



# INTERSTATE OPERATIONS AND ENHANCEMENT PROGRAM

VTCA Consultant Forum

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April 15, 2021

# Interstate Operations and Enhancement Program

- **Funding is a result of the 2019 Interstate 81 bill**
- **Omnibus legislation in 2020 codified program and its requirements (33.2-372)**
- **Program receives 20% of funds available for construction, after revenue sharing take-down**
- **Goal of program is to improve the safety, reliability, and travel flow along interstate highway corridors**

# Requirements of Program

- **Funds may be used to address a need identified in VTrans or an Interstate corridor plan approved by the Board**
- **Board, with OIPI's assistance, must develop prioritization process**
  - **Priority given first to operational improvements and TDM strategies that improve reliability and safety of travel**
  - **Funds cannot be used to supplant existing operational and TDM funding as of July 2019**

# Distribution of Funding

- **43.7% distributed to Interstate 81 Corridor Improvement Fund**
- **8.4% distributed to the Northern Virginia Transportation Authority**
- **Remaining funds allocated by the Board**
  - **16.5% must be used on I-95**
  - **11.8% must be used on I-64**
  - **Remaining 19.6% can be used at Board's discretion on any interstate project**

# Distribution of Funding

(Excluding Interstate 81 and NoVA)

	Previous	2022	2023	2024	2025	2026	2027	TOTAL
Interstate 95	34.8	14.5	26.2	26.2	27.4	28.8	27.3	185.2
Interstate 64	32.1	10.8	18.7	18.8	19.6	20.6	19.6	140.2
Interstate Improvements	53.6	21.7	31.1	31.1	32.6	34.2	32.5	236.8

\* Figures in millions

# Planning Process

- **Develop corridor plans for each corridor with dedicated funding for Board adoption**
  - Identify top problem areas (congestion, safety, reliability)
  - Develop operational strategies
  - Develop potential capital improvements for top areas
- **Analyze conditions on other Interstate corridors**
  - Develop operational strategies
  - Develop potential capital improvements for areas with problems comparable to larger Interstates

# Interstate Operations and Enhancement Program Requirements

**“The Board, with the assistance of the Office of Intermodal Planning and Investment, shall establish a process to evaluate and prioritize potential strategies and improvements, with priority given first to operational and transportation demand management strategies that improve reliability and safety of travel.”**



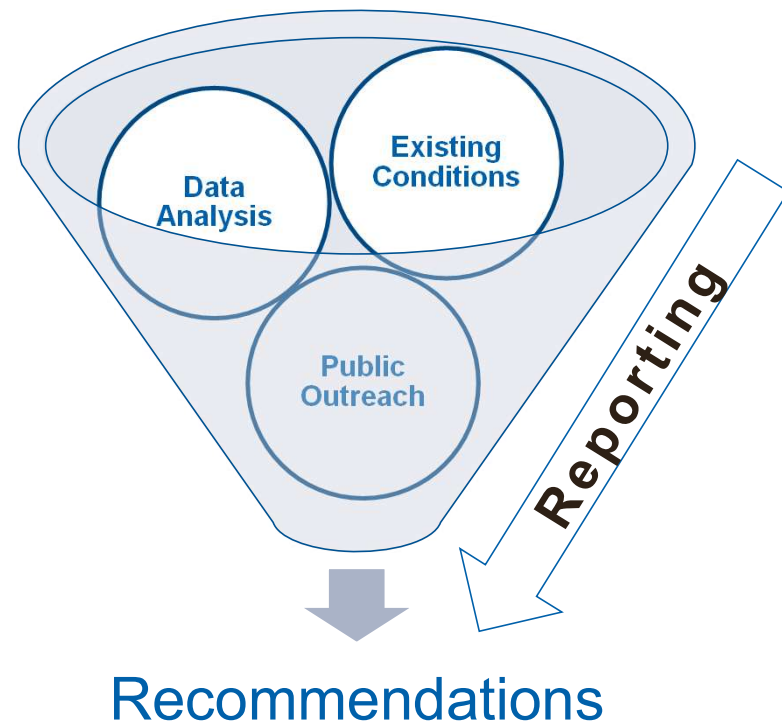
# Interstate Operations and Enhancement Program

- **Policy will recommend funding remaining operational strategies ‘off-the-top’**
- **Intermodal Office has developed a draft prioritization process for CTB consideration**
  - **Process will be consistent with SMART SCALE**
  - **May include policy provisions related to transportation demand management**
- **Board has already added operational strategies for Interstates 95 & 64**

