

# REGIONAL CONNECTORS STUDY

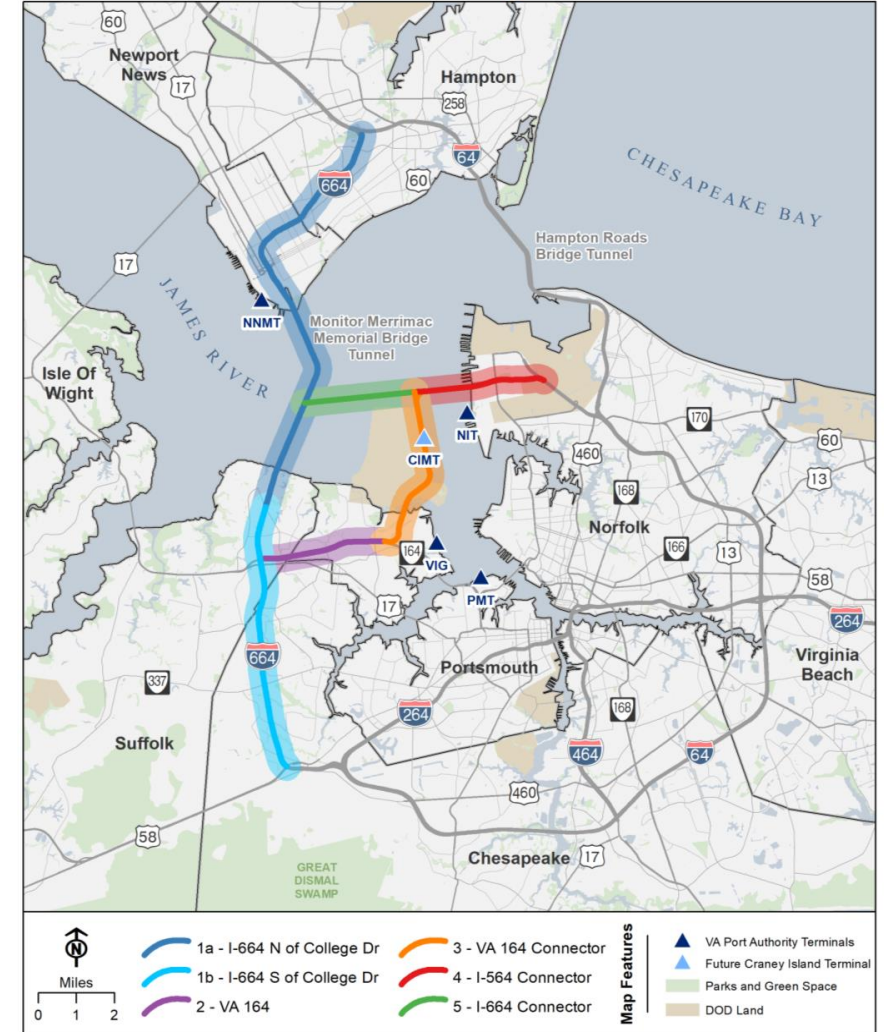
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**STEERING (POLICY) COMMITTEE AND WORKING GROUP MEETING  
AUGUST 9, 2022**

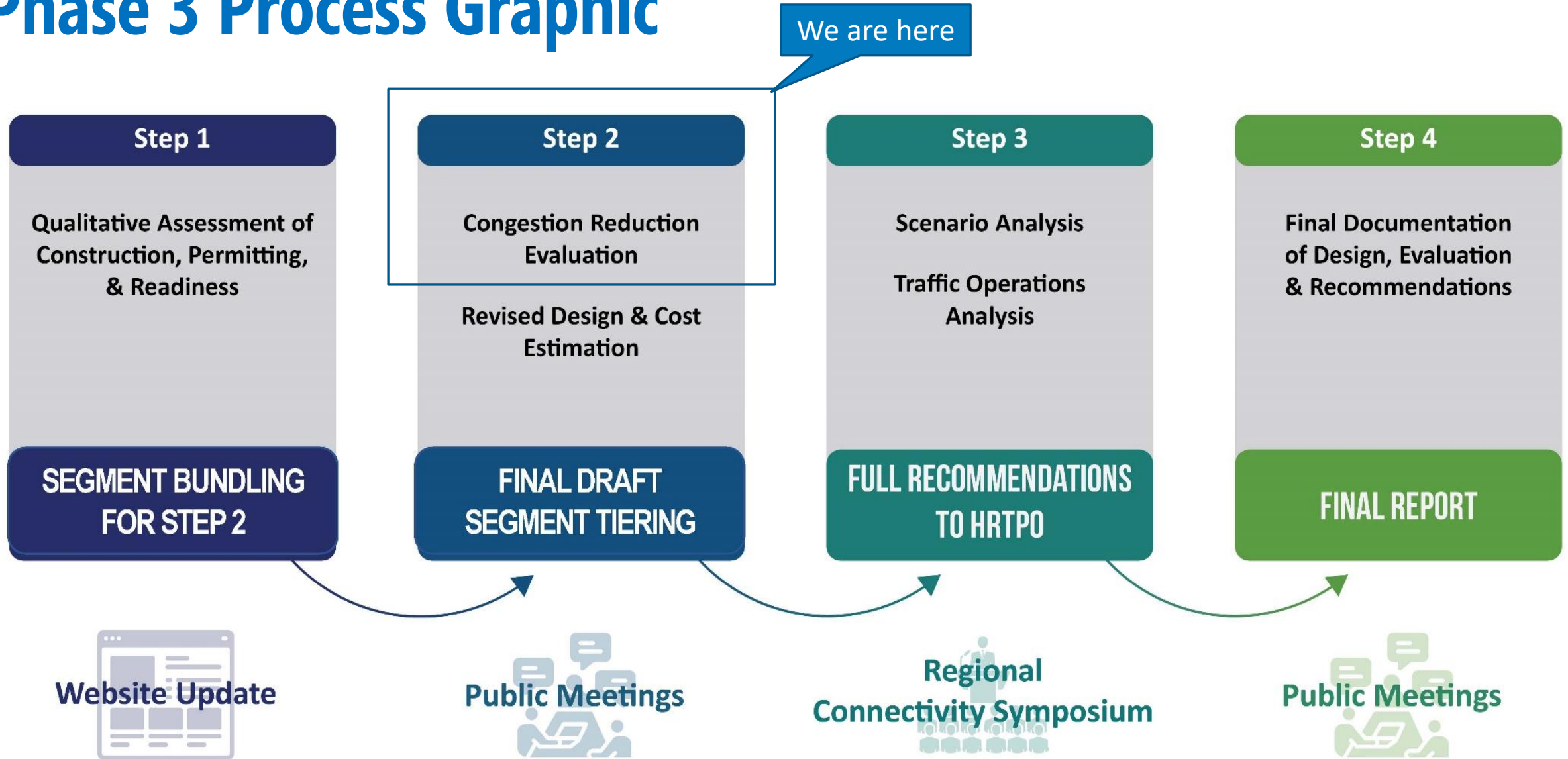
# RCS Phase 3 – Agenda

- Qualitative Evaluation of Mandated Segments and Segment Bundling - Comments and Responses
- Congestion Reduction Evaluation and Economic Impact Analysis
- Public Engagement Plan – Proposed Outreach
- Next Steps

