the 2016 supplement to the 5th edition of the Florida Building Code (Residential).<sup>9</sup> The subsection deals with the permanent installation of a nonremovable, hoistway door space guard.

The Florida Building Commission also enacted section R321.4.2 of the 2016 supplement to the 5th edition of the Florida Building Code (Residential).<sup>10</sup> The subsection requires a device located on the underside of an elevator car to interrupt electric power to the driving machine and brake and stop the elevator car's downward motion within two inches. The downward motion can be resumed only after the elevator has been manually reset.

### III. Effect of Proposed Changes:

**Section 1** requires the elevator controller to monitor the closed and locked contacts of the hoistway door locking device, whether electrical or mechanical, during normal operation.

If the closed and locked contacts of the landing locks are open while the car is not in the unlocking zone for the hoistway door locking device, the elevator controller must interrupt power to the motor and brake. Additionally, the elevator controller must not allow the elevator car to restart until the owner or owner's agent, with a master elevator key, has checked for obstructions above and below the elevator car, returned the hoistway door locking device contacts to the normal operating position, and manually reset the elevator controller with the master elevator key. Furthermore, a visual indicator must be visible at all landings until the hoistway door locking device has been returned to the normal operating position and the elevator controller has been manually reset.

This requirement replaces the existing requirement that the underside of an elevator car be equipped with a device that, if the elevator car is obstructed anywhere on its underside in its downward travel, stops the elevator car's downward motion within 2 inches.

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<sup>7</sup> 2016-211, Laws of Fla.

<sup>8</sup> Section 553.74, F.S.

<sup>9</sup> Florida Building Code, 2016 Supplement to the 5<sup>th</sup> Edition (2014), available at [http://www.floridabuilding.org/fbc/thecode/2017\\_Code\\_Development/Glitch\\_2016/2016\\_Supplement\\_to\\_the\\_5th\\_Edition\\_2014\\_FBC.htm](http://www.floridabuilding.org/fbc/thecode/2017_Code_Development/Glitch_2016/2016_Supplement_to_the_5th_Edition_2014_FBC.htm) (last visited March 16, 2017).

<sup>10</sup> *Id.*

**Section 2** requires the Florida Building Commission to adopt, by October 1, 2017, a provision authorizing the permanent installation of a nonremovable, hoistway door space guard to comply with section R321.4.1(c)2-5 of the 5th edition (2014) of the Florida Building Code (Residential). The provision must require the hoistway door space guard to withstand a force of 75 pounds applied horizontally using a 4 inch-diameter sphere at any location within the folds on the car door without permanent deformation. The Florida Building Commission must also adopt s. 399.031, F.S., relating to clearance requirements between elevator doors for elevators inside a private residence, into the Florida Building Code.

**Section 3** provides an effective date of July 1, 2017.

**IV. Constitutional Issues:**

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

**V. Fiscal Impact Statement:**

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

Homeowners may incur indeterminate costs of complying with the new provisions when installing new residential elevators.

C. Government Sector Impact:

Residential elevators are not regulated by DBPR, so there is no fiscal impact to the state.<sup>11</sup> Local governments will enforce the provisions of the bill while conducting building inspections, so no fiscal impact is anticipated on local governments.

**VI. Technical Deficiencies:**

None.

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<sup>11</sup> Section 399.02(3)(u), F.S.

**VII. Related Issues:**

Section 399.02(3)(u), F.S., indicates that residential elevators are not covered by the chapter, but residential elevators are regulated in s. 399.031, F.S.

It is not clear if the bill requires the Florida Building Commission to remove its prior adoption of the requirement that the underside of the platform of an elevator car be equipped with a sensor device from the Code. Currently, section R321.4 of the 5th edition of the Florida Building Code (Residential) requires the underside of the platform of a residential elevator car be equipped with such a device.

In its analysis, the DBPR noted that the bill uses the phrase “owner or the owner’s agent” instead of “authorized personnel.”<sup>12</sup> According to DBPR, the use of the term “owner or owner’s agent” may lead a court to determine that Florida licensed elevator personnel are not required to reset an elevator in s. 399.031, F.S.<sup>13</sup>

**VIII. Statutes Affected:**

This bill substantially amends section 339.031 of the Florida Statutes.

**IX. Additional Information:**

- A. **Committee Substitute – Statement of Substantial Changes:**  
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

**CS by Rules Committee on April 6, 2017:**

- Removes one of the triggers that causes the elevator to cut off power to the motor and brake and prevents the elevator car from restarting until certain precautions are taken.

- B. **Amendments:**

None.

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This Senate Bill Analysis does not reflect the intent or official position of the bill’s introducer or the Florida Senate.

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<sup>12</sup> Department of Business and Professional Regulation, Legislative Bill Analysis for SB 1634, p. 5 (analyzed March 15, 2017).

<sup>13</sup> *Id.*