# Interstate Corridor Improvement Plans

# Study Process Overview

- **Team Organization**
- **Management**
- **Plan Objective**
- **Data Analysis**
- **Existing Conditions**
- **Recommendations**
- **Reporting**
- **Public Outreach**



# Team Organization

Task	Agencies / Divisions Involved
Project management	TMPD, OIPI, District Planners
Transit (multimodal)	DRPT
Freeway operations	Central Office Operations, Regional Operations
Arterial operations	TED, District Traffic Engineering
Data analytics	Central Office Operations, TED, DRPT
Travel demand	TMPD
Traffic analysis	TMPD, TED, Central Office Operations, District Traffic Engineering
Roadway design & cost estimating	Central Office L&D, District L&D, Right of Way, Environmental
GIS & mapping	TMPD
SMART SCALE prioritization	OIPI, TMPD, TED, DRPT
Public outreach & website development	Central Office Communications, District Communications
Reporting	All

# Management

- Study work group coordination
- VDOT, OIPI, DRPT leadership briefings
- Agency briefings (Regional Authorities, MPOs)
- CTB briefings

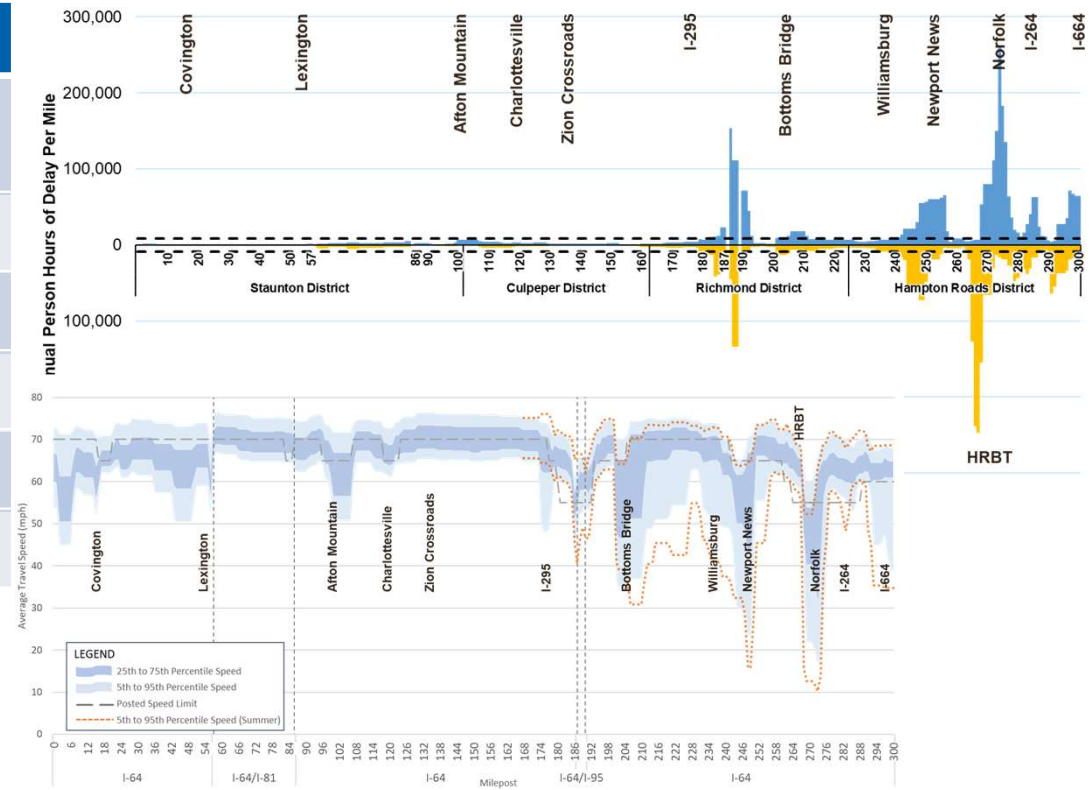


# Plan Objectives

- **Interstate corridor improvement plans follow a template**
  - Gather readily-available performance data
  - Identify locations with performance issues (up to 25% worst locations) using performance measures
    - Congestion
    - Safety
    - Reliability
  - Validate performance analysis results through public outreach and feedback
  - Develop targeted solutions for performance issues
    - Operational upgrades on freeway and arterials (ROI and VDOT region input prioritization)
    - Multimodal improvements (SMART SCALE-like prioritization)
    - Highway capital improvements (SMART SCALE-like prioritization)