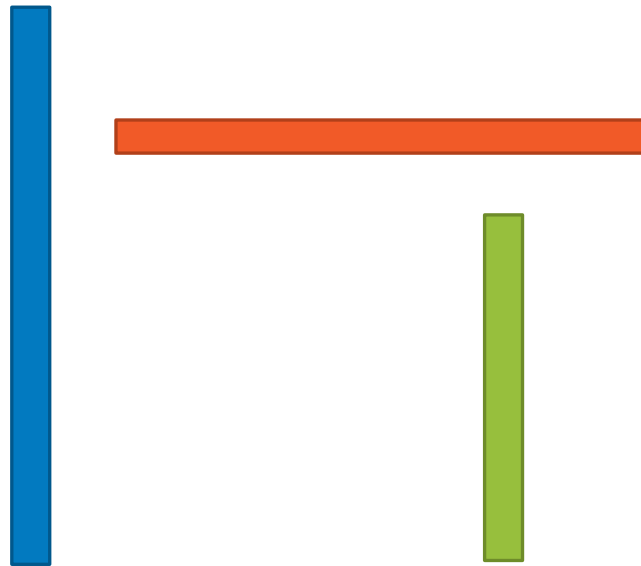
## Mandated Segments



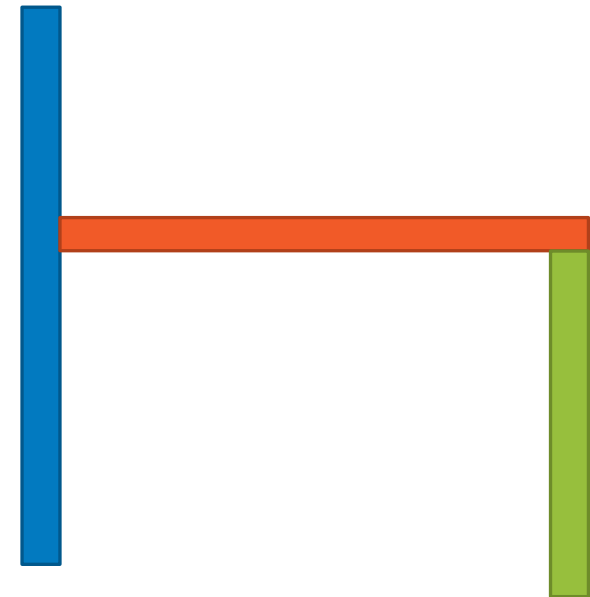
# Phase 3 Process Graphic



# Segments vs Bundles



SEGMENTS



BUNDLE

# Tiering

## SEGMENT TIERING

### Tier 1

Segments ready for advancement and recommended for consideration in the fiscally constrained portion of the 2050 HRTPO Long Range Transportation Plan.

### Tier 2

Segments which require further refinement and maturation, and will be recommended for consideration in the 2050 Vision Plan, as developed by the HRTPO.

### Tier 3

Segments that due to technical challenges and uncertainties, will be further developed at an appropriate time in the future.

## REGIONAL CONNECTORS STUDY

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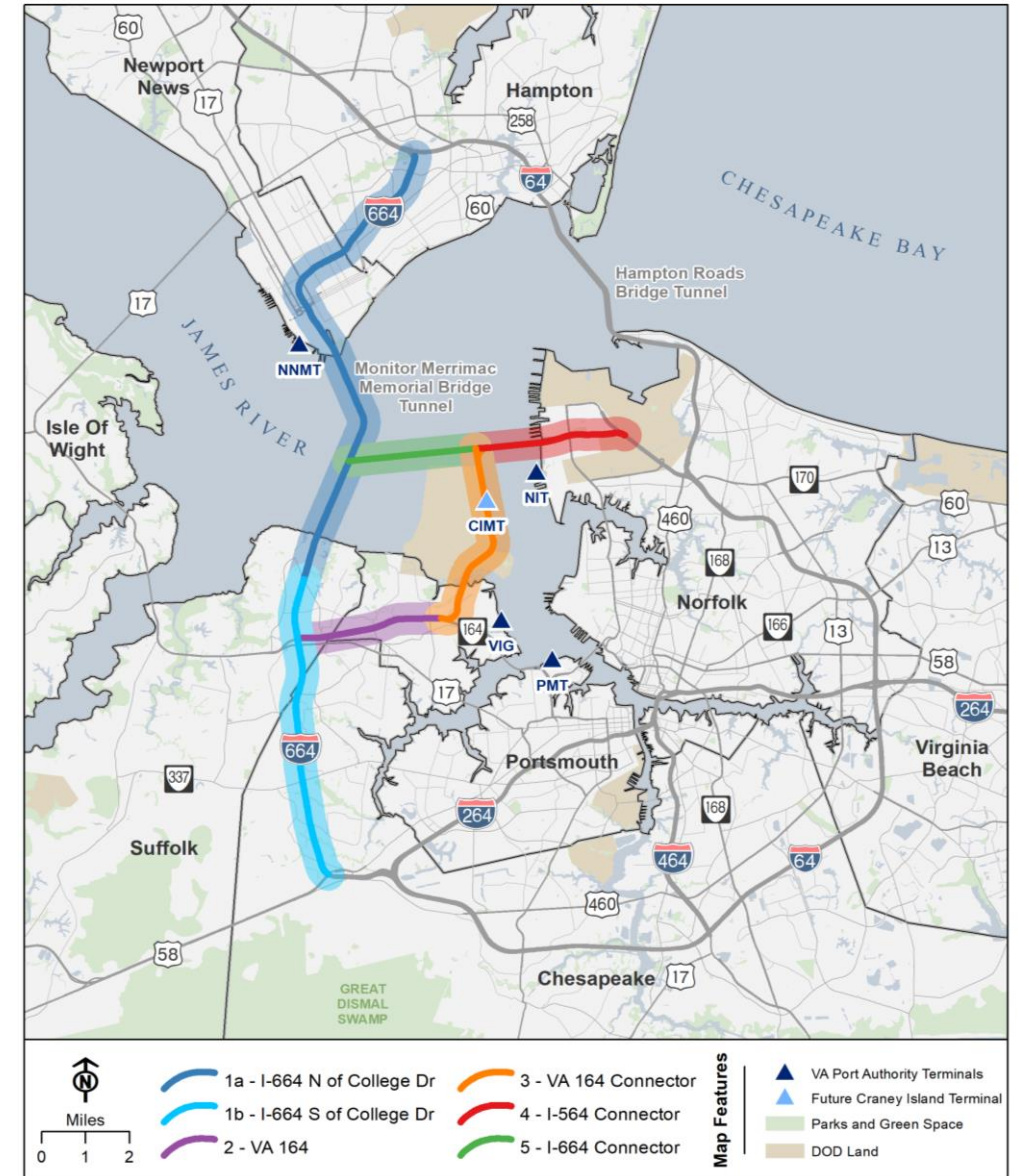
# QUALITATIVE EVALUATION OF MANDATED SEGMENTS AND SEGMENT BUNDLING - COMMENTS AND RESPONSES



# Comments Received

- Portsmouth – VA 164 Widening
  - Alignment assumptions need refinement
  - Ratings re: local impacts and local opposition
  - Environmental Justice
  - Stormwater management
- US Navy – 164 Connector
  - Security Requirements of Navy Fuel Depot
  - Security Requirements of Fuel pipeline facilities
  - Strategic nature of the Fuel Depot and Colonial Pipeline

