



SOLUTIONS | Case Study

Originally built in the 1960s, the Desmond Gerald bridge has long been a keystone of the United States' trade infrastructure, as well as a mainstay commuter travel bridge between downtown Long Beach, its surrounding communities, and the Port of Long Beach.



Desmond Gerald Bridge Replacement

Long Beach, CA

Product:

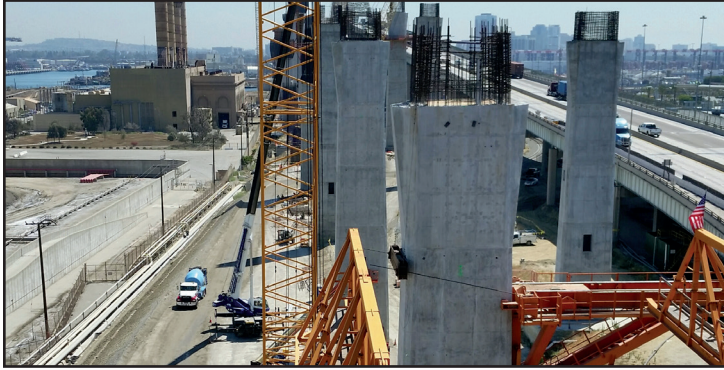
Five Star[®] SP Epoxy Grout PG

For information 1-800-243-2206 • FiveStarProducts.com



Build on our strength

Desmond Gerald Bridge Replacement



Date of Project: 2016

Project Owner: Port of Long Beach

Project Contractor: Schimmick Construction Co. Inc., FCC Construction SA, & Salini Impregilo

Project Engineer: Parsons Transportation Group and HNTB

Market/Environment: Infrastructure

Substrate: Concrete Column

Size of Project: 20 Units of Five Star® SP Epoxy Grout PG

The Challenge

The deck of this long-span cable-stayed bridge, rising 205 feet above-grade, provides a higher clearance to accommodate taller cargo ships, incorporates additional traffic lanes, and includes a dedicated bicycle/pedestrian walkway. The overall height of the bridge's towers reaches 515 feet tall.

Two temporary crane-bearing beam pads on opposing sides of the bridge structure needed to be set up for the crane to manipulate segments into place. The rails the crane rests on were located 120+ feet above the ground, atop concrete columns. A grout was needed that provided an extremely high compressive strength with rapid strength development.

Five Star® Solution

Five Star Products offered an epoxy grouting option that provided the required high compressive strength, rapid strength development, and excellent flow characteristics.

Placing the epoxy grout via a headbox and plunger, **Five Star® SP Epoxy Grout PG** was used to successfully grout these beam pads — roughly 4.5' in length x 12" wide — with a 1" clearance. Multiple crane supports will be erected as the bridge span grows and progress on the project moves forward. The utilization of this crane, form system, and project advancement process is believed to be the first in the United States, according to the Contractor.

As a joint venture effort funded by Caltrans and the Port of Long Beach, with funding contributions from the US DOT and LA County Metropolitan Transportation Authority (Metro), this project was a large-scale undertaking. While construction originally began in 2013, this \$1.2 billion dollar project is expected to be open to traffic in late 2019, with an expected completion date in 2020.

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

Five Star® SP Epoxy Grout PG (Pump Grade)

Superior Performance, Precision Non-Shrink Grout

Five Star® SP Epoxy Grout PG is the next generation in ultra-high performance epoxy grout. Five Star® SP Epoxy Grout PG has extremely high compressive strength, is expansive non-shrink per ASTM C 827 with ultra-low creep and 95% or better Effective Bearing Area (EBA). Five Star® SP Epoxy Grout PG is a 100% solids epoxy grout system for high performance machinery and equipment.

- Ultra-high 1 day & 7 day strengths
- Excellent chemical resistance
- Compressors and turbo-machinery
- Wind turbine bases and crane rails
- High dynamic load applications

FIVE STAR® SERVICES

- Design-A-Spec™ engineering specification assistance
- Pre-placement meetings
- On-call center with experienced engineering and technical support
- Field support representatives for on-site consultation



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