# Data Analysis

Data Type	Data Source
Crashes	VDOT crash database
Incidents	VDOT 511
Origin-destination	Streetlight
Incident delay	RITIS
Speed performance	RITIS
Travel time reliability	RITIS



## Existing Conditions

- Performance measures and identification of hot spots (mapping)
- Impact of roadway capital improvement projects in the SYIP (boards)
- Freeway operations (boards)
  - CCTV cameras
  - Changeable message signs (CMS)
  - Ramp metering
  - Safety service patrol (SSP) & towing
- Multimodal operations (boards)
  - Express and commuter buses
  - Commuter, intercity, and metro-rail
  - Vanpool, carpool, slugging (if applicable), and park and ride lots

### PERFORMANCE MEASURES





# Recommendations – Suite of Improvements

## Focus Areas

- INTERSTATE OPERATIONS
- PARALLEL FACILITIES
- MULTIMODAL IMPROVEMENTS
- CAPITAL PROJECTS



**Data-driven approach incorporating performance measures**

## GOAL

To provide faster, safer, and more reliable travel along the interstate corridors

# Operational Improvements

## CCTV Cameras

Detect incidents and provide situational awareness of incidents

## Changeable Message Signs

Informs drivers of conditions ahead

## Safety Service Patrols

Provide incident scene support and help stranded motorists

## Quick Clearance Towing Programs

Activate contract towing services as incidents are detected

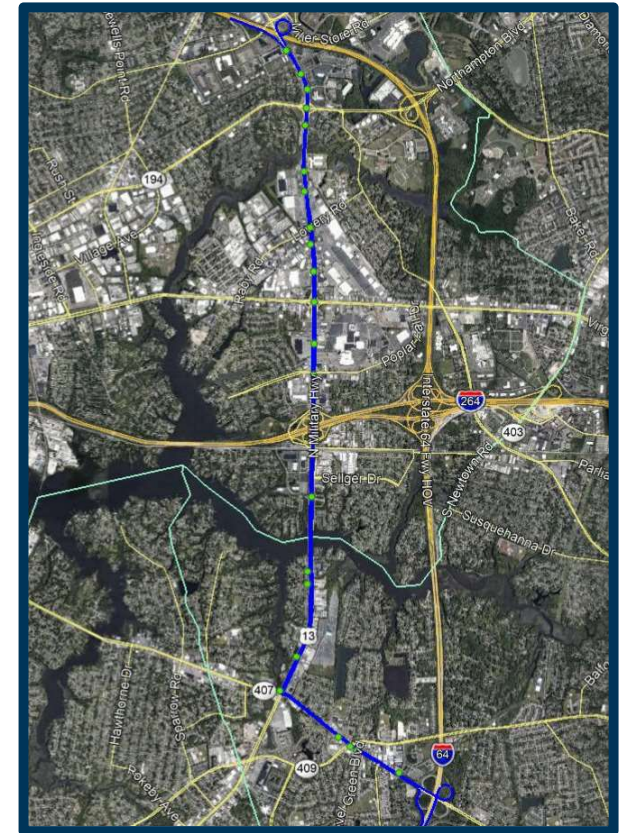
## Geo-fenced Emergency Notifications

Location-based alerts via GPS and cellular technology



# Parallel Facility Improvements

- **Priority route identification**
- **Traffic signal suite of improvements**
  - Communications
  - Automated Traffic Signal Performance Measures (ATSPM)
  - Traffic signal controller and cabinet upgrades
  - CCTV monitoring
  - Traffic signal retiming
- **Development of cooperative agreements**

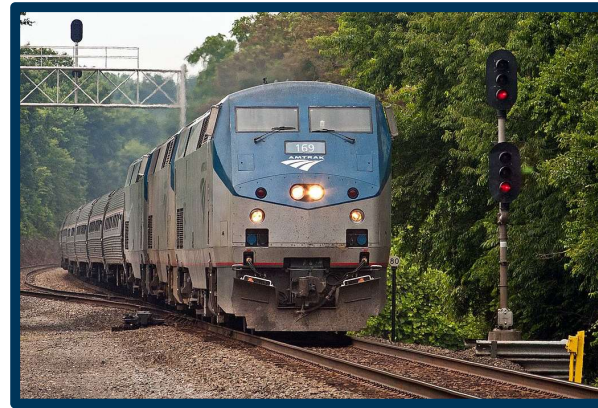




# Multimodal Improvements

- **Improvements Considered**

- Intercity passenger rail
- Commuter bus
- Local bus
- Park and ride lots
- Commuter assistance programs
  - *Carpool*
  - *Vanpool*
  - *Commute!VA / Telework!VA*
  - *Outreach and support to large employers*