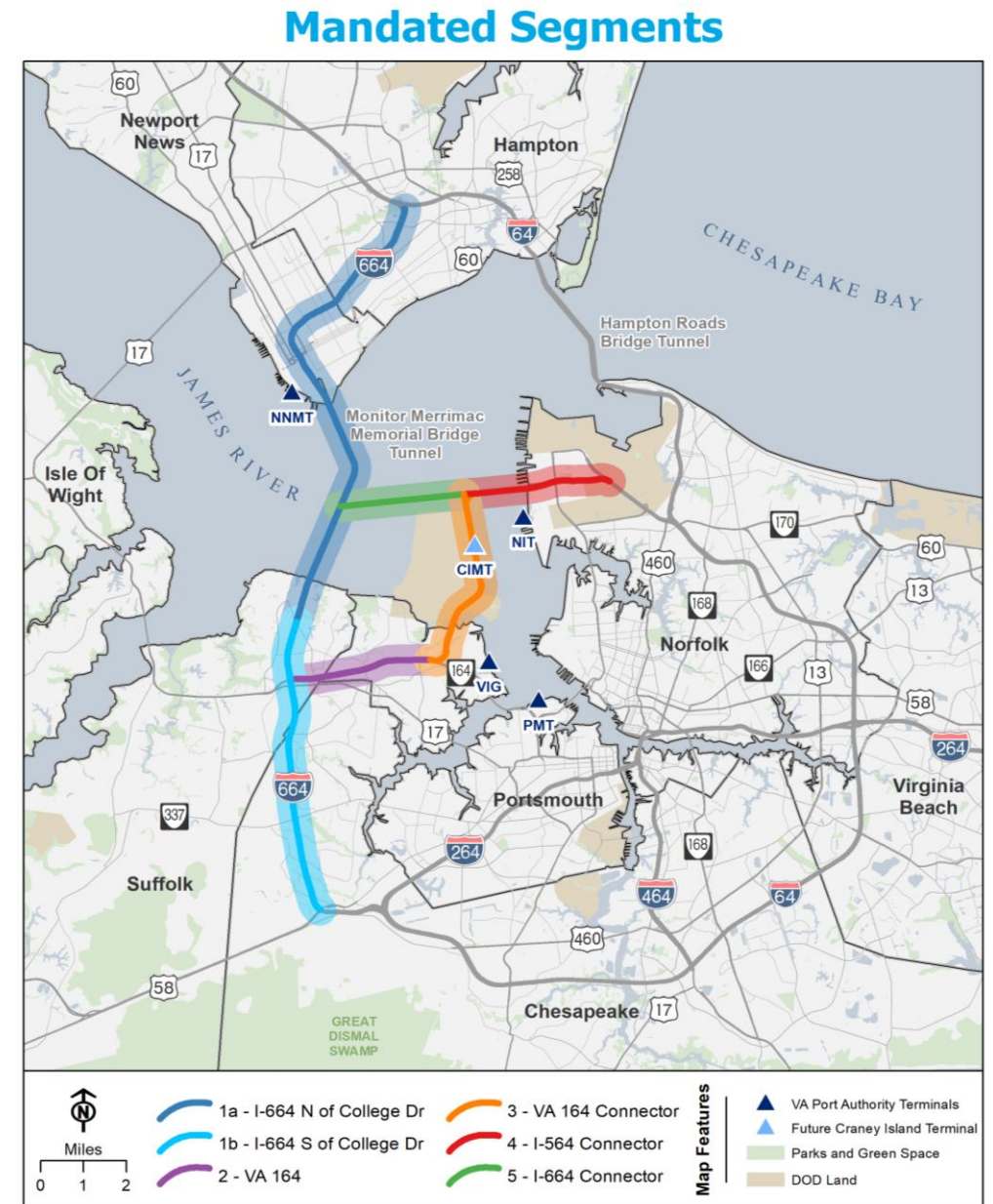
## Mandated Segments



# Comments Received

- US Navy – I-564 Connector

- Security Requirements of Navy fueling facility
- Height restrictions of facilities in flight paths (including construction limitations)
- Strategic nature of the Fuel Depot and Colonial Pipeline
- Security concerns proximate to/in view of Gate 6
- Security concerns proximate to NSN piers 1-3 including construction limitations
- Changing assumptions re: ATI interchange and I-564 Intermodal Connector

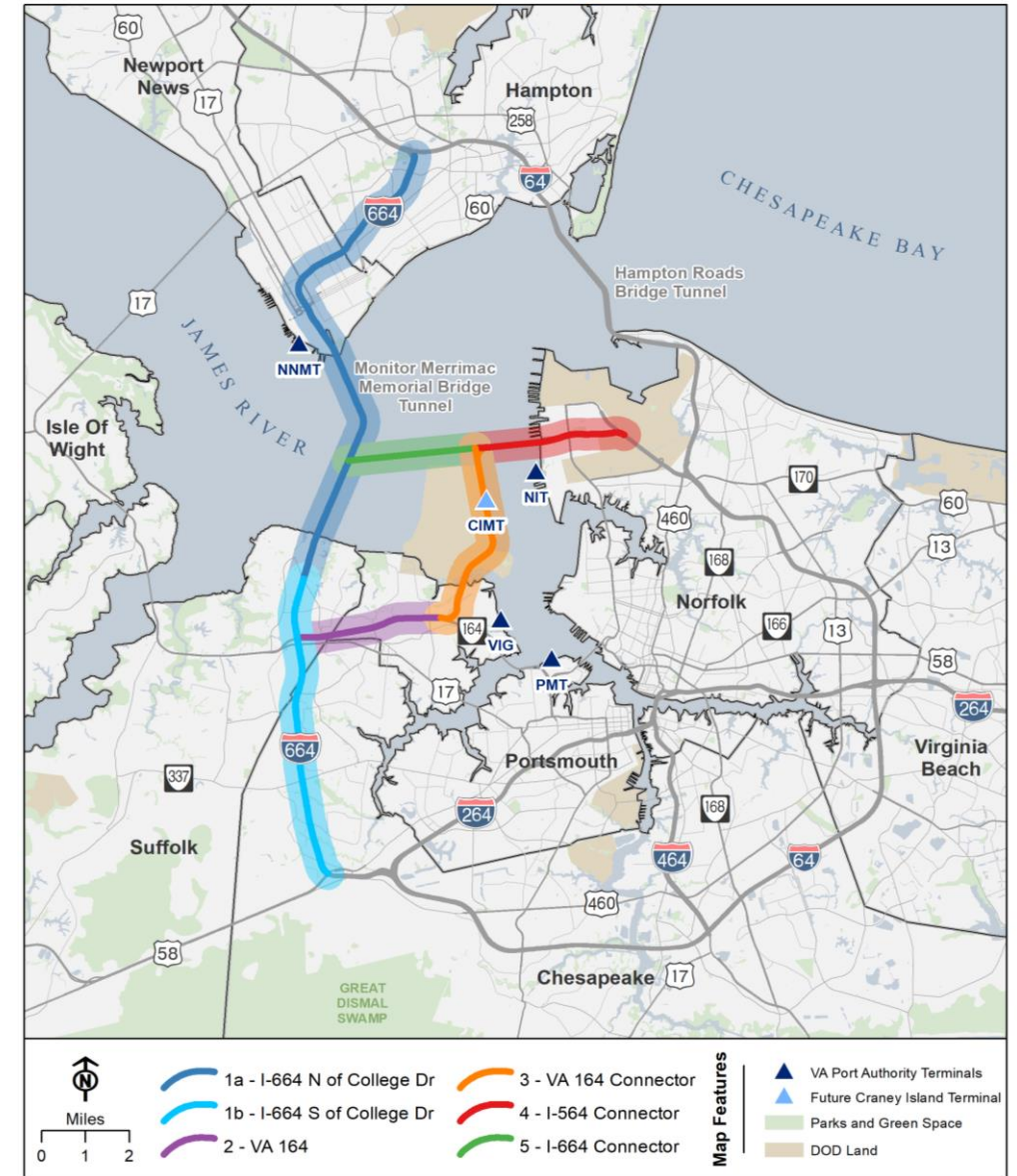




# Comments Received

- USACE Operations –164 Connector
  - Provided updated GIS data of CIDMMA
  - East-side Craney Island operations concerns and clearance requirements
  - Section 408 Permit requirements
- USACE Regulatory
  - Reference to June 2016 letter re: 164 Connector
  - Independent utility reminder
  - Various future permitting requirements/considerations
  - Wetland impact & remediation reminders
  - Environmental justice
  - 164 Connector Section 408 rating should be higher
  - Benthic & Endangered Species evaluations & measures

