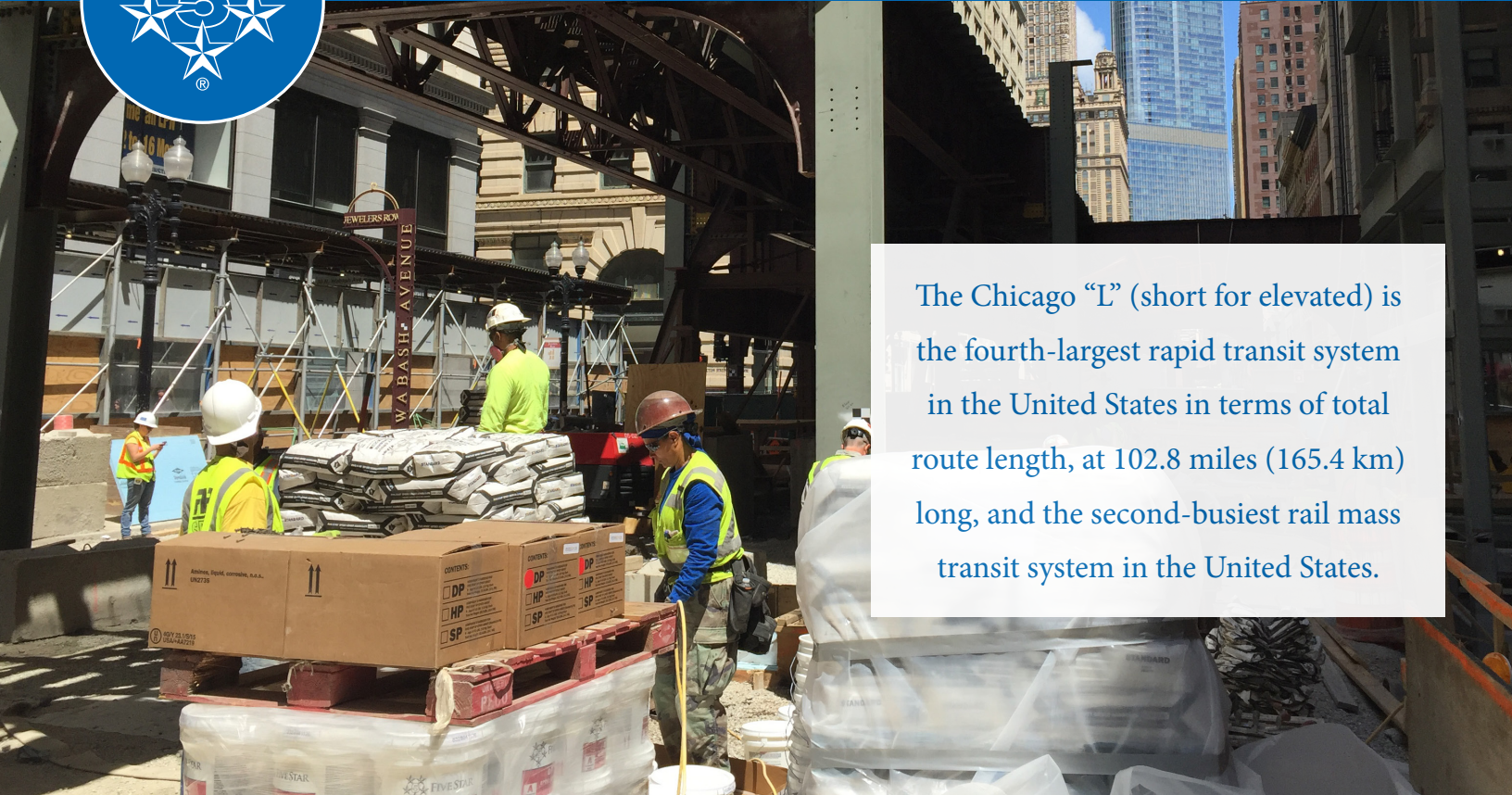




# SOLUTIONS | Case Study



The Chicago “L” (short for elevated) is the fourth-largest rapid transit system in the United States in terms of total route length, at 102.8 miles (165.4 km) long, and the second-busiest rail mass transit system in the United States.

## Chicago Transit Authority (CTA) Loop Elevated Track Structure

Chicago, IL

**Application:** Supplemental electrical isolation of steel column bases below pavement

**Product:** Five Star® DP Epoxy Grout

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Build on our strength



# Chicago Transit Authority (CTA) Loop Elevated Track Structure



Preparation Includes Creating Forms Around the Beams



Pouring the DP Epoxy Grout



Monitoring Exotherm After Single 36" Pour

## Five Star® DP Epoxy Grout

### Dual-Purpose, Deep Pour Precision Grout

Five Star® DP Epoxy Grout is the only expansive, non-shrink, low exothermic epoxy system for machinery grouting. This versatile, dual purpose product is formulated for single, large volume placements and may be used as thin as 1/2 inch (13 mm) in depth. Five Star® DP Epoxy Grout is a three component, 100% solids, solvent-free system formulated to provide high-strength and superior creep resistance combined with the highest effective bearing area. Five Star® DP Epoxy Grout exhibits positive expansion when tested in accordance with ASTM C 827.

- Permanent support for machinery requiring precision alignment
- Low exothermal properties with early strength development
- Chemically resistant
- Adjustable flow for various conditions

## FIVE STAR® SERVICES

- Design-A-Spec™ engineering specification assistance
- Technical on-call center with field and project experienced staff
- Field support representatives for on-site consultation



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**Date of Project:** May 2016 to July 2017

**Project Owner:** Chicago DOT/CTA

**Project Contractor:** F.H. Paschen

**Resident Eng./Const. Mgr:** Burns and McDonald

**Engineer of Record:** EXP

**Market/Environment:** Rail Transit

**Substrate:** Steel Columns and Concrete

**Size of Project:** 800 units

## The Challenge

CTA's standard is to electrically isolate above-ground steel column bases on concrete piers. This was not possible due to traffic lane width limitations along Wabash Street. Therefore, steel columns for the CTA elevated structure were designed to extend 3'- 4' below top of street pavement.

In order to eliminate the possibility of stray electrical current and deterioration of the steel column, epoxy grout was specified to supplement CTA's standard isolation detail. Epoxy grout provides excellent bonding characteristics to concrete and steel, and it also has great durability and electrical insulating properties.

## Five Star® Solution

Five Star® DP Epoxy Grout brought significant benefits to this project; one being the ability to pour depths up to 36" in one lift. This factor played a major role in DP Epoxy Grout being selected for the project, as it can be poured at greater depths while still providing electrical insulation.

With space being minimal in the work area, the Five Star® DP Epoxy Grout was transported in from an off-site storage location. Working with Five Star's engineering and technical support teams, the contractor was able to devise creative ways to get this job completed in a timely manner.

For worldwide availability, additional product information and technical support, contact your local Five Star® licensee, distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

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