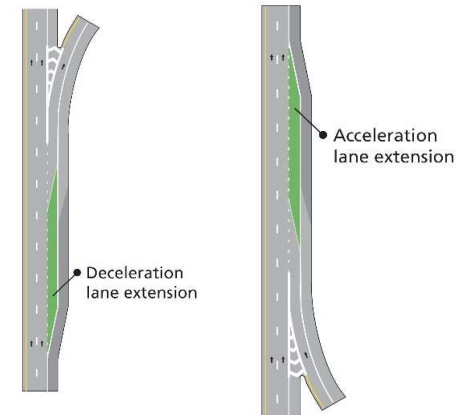
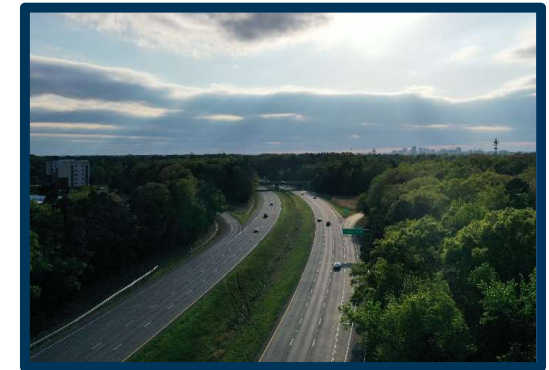
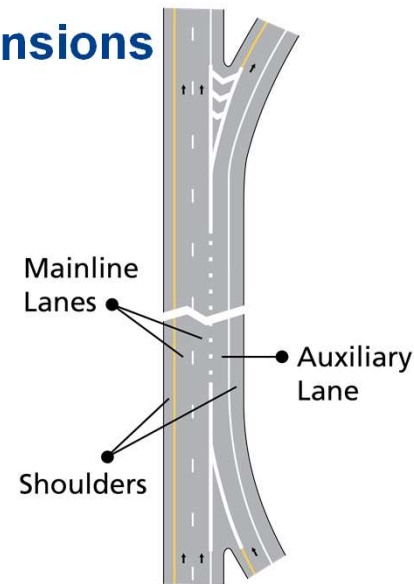


**Commute!VA**

# Capital Highway Improvements

## Improvements Considered

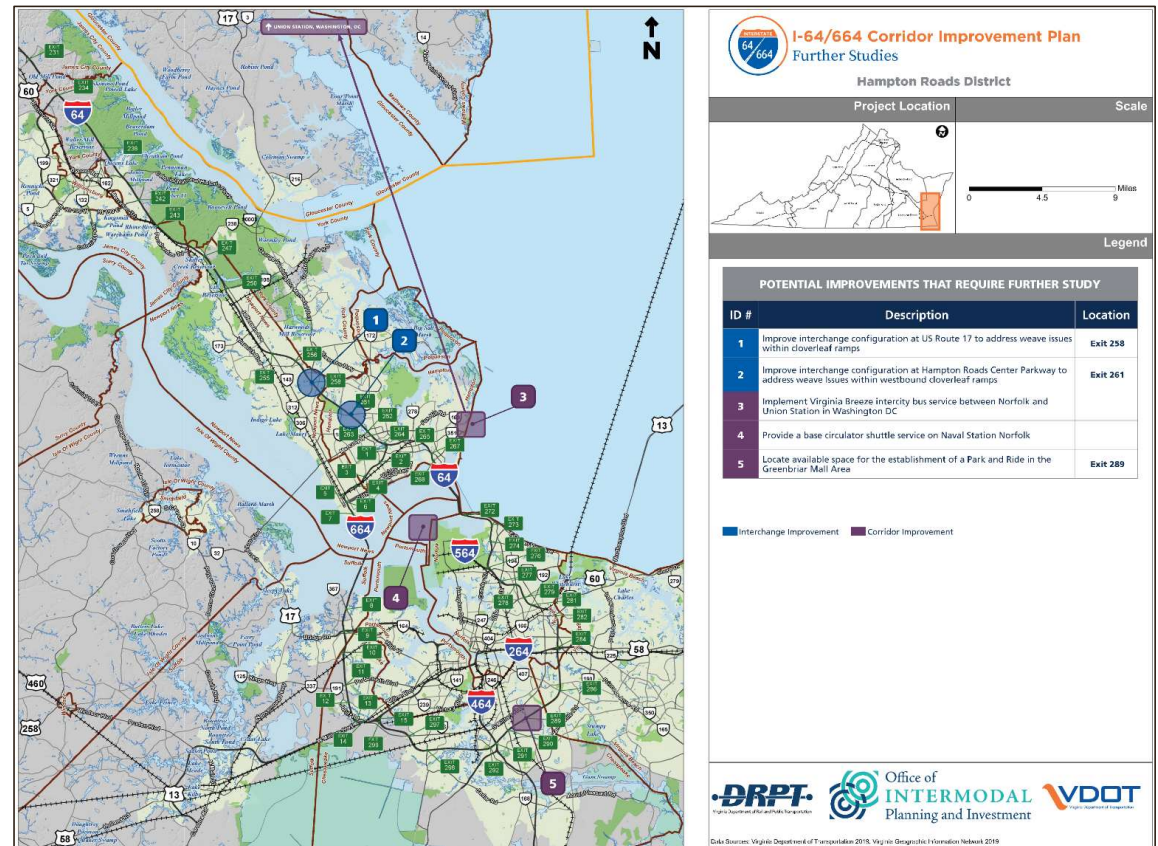
- Interchange modification and/or reconfiguration
- Acceleration/deceleration lane extensions
- Hard shoulder running lanes
- Auxiliary lanes
- Additional general purpose lanes
- Express lanes
- Ramp widening
- Shoulder widening
- Curve improvements
- Drainage improvements