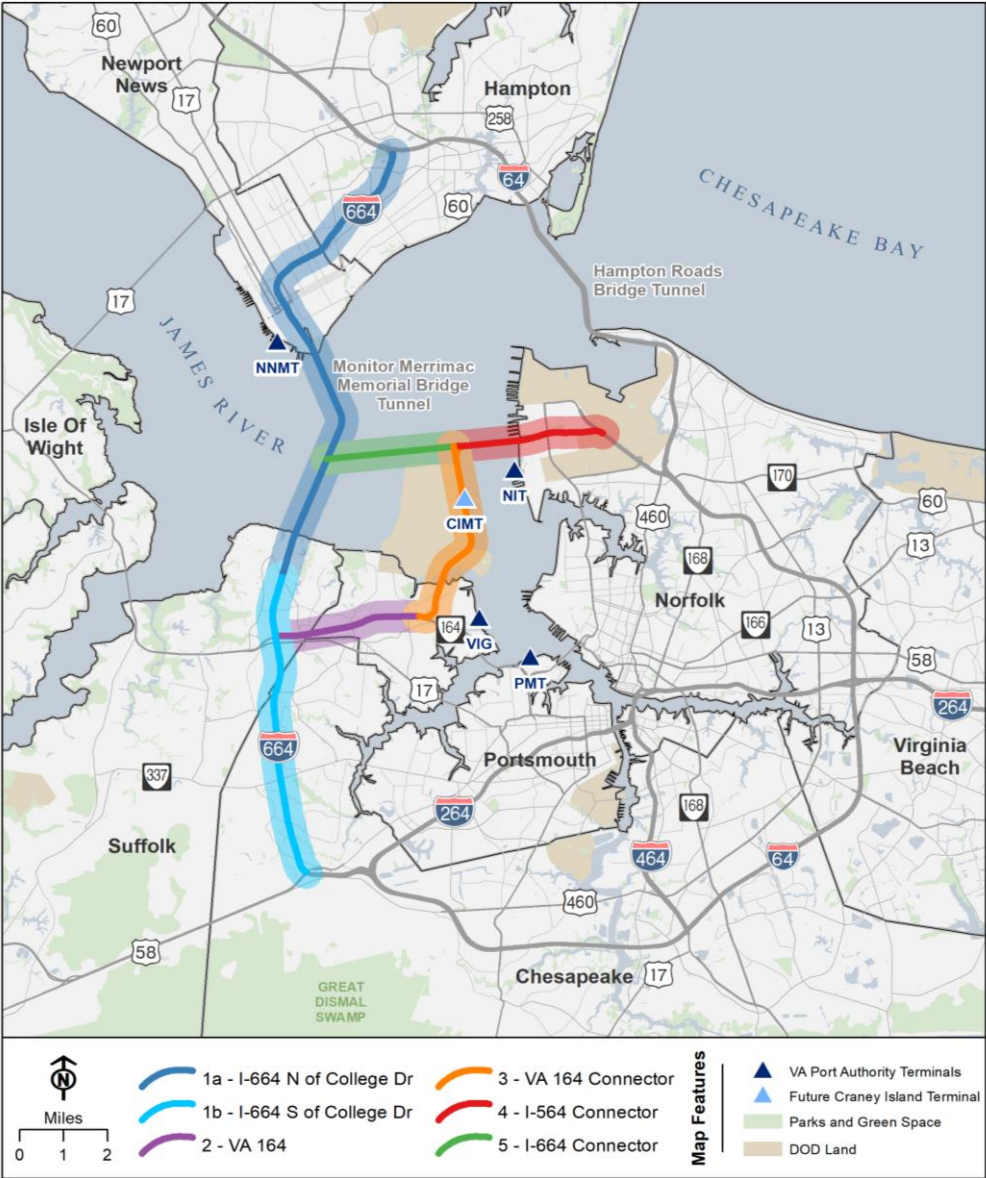
## Mandated Segments



# Comments Received

- Port of Virginia
  - Supportive of I-564 and VA-164 Connectors
  - Confident that Navy and Port security concerns can be resolved during later stages of project development
  - Continue progress on planning and conceptual design

Mandated Segments



# Comment Responses – Overview and Impacts to Study

- Very helpful to constructability, permitting and readiness considerations that should be documented at this stage and factor into qualitative ratings as well as cost estimates (i.e., contingencies)
- Some concerns can be addressed in the Step 2 evaluation update based on the additional engineering analysis of corridors
- Good documentation of key issues that will need to be addressed at future stages of project development – provides continuity and does include some new issues/considerations related to security in particular
- Acknowledge that the circumstances and standards in place at the time of later design should drive corridor location and design decisions, for example, I-564 proximity to sensitive Navy facilities
- Port comments received after meeting agenda was released. Responses will be prepared shortly

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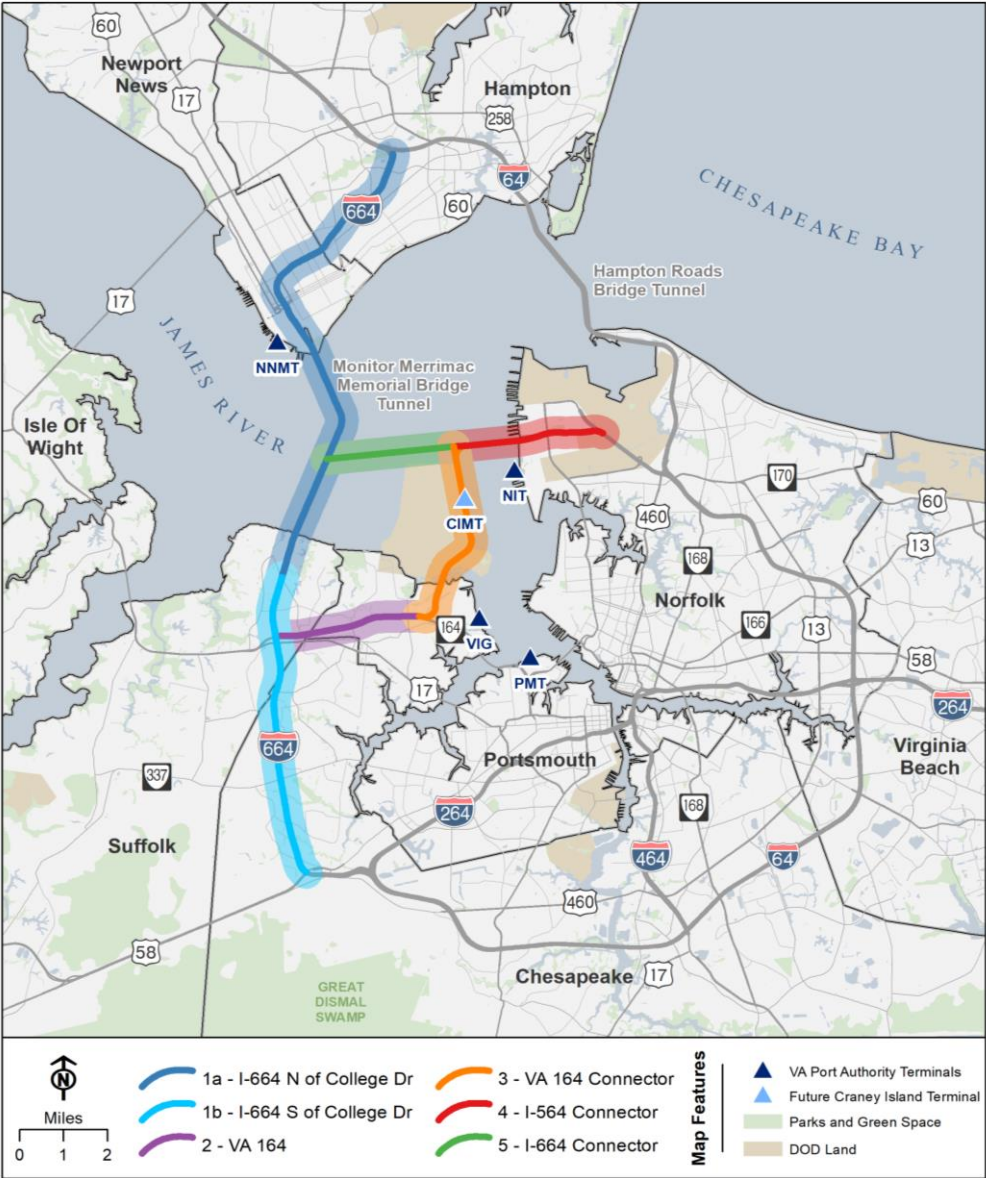
# CONGESTION REDUCTION EVALUATION AND ECONOMIC IMPACT ANALYSIS



# Overview

- Summary of Congestion Results
  - Regional Results
  - Key Facilities
- Summary Economic Results

