

# JUNCTION BRIDGE

Stretching roughly 1,800 feet across the Arkansas River between North Little Rock and Little Rock, the Junction Bridge has gone from train rails to 52-inch pedestrian handrails, protected from weather and heavy foot traffic by a high-performance coating system from Tnemec. "With the bridge sitting over the Arkansas River, it would be difficult and costly to blast and repaint the metal handrails and stair casings in the future," according to Tnemec coating consultant Myron McWherter. "So it was important to use a coating system that would provide long-term performance and prolong the life-cycle of the structure."

Steel handrails and stair casings were prepared by the fabricator in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning and shop-primed with Series H90-97 Tneme-Zinc, a moisture-cured, zinc-rich urethane that is HAPs compliant for in-shop use. Next, an intermediate coat of Series 66 Hi-Build Epoxoline, a polyamide epoxy, was applied, followed by a topcoat of Series 1074U Endura-Shield II, an aliphatic acrylic polyurethane that is highly resistant to ultraviolet (UV) light, abrasion, wet conditions, corrosive fumes, and exterior weathering. More than 600 gallons of coatings were shop-applied using airless spray equipment.

"Ultraviolet light was a consideration," McWherter noted. "There's no shade on the bridge, so the steel is exposed to sunlight, leading to concern over the handrails fading. The engineer wanted a coating that would retain color so it wouldn't be necessary to recoat the bridge for a long time. That's why we recommended the additional UV protection available with Series 1074U."

Constructed in 1884 as the primary railroad bridge connecting the northern and southern railway lines, Junction Bridge was closed to rail traffic in 1985. Conversion of the bridge into a pedestrian and bicycle venue for public use was completed in 2008 with funding provided by local, state and federal transportation funds.

## FEATURED PRODUCTS

Series 66 Hi-Build Epoxoline  
Series H90-97 Tneme-Zinc  
Series 1074U Endura-Shield II



## PROJECT INFORMATION

### Project Location

Little Rock, Arkansas

### Project Completion Date

May 2008

### Owner

Pulaski County Bridges Facilities Board  
Little Rock, Arkansas

### Architect/Engineer

McClelland Engineers  
Little Rock, Arkansas

### Shop Applicators

Hodge Fabrications  
Little Rock, Arkansas  
Sandman Blasting  
North Little Rock, Arkansas

The steel handrails and stair casings on the Junction Bridge in Little Rock, AR received a topcoat of Series 1074U Endura-Shield II because of the coating's added UV protection.

