



# CENTRAL AVENUE BRIDGE REHABILITATION

## CHALLENGE

A CRITICAL LINK BETWEEN NEIGHBORHOODS, THE 50-YEAR OLD BRIDGE WAS RAPIDLY DETERIORATING.

## SERVICES

- Bridge Design
- Bridge Inspection
- Bridge Rehabilitation
- Lighting Design
- Roadway Design
- Structural Engineering
- Structural Inspection
- Surveying
- Traffic Engineering
- Utility Coordination

## AWARDS



2010 ENGINEERING  
EXCELLENCE SILVER AWARD  
American Council of Engineering  
Companies (ACEC) of West Virginia

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Linking the neighborhoods on the north and south sides of Interstate 64 and railroad tracks, the Central Avenue Bridge is an important crossing for the community

and a critical route for school buses and emergency response vehicles. After a routine inspection by the West Virginia Department of Transportation, inspectors

noted chunks of concrete falling from the bridge. Due to the dangers of the falling concrete, city officials immediately closed the bridge to all traffic. The city of South Charleston then called in ms consultants for a thorough inspection which revealed the bridge had significantly deteriorated.

After the inspection, the city then hired ms consultants to develop a solution to the problems outlined by ms bridge inspectors. To reopen the bridge to vehicle and pedestrian traffic as soon as possible, ms first developed temporary repairs with a three-ton load limit, allowing standard passenger vehicles to safely travel the bridge.

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## PERMANENT REHABILITATION

For permanent repairs, ms performed a detailed inspection that determined, saving overall costs. ms then prepared construction plans for replacement of the bridge deck, steel beams and bearings, and the rehabilitation of the abutments and piers. The bridge rehabilitation also required coordination with utility companies for relocation of utilities on or near the bridge and coordination with CSX railroad.

At the request of city officials, ms also developed aesthetic treatments for portions of the structure, including decorative lighting and fencing to maintain the South Charleston signature bridge style.

The rehabilitated Central Avenue Bridge is a two-lane, three-span structure that carries pedestrian and vehicular traffic over a rail yard. The bridge connects 2nd Avenue on the north to Kanawha Turnpike on the south and includes sidewalks on both sides. The rehabilitation consisted of complete superstructure replacement and substructure repair.

Construction exceeded expectations by being completed a week early and slightly under budget.