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## CASE STUDY

Los Angeles Metro System | Los Angeles, California

### Exit Hatches Add Vital Safety Component on Major Rail Project

Underground construction is especially dangerous, particularly in large urban areas with pipes, wires and infrastructure that keep a city connected. When Walsh/Shea Corridor Constructors started to build a long rail line in Los Angeles, Calif. that included underground stations, one of its first objectives was to plan for emergency egress for underground workers.

The 8.5-mile Crenshaw/LAX Transit Project rail line includes six emergency exit hatches and four large doors to access underground control systems. The hatches and doors, manufactured by The BILCO Company in New Haven, Conn., provide code-compliant egress for underground workers, and eventually, subway riders.

“Even before there were any designs, the engineering team knew that they needed doors that would provide safe and reliable emergency egress” said Dave Pebley of Specialty Building Components, the sales representative for The BILCO Company in Pico Rivera, Calif. “The doors had to meet code requirements, but also stand up to the demands of the job.”

Installed at stops along the entire length of the line, the doors are equipped with many custom features that make them ideal for use in this application. Each is equipped with engineered lift assistance and a two-point panic locking mechanism that allow the doors to open with less than 30-pounds of force, a critical requirement for safe egress in an emergency. Additional features will also be added at the ground level where the doors will be installed in sidewalks to ensure reliability and enhanced safety.

To prevent structural damage, the doors are reinforced for vehicular loading to withstand the weight of an occasional car or truck that may drive onto the sidewalk. They also feature a slip resistant coating on the walking surface to ensure safety in these high pedestrian traffic areas.

There are two emergency doors at the Expo/Crenshaw, Martin Luther King, and Leimert Park underground stations. The stations at Hyde Park, Fairview Heights, Downtown Inglewood and Westchester/Veterans are at-grade and the Aviation/Century stop is elevated, so emergency evacuation doors are not required.

“These doors are located on the sidewalk and had to be tested by the fire department.” Pebley said. “They meet H-20 wheel loading specifications, but are also light enough to be opened easily by one person. which is an engineering challenge.”



Planning for this \$2.058 billion project started in 1992 and the extension is designed to better serve transit-dependent residents in the corridor and provide economic stimulus in the region. The project will be the first rail line to serve Crenshaw Boulevard and the city of Inglewood since streetcars of the Los Angeles Rail Line stopped running in 1955. The new light rail line will use the alignment of the streetcars in some instances. It is expected to be operational in 2019.

Los Angeles is amid a major infrastructure update in advance of the 2028 Summer Olympics. Besides the new Crenshaw line, Los Angeles is also building a nine-mile extension to a Westside subway line and an automated people mover that will serve people on the Crenshaw Line and help them connect to the broader Metro rail network.

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