Welcome to the Virginia Department of Transportation's (VDOT) public information meeting about plans to rehabilitate the Duke Street (Route 236) bridge over I-395 in order to improve safety for drivers, bicyclists and pedestrians. The bridge was built in 1965. We look forward to your active participation.

This meeting is being held to provide an opportunity for residents and organizations to give VDOT comments and/or suggestions on the proposed project. VDOT strives to ensure that all members of the community have the opportunity to participate in public decisions on transportation projects and programs affecting them.

VDOT representatives are here to discuss the project and answer your questions. We've included a comment sheet with this brochure and encourage your input. All written comments received will be reviewed by the design team, summarized and made available on the VDOT project website.

**Project at a Glance**

- **Purpose:** Aims to improve operations and safety for drivers, bicyclists and pedestrians
- **Lengths and Limits:** Duke Street bridge over I-395
- **Phase:** In Design
- **Construction Begin Date:** Spring 2020
- **Cost:** $15 million

This project is being financed with state and federal State of Good Repair funds used for maintenance of structures and bridges.
This project will rehabilitate the Duke Street (Route 235) bridge over I-395 in order to improve safety for drivers, bicyclists and pedestrians and extend the overall life of the bridge. The bridge was built in 1965.

The planned improvements include a new concrete bridge deck and steel beams, replacing the westbound sidewalk with a shared-use path and widening the eastbound sidewalk.

Duke Street averages 56,000 vehicles a day at the interchange, while I-395 averages up to 192,000 vehicles a day in the area.

Pursuant to the National Environmental Policy Act (NEPA) and 23 CFR 771, a Programmatic Categorical Exclusion (PCE) was prepared on November 18, 2016 for this project under agreement with the Federal Highway Administration (FHWA) dated May 1, 2013.

VDOT will review and evaluate any information received as a result of the public information meeting. The comment sheet and brochure is provided to assist in making your comments. You may leave the sheet or any other written comments in the comment box, or mail/email your comments.

Comments must be postmarked, emailed or delivered to VDOT by Oct. 1, 2018. Mail comments to Edwin Woo, P.E. at the address below or email meetingcomments@vdot.virginia.gov.

Please include “Duke Street over I-395 Bridge Rehabilitation” in the subject line.

Project information shared here, including a summary of comments received during the comment period, will be available at a www.virginiadot.org/projects and at VDOT’s Northern Virginia District Office.

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All comments are subject to public disclosure.

Name (optional): __________________________________________________________

Address (optional): _______________________________________________________

Email (optional): _________________________________________________________

1. What are your major concerns that you would like to see incorporated into this project?

2. Please provide us with any additional information or suggestions that will assist VDOT in the completion of this project.

4. How did you hear about this meeting?

_____Newspaper _____Social Media _____Website _____Other ____________________________

Please leave this comment sheet at the designated location, mail your comments (postmarked by Oct. 1, 2018) to the addressee on the reverse side, or email them to meetingcomments@vdot.virginia.gov. Please include “Duke Street over I-395 Bridge Rehabilitation” in the email subject line.
Postal Service will not deliver without a stamp

Virginia Department of Transportation
Northern Virginia District
Mr. Edwin Woo, P.E.
4975 Alliance Drive
Fairfax, VA 22030
DUKE ST. (RTE. 236) OVER I-395
CITY OF ALEXANDRIA
BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE
REHABILITATION
PROJECT NO. 0236-000-862; UPC 110032

PUBLIC INFORMATION MEETING

Edwin Woo, PE – Project Manager, Structure & Bridge
PROJECT LOCATION
PROJECT OVERVIEW

EXISTING BRIDGE DESCRIPTION

• The bridge was built in 1965 with a composite concrete deck on steel rolled beams with cover plates.
• The Bridge is 305’ long (Five simple spans, 41’-78’-54’-78’-50’) and 106’ wide (Dual bridges with longitudinal joint). The existing min vertical clearance is 16’-11”.
• The Bridge carries 3 lanes (2 thru and one auxiliary) in WBL and 2 thru lanes in the EBL. (39’ roadway curb-to-curb EBL and WBL, with 16’ raised median and 5’ sidewalks)
EXISTING BRIDGE DESCRIPTION (continued)

- Roadway Classification: Principal Arterial (Rte. 236), Urban Interstate (I-395)
- Posted Speed Limit: 35 mph (Rte. 236), 55 mph (I-395)
- 2017 Average Daily Traffic (ADT) Data: 56,000 vehicles (Rte. 236), 192,000 vehicles (I-395 Combined for NBL,SBL & HOV)
The Interchange Modifications being constructed by the I-395 Express Lanes project represent what will be the existing conditions during the construction of this bridge rehabilitation project.

Link to I-395 Express Lanes project:
EXISTING CONDITION

Bridge Deck:
- Condition Rating 5 of 9 (Fair)
- Top of the deck in fair condition due to numerous concrete and asphalt patch repairs and map cracking.
- The thin epoxy coating has failed and large areas have peeled off.