# Potential Improvements that Require Further Study

## Project Types

- Interchange improvements without sufficient operational and safety analyses
- Park and ride lots requiring a location study
- Express lanes



# Reporting

- Existing conditions
- Performance measures
- Development of targeted improvements
- Cost estimating
- SMART SCALE and ROI analysis
- Project prioritization
- Projects recommended for further study
- Next steps





# Public Outreach

- Website development
- MetroQuest survey
- Meetings (In-Person)

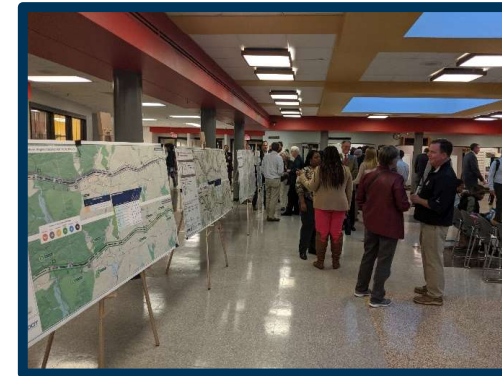
## Existing conditions

- Overview presentation
- Boards showing performance measures and supplemental data

## Recommended improvements

- Overview presentation
- Boards showing proposed improvements and supplemental data

## Prioritized improvements





# Public Outreach

## Meetings (Virtual)

### Existing conditions

- Introductory video presentation
- CTB presentation audio file
- Boards showing performance measures and supplemental data

### Recommended improvements

- Introductory video presentation
- CTB presentation audio file
- Boards showing proposed improvements and supplemental data

