THE MIDDLESEX CORPORATION

KENNETH F. BURNS MEMORIAL BRIDGE REPLACEMENT, WORCESTER, MA

DESIGN-BUILD

OWNER: MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK

- Construction of five-span steel deck arch bridge with a length of 870'
- Three eastbound and three westbound travel lanes
- New turning lanes
- Wide, bicycle-accommodating shoulders
- ADA-compliant sidewalks/scenic overlooks
- Improved stormwater management

PROJECT DETAILS

- 4,000 tons of structural steel
- 10,000 CY of concrete
- 19,000 tons of pavement
- 25,000 CY of excavation
- Open Spandrel Steel-Tied Deck Arch
- Project Value: $105M

The construction of the Kenneth F. Burns Memorial Bridge was a complex and high-profile project that replaced a structurally deficient, seven-span concrete arch bridge built in 1916 with two new bridges over Lake Quinsigamond, between Worcester and Shrewsbury, MA. The new bridges are 870' long, five-span open spandrel steel deck arches founded on 36" diameter pipe piles up to 290' deep. The project also included reconstructed portions of Lake Avenue and Route 9 and contains many architectural features.

UNIQUE CHALLENGES

- Maintain traffic flow Route 9 (53,000 vehicles per day)
- Maintain lake access for recreational users with a minimum. 50' clear channel at all times
- Bridge construction and deep foundation installation adjacent to a 95-year-old structurally deficient bridge

AWARD-WINNING PROJECT

2016 National Steel Bridge Alliance – Best Medium Span Bridge

2016 APWA Professional Award – Project of the Year

2016 ACEC/MA Engineering Excellence Award – Gold

2016 ENR New England's Excellence in Safety Award of Merit

2016 I Build America Construction Impact Awards – Grand Prize Winner

2016 AASHTO Northeast Association of State Transportation Officials (NASTO) for Outstanding Transportation Projects

2015 ABC Excellence in Construction

2015 DBIA of America NE Chapter Gold Award in Highway/Infrastructure