FDOT Transportation Innovation Initiative:

UHPC – Design Innovation





Fast Facts:

Ultra-High
Performance
Concrete



Project Location: FDOT District Five Brevard County, Florida

Agency: Florida Department of Transportation

URL: http://www.fdot.gov/structures/innovation/UHPC.shtm

Project Name: I-95 NB over CR 5A

Bridge No. 700156 FPID: 438321-1

Project Description: Partial Deck Replacement using full depth

precast deck panels with UHPC joints.

Project Purpose & Need: Bridge Inspection Reports identified

deterioration, of deck sections using partial depth precast panels. Work activities included removal of the existing deck concrete and panels, installation of a new full depth precast panels and connections with straight splice

bars and UHPC joint fill.

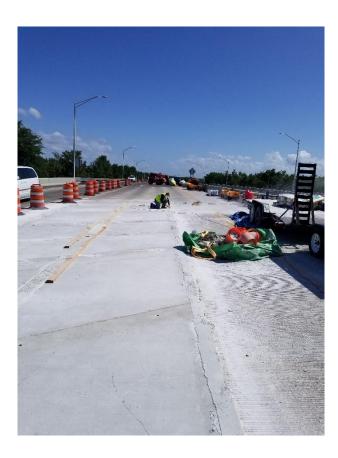
Overall Budget/Cost Estimate:

\$334,599 (Construction Contract)

What was unique about this project?

First use of UHPC for connections full-depth precast deck panels

for interstate repair in Florida.



Describe Traditional Approach:

Traditional approach includes using hooked and lacing reinforcing bars within wider closure pours using high early strength concrete.

Describe New Approach:

Utilization of short length straight bars lap splices with nominal 8" with UHPC closure pour.

Top Innovations Employed:

Utilization of UHPC connections for rapid replacement of damage deck.

Primary Benefits Realized/Expected:

More robust and longer service life from precast deck panel and UHPC connections. Short closure time for interstate bridge lane (4/9/8 – 4/12/18).

Project Start Date/Substantial Completion Date:

10/9/2017 - 4/19/2018

Affiliations: PE Consultant:

Construction Contractor:

Construction Engineering Inspection:

Project Contact: Engineer of Record: **Target Engineering**

Kisinger Campo and Associates Corp.

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FDOT Project Manager: **Richard Clements**

FDOT Brevard Operations

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