

Incident Summary #II-980960-2020 (#16635) (FINAL)

SUPPORTING INFORMATION	Incident Date		March 5, 2020
	Location		Victoria
	Regulated industry sector		Elevating Devices – B44 Freight Hydraulic
	Impact Injury	Qty injuries	0
		Injury description	Not Applicable
		Injury rating	None
	Damage	Damage description	Broken brackets supporting enclosure wall. Corrosion throughout steel wire enclosure.
		Damage rating	Moderate
Incident rating		Moderate	
Incident overview		An outdoor freight elevator with steel wire enclosure has corrosion throughout. One panel of the enclosure had multiple broken brackets leaving the panel only supported on one side. Access into the hoistway created through the compromised panel being movable.	
INVESTIGATION CONCLUSIONS	Site, system and components		A 2-stop outdoor freight elevator at a hospital. The freight elevator is inside an enclosure constructed of concrete and concrete blocks around the bottom landing and steel tube frame and wire mesh panels located above the concrete sections. There is a concrete ceiling above the elevator. Concrete pillars (<i>rail pillars</i>) run from the bottom of the hoistway to the concrete ceiling where the elevator guide rails are located (two pillars located across from each other). The top landing entrance gate is constructed of steel tube frame and wire mesh. The gate has wheels along the top that run on a steel track, the bottom of the gate is guided by the square steel tube frame of the gate running through a steel guide channel. (See photos) The steel portions of the enclosure are secured by brackets attached the concrete ceiling, <i>rail pillars</i> and to the concrete portions of the enclosure below the steel portions. Adjoining steel panels of the enclosure at enclosure corners are fastened together with brackets.

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Failure scenario(s)	The top landing gate being struck by pallets of delivered goods caused the gate to become bowed over time, which reduced the clearance of the gate to the adjacent rigid enclosure panel. When the gate is opened the reduced clearance caused the gate to strike the adjacent panel. Corrosion of the enclosure and steel brackets combined with the repeated impacts caused the adjacent rigid panel to have its brackets break, leaving only one side of the panel being supported.
Facts and evidence	Evidence observed during on-site investigation: • Corrosion throughout the steel enclosure. • Delivery trucks back up to the top elevator landing and load the elevator with pallets of goods using powered pallet jacks. • The gate is protected from being struck by delivery trucks by bollards located at the corners of the enclosure. • The gate is bowed in towards the elevator. • Opening the upper landing gate can cause it to strike the adjacent enclosure panel. • The top support bracket (attached to the ceiling) of the compromised panel, located adjacent to the gate, is broken. (see photo 3) • The bottom support bracket of the compromised panel, located adjacent to the gate, is broken. (see photo 4) • The compromised panel is now only supported by brackets attached along one side to the adjacent <i>rail pillar</i>. • The compromised panel is located above a passageway for hospital employees.
Causes and contributing factors	Corrosion to the steel portions of the enclosure is likely the main contributing factor. Pallets of delivered goods striking the landing gate is possibly a contributing factor. The gate striking the adjacent rigid enclosure panel is likely a contributing factor.

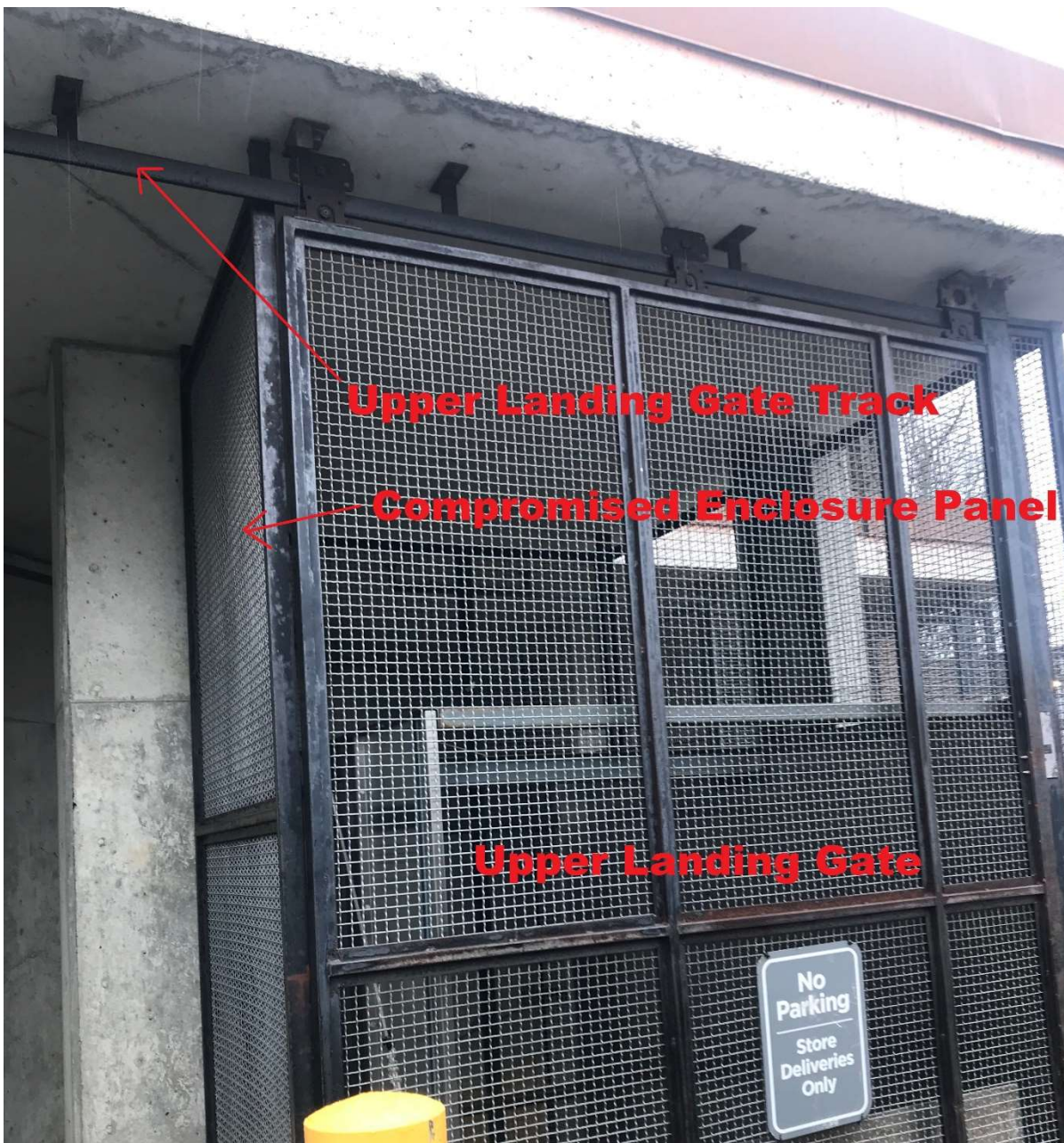


Photo 1 – Upper landing gate with roller guide track and damaged enclosure panel



Photo 2 – Bottom of upper landing gate



Photo 3 – Broken top bracket of compromised enclosure panel



Photo 4 – Broken bottom bracket of compromised enclosure panel