Bridge Superstructure:
- Condition Rating 6 of 9 (Satisfactory)
- The steel beams are in Satisfactory condition. Peeling paint and rust scale with minor section losses can be seen throughout the superstructure.

Bridge Substructure:
- Condition Rating 4 of 9 (Poor)
- All four bridge piers are in poor condition due to significant spalled and delaminated concrete on the pier caps and columns with exposed and corroded reinforcing steel.
- The abutments are in fair condition with minor cracks and spalled and delaminated concrete areas.
EXISTING CONDITION
BRIDGE DECK & APPROACH SLABS

WBL Deck and approach slab in fair/poor condition with numerous concrete and asphalt patch repairs and map cracking.

Pier deck joint in poor condition
Steel rolled beams with cover plates are in fair condition. Peeling paint and rust scale with minor section losses can be seen mainly below the deck joints. Last painted in 1997.
EXISTING CONDITION BRIDGE SUBSTRUCTURE

Spalled and delaminated concrete at the Abutment Backwall

Spalled and delaminated concrete and exposed rebar at the Pier caps
EXISTING CONDITION

Existing utilities will be maintained, temporarily supported and protected during construction and remain. Including: Gas Line, telephone and electrical conduits.
BRIDGE PLAN AND ELEVATION
PROPOSED WORK

• Replace concrete bridge deck with lightweight concrete. The new deck slab will be continuous over the piers to eliminate deck expansion joints. The Abutment expansion joints will be reconstructed with expansion dams.

• Add Shared-Use Path (WBL) and widened sidewalk (EBL)

• Replace four (fascia) beam-lines on bridge.

• Construct new crash tested concrete barriers on bridge and bridge approaches to improve driver safety.

• Replace all bearing assemblies and pedestals to accommodate the new continuous deck.

• Repair concrete delaminations and spalls at abutments, pier caps and columns using type B patching and galvanic anodes. Strengthen pier caps to increase shear capacity.
EXISTING TRANSVERSE SECTION

PROPOSED TRANSVERSE SECTION
PROPOSED WORK (Continued)

- Waterproof all existing substructure elements.
- Repair Duke Street approach concrete roadway 100 ft east of the bridge (Covered by State of Good Repair funding).
- All work will be within VDOT right of way.

Maintenance of Traffic

- Duke Street: All existing EB and WB through lanes will be maintained throughout construction. All lanes will be shifted as needed to accommodate staged bridge construction.
- SB I-395: Single lane closures during allowable nighttime closure hours will be required during the bridge pier repairs.
- NB I-395 and Express Lanes: All traffic lanes will remain open and be shifted during the bridge pier repairs.
PROPOSED MAINTENANCE OF TRAFFIC

- **Stage IA** – Work Areas for Abutment A, Piers 1 & 3

- **Stage IB** – Work Areas for Abutment B, Piers 2 & 4
PROPOSED MAINTENANCE OF TRAFFIC

Maintain two existing through lanes in each direction at all times during construction.

- **Stage II** – Remove raised median and replace the bridge deck and middle beams within the limits shown.

- **Stage III** – Replace the bridge deck, bridge parapet, sidewalk and exterior beams within the limits shown.

Legend:
- **Existing Structure**
- **Proposed Construction**
- **Existing Structure Removal**
- **Replacement of Existing Structure**
• Stage IV – Replace the bridge deck, bridge parapet, sidewalk and exterior beams within the limits shown.

• Stage V – Construct new concrete median barrier BMB-3A.
PROPOSED MAINTENANCE OF TRAFFIC (Continued)

Existing Conditions (after 395 Express Lanes Project improvements)


Stage III (westbound traffic shifts into median)

Stage II (median is removed to facilitate traffic shifts in other stages)

Stage IV (eastbound traffic shifts into median)

2 eastbound lanes and 2 westbound lanes maintained on Duke St

Work area on north side of bridge

Work area in median

2 eastbound lanes and 2 westbound lanes maintained on Duke St

Work area on south side of bridge

2 eastbound lanes and 2 westbound lanes maintained on Duke St
ANTICIPATED SCHEDULE AND COST

Anticipated Schedule:

Construction – Bridge Repair

Advertisement for Construction: Fall 2019
Begin Construction: Spring 2020
Construction Completion: Summer 2021

Estimated Project Cost: (State of Good Repair Funded)

Total Cost: $15 million (P.E. and Construction)
Preliminary Engineering . . . . . . . $850,000
Construction . . . . . . . . . . . . . . . . . . . . $14.15 million
THANK YOU

QUESTIONS & COMMENTS
Send comments via email or comment form until October 1st to:

Edwin Woo, P.E.
NOVA District Project Manager
(703) 259–2607
Edwin.Woo@vdot.virginia.gov