

# RECONSTRUCTION OF 16<sup>TH</sup> STREET BRIDGE OVER MILITARY ROAD NW



## OVERVIEW

**Location:** 16th St NW at Missouri Ave and Military Rd.

**Client:** DDOT

**Period of Performance:** October 2014 – November 2015

**Contract Value:** \$15.8 M

**FMCC Job No.:** 10035 (bridge), 10036 (roadway), 10037 (electrical)

**Award Winner:** 2016 ABC Excellence in Construction

## Project Description

The existing 16th Street, NW Bridge over Military Road was in an advanced state of deterioration with the load rating prior to demolition only slightly above the legal level. This project, exemplifying safe, effective, and efficient construction, replaced the existing reinforced concrete rigid frame bridge, abutments and adjoining wing walls, with prefabricated superstructure units. Also included, replacement of the median barrier and improvement of streetlights. The bridge work entailed demolition of the old bridge span, building footing for the new bridge, bringing in the precast concrete deck, placing approaching slabs, sidewalk, walls, and striping.

## Project Significance

Accelerated Bridge Construction (ABC) System was implemented, meaning innovative planning, design, materials, and construction methods are used in a safe, cost-effective manner to reduce the onsite construction time. Major components, like the girders and deck, were assembled off site, then delivered and set with minimal traffic disruption. While Fort Myer has a reputation for on-time delivery, DDOT exercised innovative contracting methods (incentive/disincentives) to assure the project was completed by July 15, 2015. In addition to advanced construction and delivery methodology, this is the first project Fort Myer has deployed Ultra-High Performance Concrete (UHPC), which is an advanced construction material, setting to the highest strength. The Federal Highway Administration sought UHPC for this project because its advanced composite materials demonstrate mechanical, flexural, and durability properties far surpassing those of conventional concrete. This relatively new class of advanced material affords new opportunities for the future of roadway and bridge infrastructure.

## Client Reference

Mr. Paul Hoffman, PE, DDOT Program Manager, Wards 3 & 4  
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## Key Personnel

Mouhamed Diop – Project Manager | Ricky Fernandes – VP Bridge Division  
Hilario Barros - Superintendent | Mark Fuhrman – Electrical Superintendent