Mandated Segments





## Segment Bundle A



## Segment Bundle B

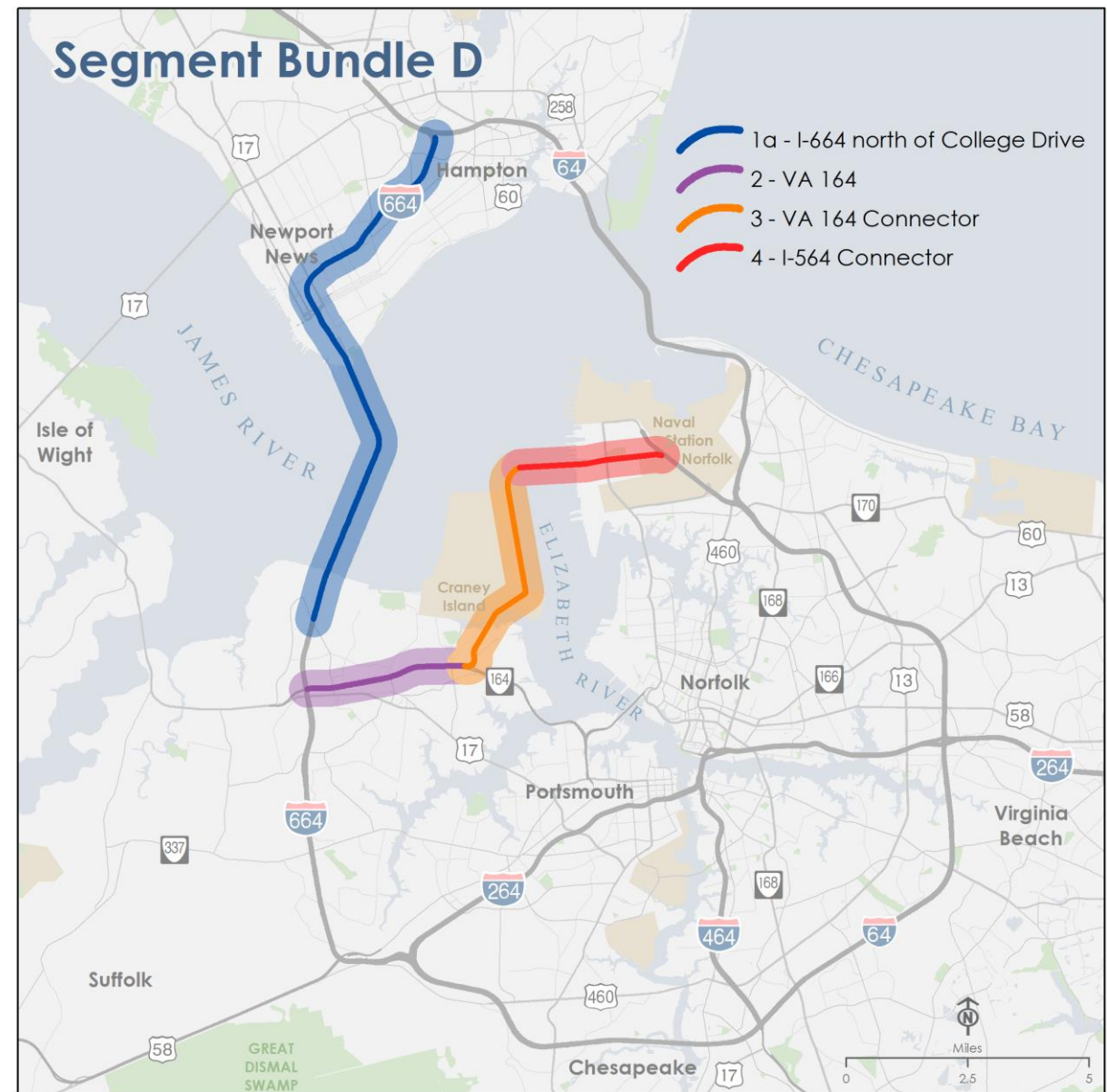


Segment 1b (I-664 South of College Drive) included in the 2045 RCS Baseline Network

## Segment Bundle C



## Segment Bundle D



Segment 1b (I-664 South of College Drive) included in the 2045 RCS Baseline Network



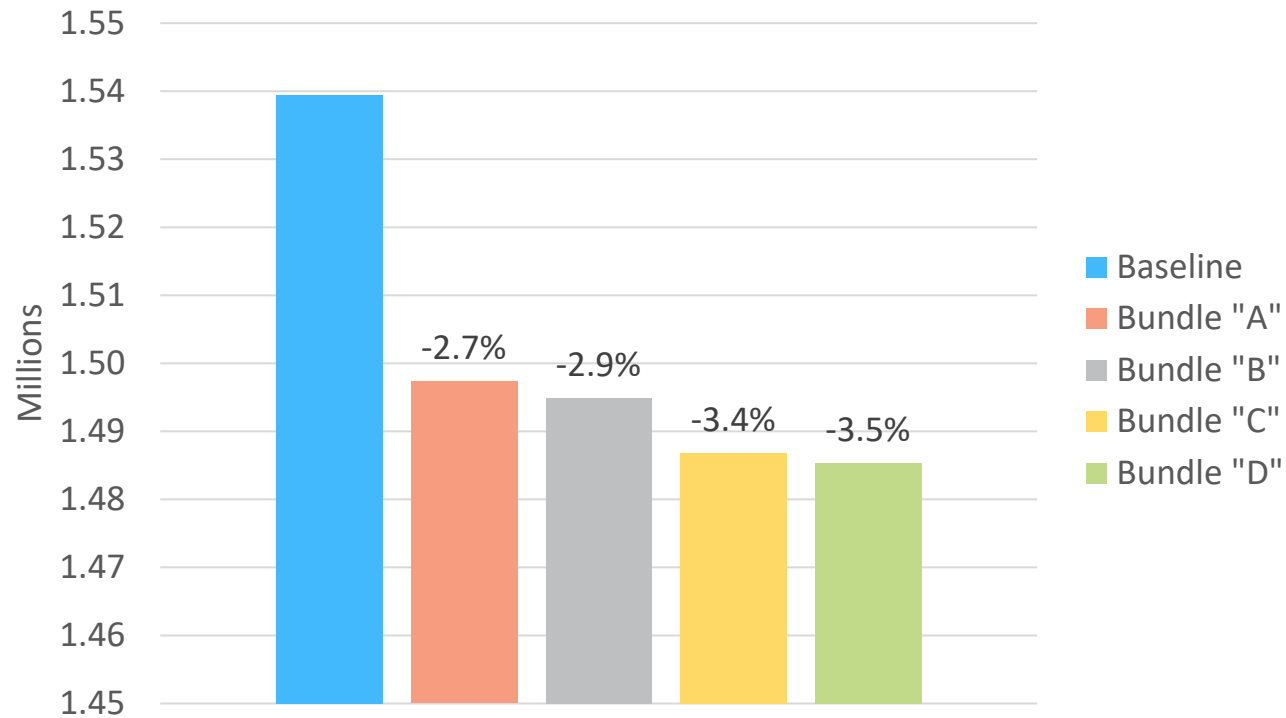
# Congestion Analysis Takeaways – Regional Results

- Total regional travel levels (vehicle miles of travel - VMT) are similar for the 2045 baseline and all four bundles, but vehicle **hours** of travel are reduced with all four bundles. This is a result of reduction of congestion.
- Additional harbor crossing capacity reduces travelers' delay (the additional time spent driving due to congested conditions) by 10-14% daily and 12-17% in the peak periods relative to the 2045 baseline.
- Bundles C and D have the greatest cumulative effect on congestion.

Cost estimates for segments (next meeting) will bring greater insight on cost-effectiveness of the congestion benefits

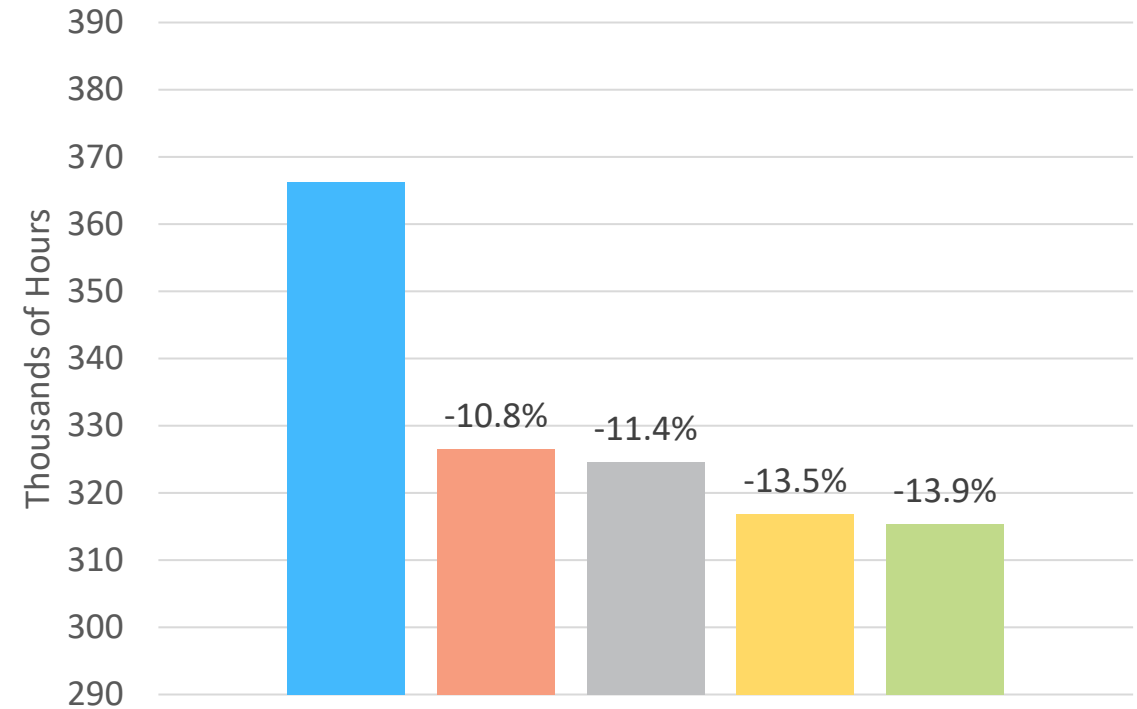
# Regional Results of Congestion Analysis