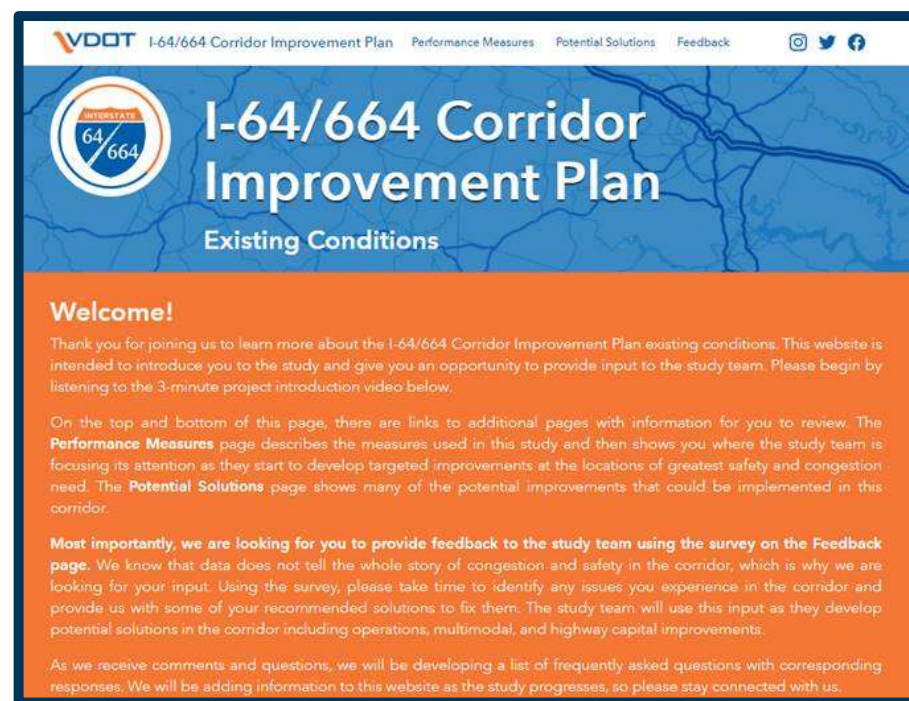
### Prioritized improvements



# Public Outreach

## Enhanced Project Website

- **GIS-based website**
- **Two-minute introductory video**
- **Embedded CTB presentation**
- **Replicated materials typically displayed at in-person meetings**
- **Updated FAQs as public feedback was received**
- **Directed users to MetroQuest survey**



# Potential Improvements Boards

## I-64/664 Corridor Improvement Plan Towing and Safety Service Patrol

**Safety Service Patrol**  
Provides roaming assistance to help stranded motorists; detect incidents, and clear obstructions and debris from the roadway. They help stranded motorists with:  
- Flat tires  
- Dead batteries  
- Fuel to go (24 hrs)  
- Broken down and/or stuck vehicles  
- Accidents  
- Injured motorists  
- Missing vehicles  
- Missing children  
- Missing pets  
- Missing vehicles

**Richmond District**  
Expanded to weekday and weekend coverage

**Stafford District**  
Funding for continued trip and departure towing program in Richmond District

**Hampton Roads District**  
Funding for continued outreach towing program in Hampton Roads District

**Quick Clearance Towing Programs**  
Dispatch towing services and/or provide low pass program to clear incidents faster. Towing services are provided 24/7.

**Legend**  
- Existing Towing Program  
- Towing 24 hours (weekend towing)  
- Towing 24 hours (weekend towing)  
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- Towing 24 hours (weekend towing)

## Richmond District: MM 197 to MM 209

**Number of Public Comments Per Board**

CONCRETE	SAFETY	MULTIMODAL	ALTERNATE ROUTES	TECHNOLOGY	OTHER
151	24	11	8	3	10

**FUNDED PROJECTS**

ID #	NAME	DESCRIPTION	STATUS
101	MM 197 to MM 209	Construction of a new interchange at MM 197 and I-64/664.	Completed
102	MM 209 to MM 211	Construction of a new interchange at MM 209 and I-64/664.	Completed

**POTENTIAL IMPROVEMENTS**

ID #	NAME	DESCRIPTION	STATUS
103	MM 211 to MM 213	Construction of a new interchange at MM 211 and I-64/664.	Under Review
104	MM 213 to MM 215	Construction of a new interchange at MM 213 and I-64/664.	Under Review
105	MM 215 to MM 217	Construction of a new interchange at MM 215 and I-64/664.	Under Review
106	MM 217 to MM 219	Construction of a new interchange at MM 217 and I-64/664.	Under Review
107	MM 219 to MM 221	Construction of a new interchange at MM 219 and I-64/664.	Under Review

**Existing Corridor**

**Potential Improvements**

## I-64/664 Corridor Improvement Plan Potential Multimodal Improvements - Hampton Roads

**Amtrak to Richmond\***  
2 trips per day (today)  
3 trips per day (by 2026)

**Amtrak to Richmond\***  
3 trips per day (today)  
3 trips per day (by 2026)

**Legend**  
- Parking (Bicycles, Trail & Skate)  
- Existing Intermodal Connections  
- Potential Intermodal Connections

**Potential Multimodal Improvements**

- Route 106 (Lee Hall to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route
- Route 107 (Patrick Henry Mall to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route
- Route 112 (Patrick Henry Mall to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route
- Route 166 (Silverleaf Park and Ride to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route
- Route 170 (Downtown Portsmouth to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route
- Route 172 (Tidewater Community College to Newport News Shipbuilding/Downtown)  
- Existing route  
- Proposed route

**Key Map**  
- Key Map



## Next Steps

- **April 2021**  
CTB briefing on draft IOEP prioritization  
Address comments from CTB briefing
- **May/June 2021**  
CTB briefing  
Complete final interstate operations and enhancement program document
- **June 2021**  
Interstate capital projects added to FY22-27 Six Year Improvement Program