## 2045 Regional Vehicle Hours of Travel



Vehicle hours of travel is the cumulative time of travelers spent on all the regional roadways

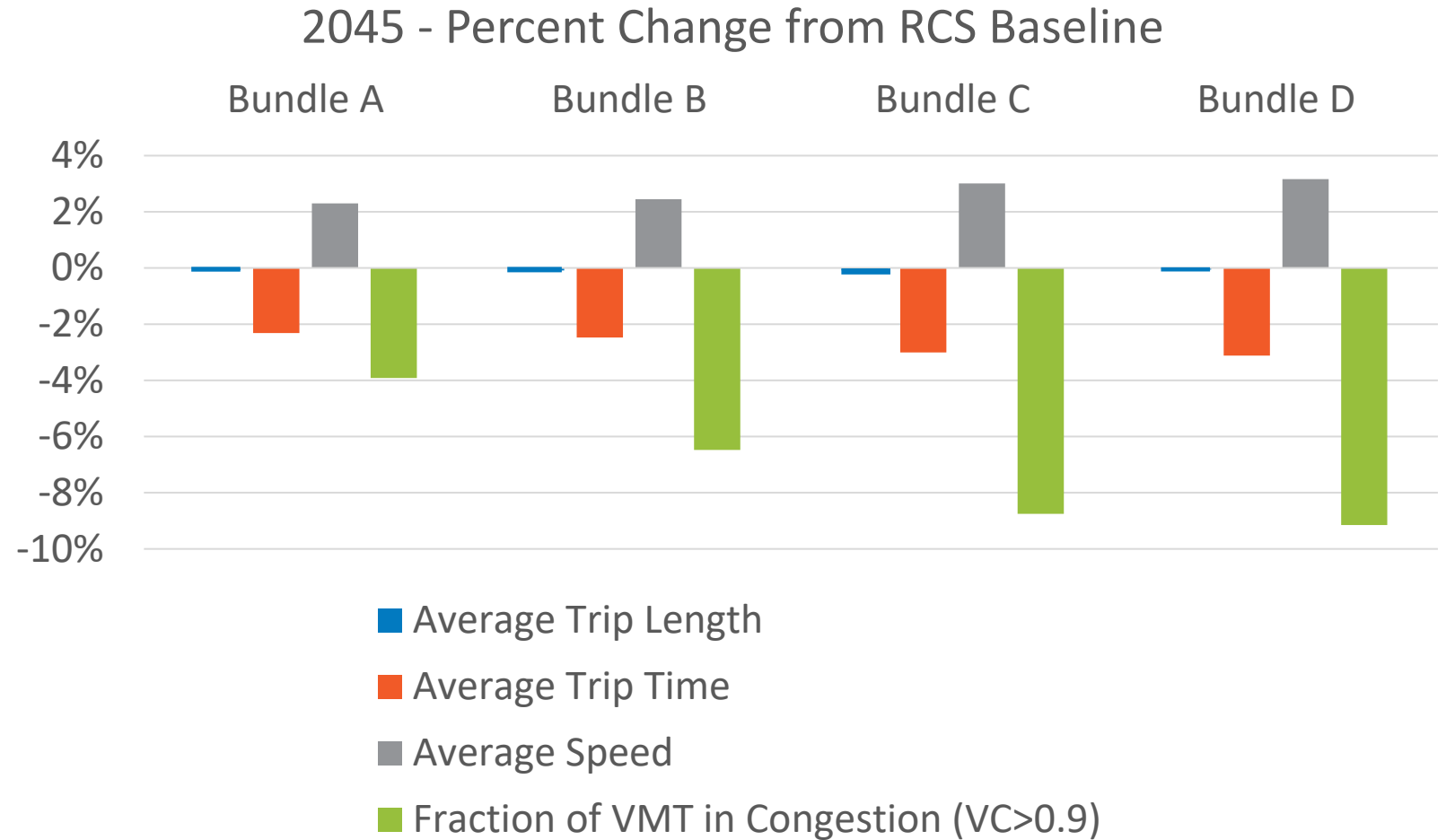
## 2045 Regional Delay



Delay is the amount of vehicle hours of travel spent due to traffic congestion

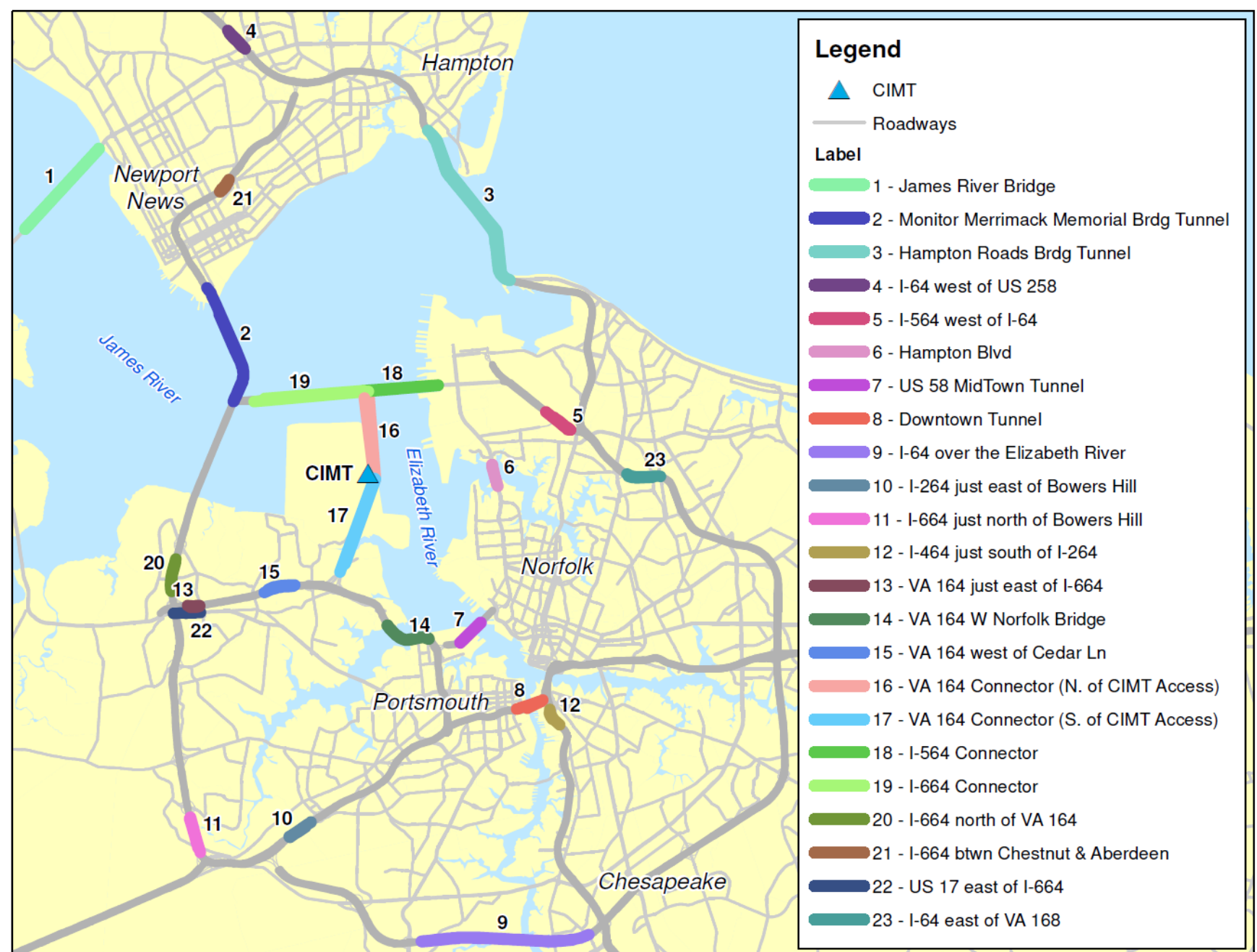
# Congestion Analysis Takeaways – Regional Results

- Average trip length varies little
- Average trip time decreases
- Average speed increases
- Share of congested travel decreases significantly, leading to improved reliability





# Locations Examined in Congestion Analysis



# Example Congestion Analysis Findings – Key Facilities

- Hampton Roads Bridge Tunnel sees some relief from the bundles
  - Reduced peak period volumes and increased speeds in managed lanes; less overall benefit to the general-purpose lanes
- Comparing the 2045 Baseline and Bundles, Bundle A results in the highest daily volumes across the three existing North-South harbor crossings while Bundle D results in the lowest volumes.
- Midtown and Downtown tunnels have slightly higher daily volumes with Bundles A and B, and 5-6% lower volumes with Bundles C and D
- Hampton Boulevard has lower daily volumes in Bundles C and D compared to the 2045 baseline, providing some congestion relief.

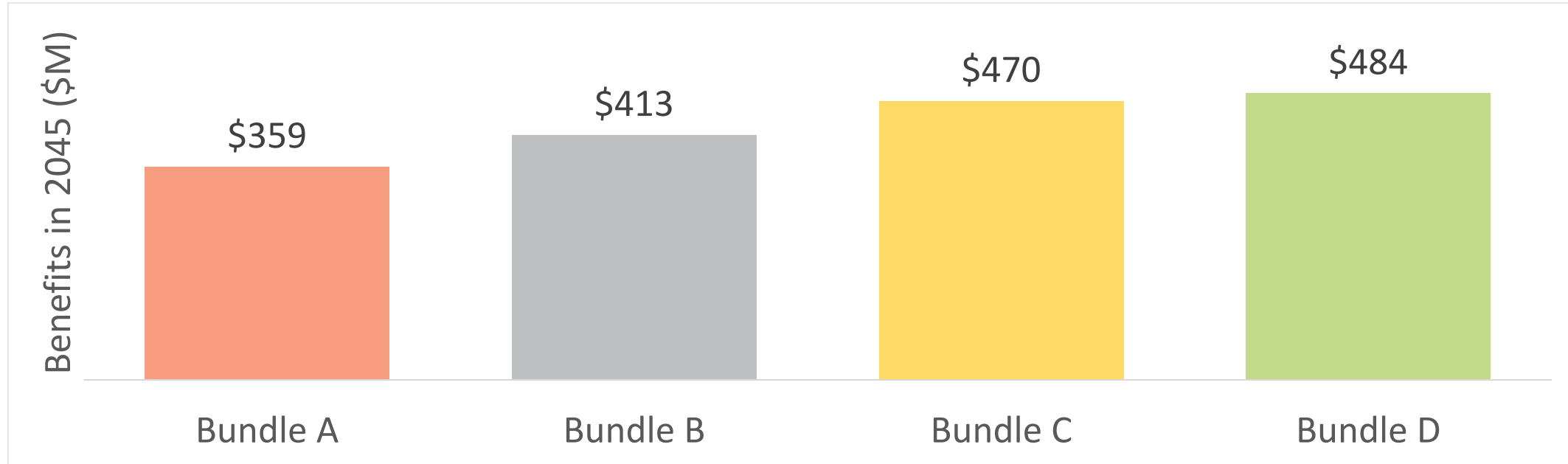
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**SUMMARY ECONOMIC IMPACT ANALYSIS**

# Societal Benefits in 2045

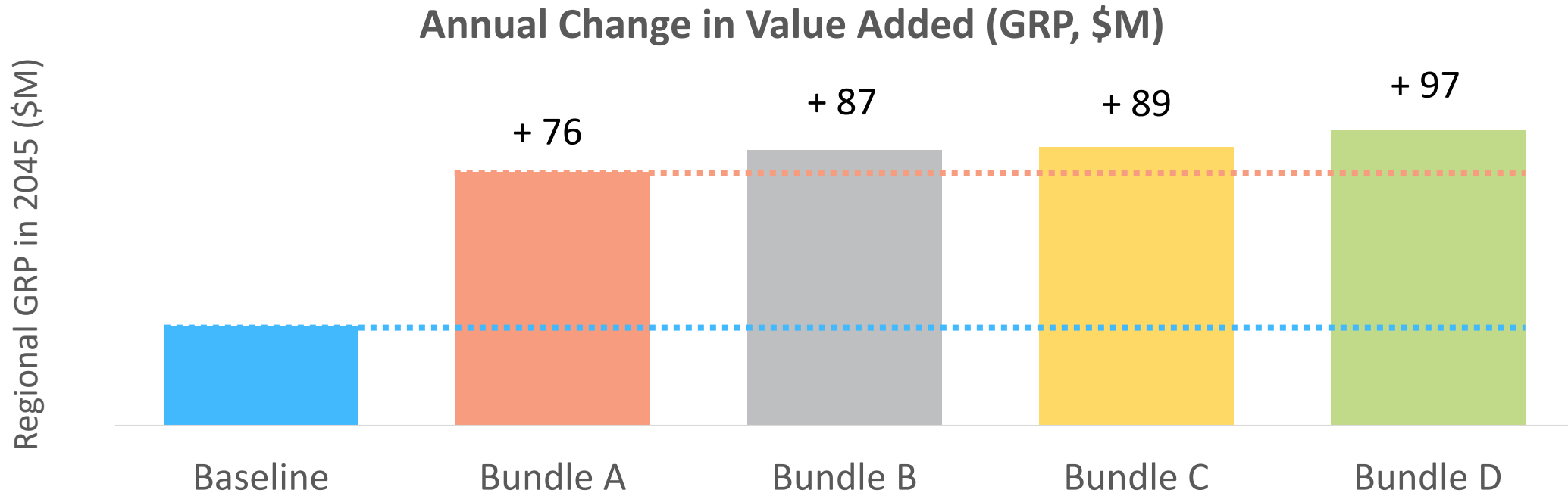
(Annual, \$M, benefits of each bundle are relative to 2045 baseline)



- Benefits dominated by time and reliability savings
- Very minimal effects related to VMT reductions (emissions, safety, vehicle operating costs)

# Regional Economic Impact in 2045

(Annual, \$M, incremental effects relative to 2045 baseline)



- Greatest incremental economic impacts from Segment 1A in Bundle A
- Greatest overall economic value from Bundle D

GRP – Gross Regional Product (total value of production minus intermediate goods and services). The 2020 GRP was \$154 B.



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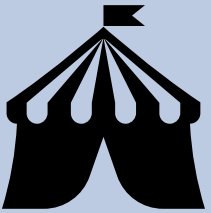
**PUBLIC ENGAGEMENT PLAN – PROPOSED OUTREACH**

# Updates to Public Meetings Plan



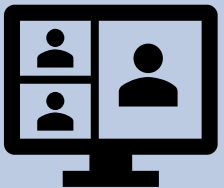
## Four In-Person Meetings

- Lower Peninsula, Norfolk, Suffolk, Portsmouth



## Three Pop-Up Meetings

- Add geographic coverage, go to people at events

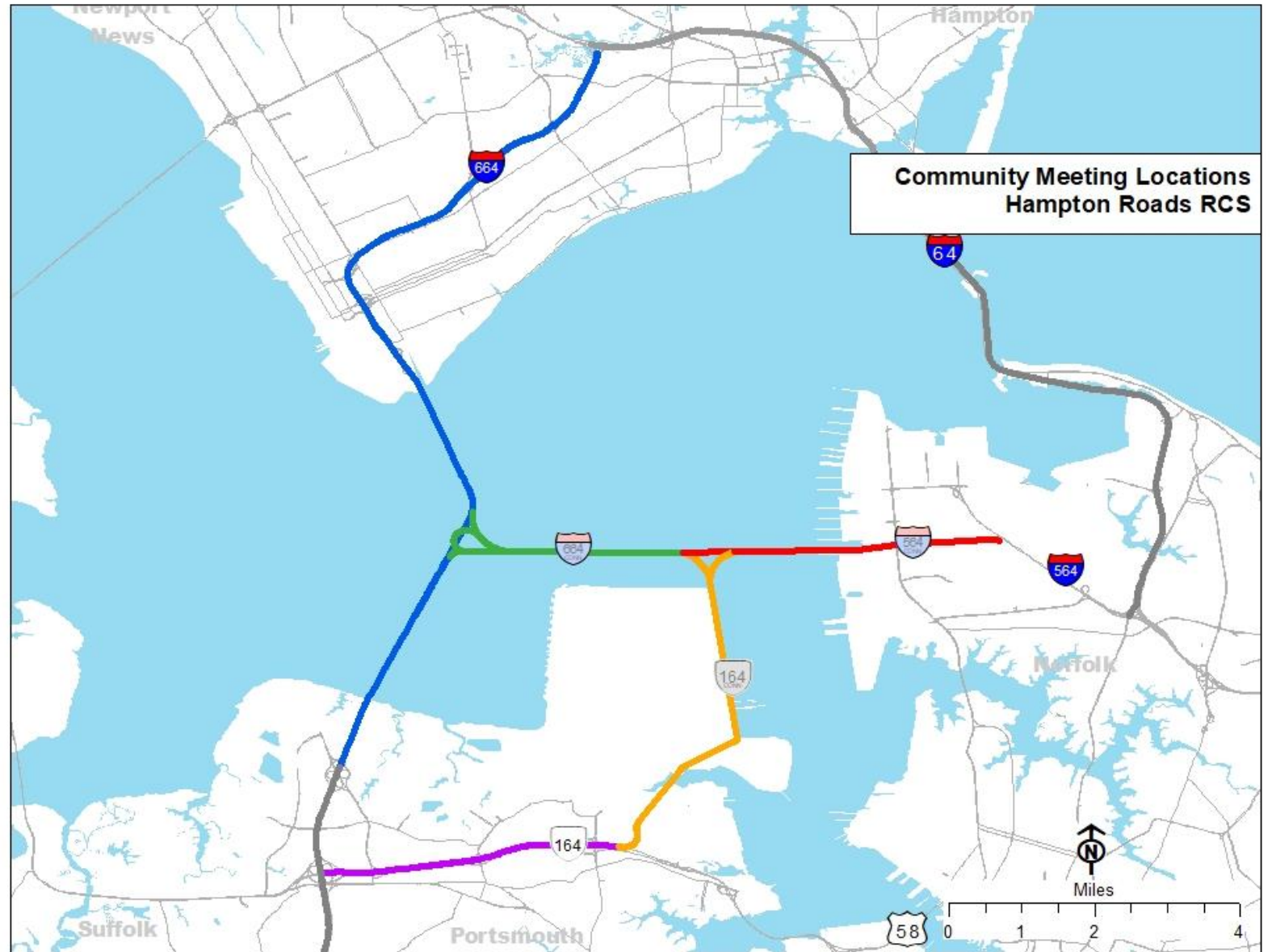


## Online Engagement

- Reach parties unable to attend meetings

# Proposed Meeting Locations Map

With Transit and Demographics



# Proposed Meeting Locations Map

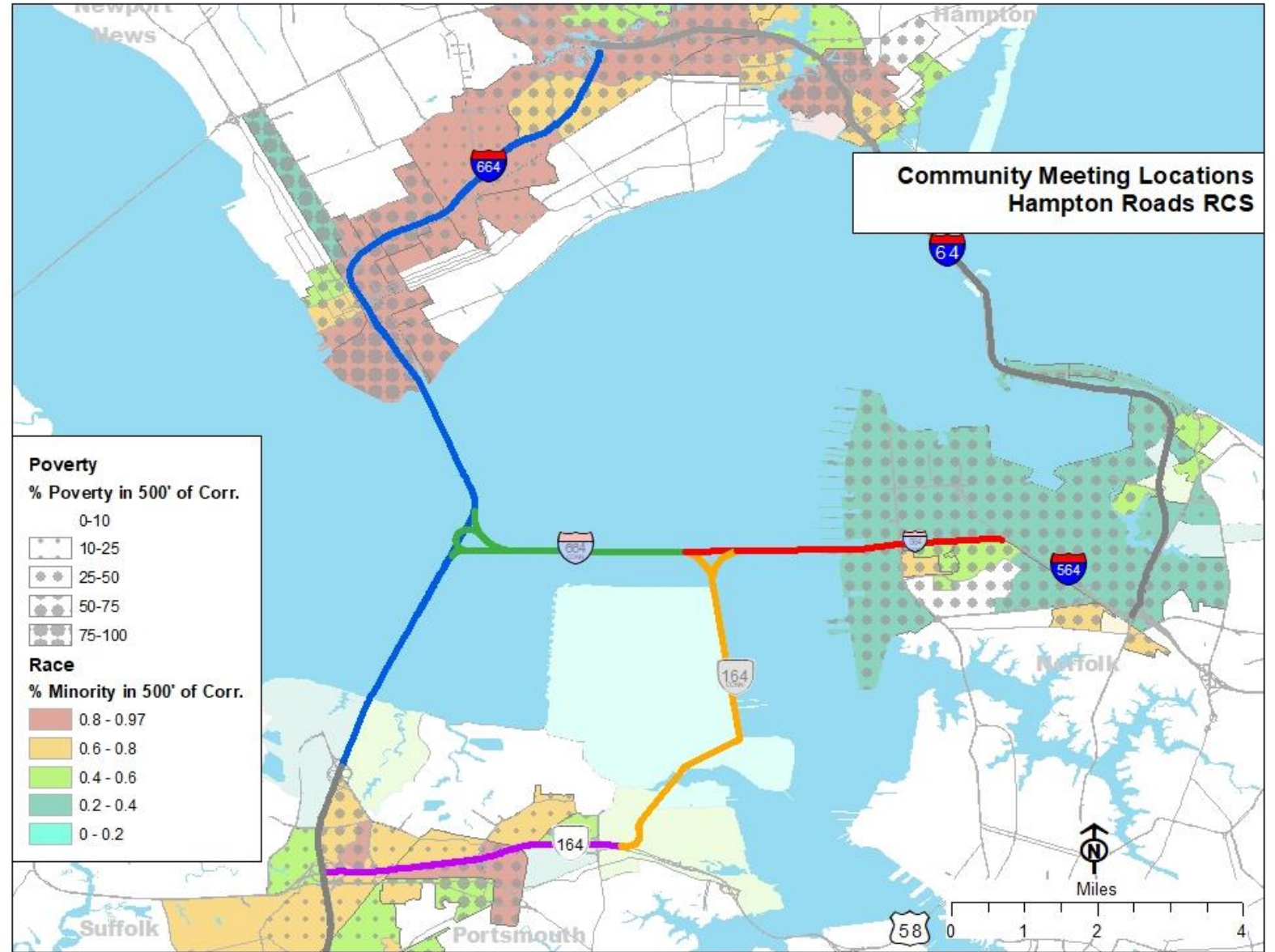
With Transit and Demographics





# Proposed Meeting Locations Map

With Transit and Demographics





# Proposed Meeting Locations Map

With Transit and Demographics

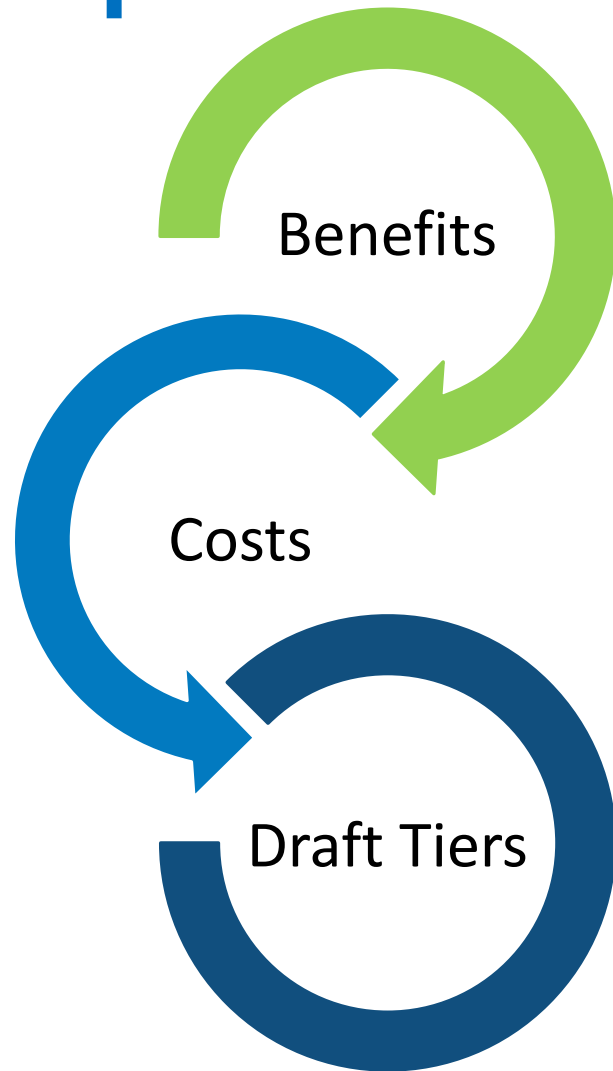


# Proposed Meeting Locations Map

With Transit and Demographics



# Next Steps



**Next Meeting:  
September 27**

## Step 2

**Congestion Reduction  
Evaluation**

**Revised Design & Cost  
Estimation**

**Final Draft  
Segment Tiering**