



EASTERN SHORE RAIL TO TRAIL STUDY

Stakeholder Meeting

John Bolecek, AICP (VDOT)

Chris Daily, PE (VHB)

May 5, 2020

Meeting Agenda



Introductions



Study Progress

- Smart Scale Pre-Applications
- Field Work
- Cost Estimating



Project Schedule



Public Outreach

- MetroQuest Survey
- Public Meetings



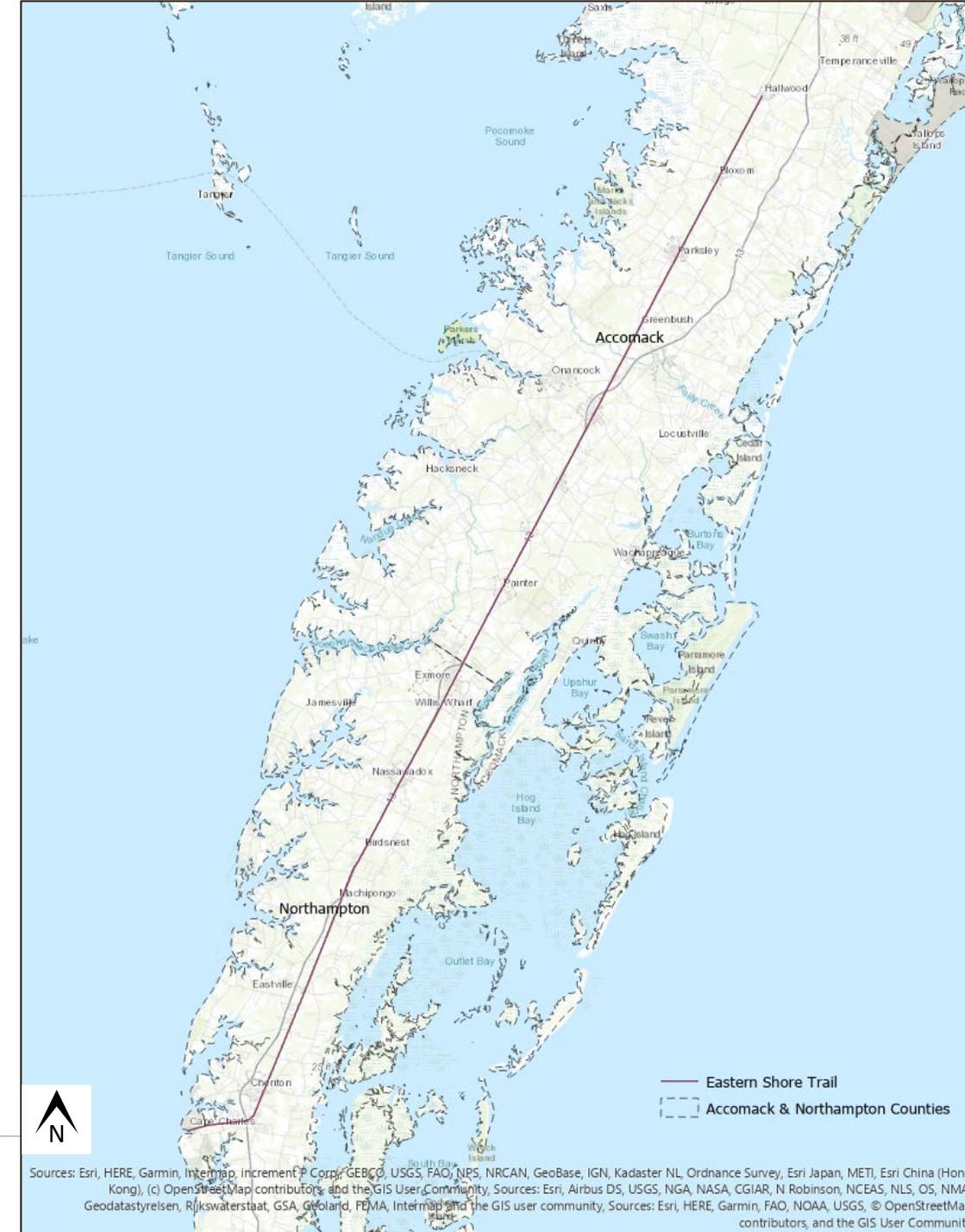
Stakeholder Updates



Discussion Opportunity

Eastern Shore Trail Study

- **Rail to Trail opportunity**
 - Study requested by A-NPDC
- **Eastern Shore Railroad Corridor**
 - Former Bay Coast Railway
 - 49.1 miles from Cape Charles to Hallwood
 - Primarily flat and straight
 - 66' right of way
- **Connection between communities, businesses, state and federal parks, and other amenities**





STUDY PROGRESS

Eastern Shore Rail to Trail Study

Study Goals

Date: March 2020
Eastern Shore Rail to Trail Study



Phase 1 Goals

- 1) Discuss known and potential considerations for the shared-use path development
- 2) Develop the Framework Document

Eastern Shore Rail to Trail Study – Framework Document

Study Work Group Acceptance

The undersigned concur with the methods and assumptions for the Eastern Shore Rail to Trail Study as presented in this document.

TECHNICAL GROUP MEMBERS

Canonie:

St. Francis Murray
Signature

Director & SVP for Admin
Title

4/1/2020
Date

VDOT (CO - TMPD):

John Borlock
Signature

Statewide Bicycle and Pedestrian Planner
Title

4/1/2020
Date

VDOT (Hampton Roads District):

[Signature]
Signature

Sr. Planning Specialist
Title

04/03/2020
Date

Accomack County:

[Signature]
Signature

Deputy County Administrator of Building, Planning, & Economic Development
Title

4/01/2020
Date

Northampton County:

[Signature]
Signature

County Administrator
Title

4/10/20
Date

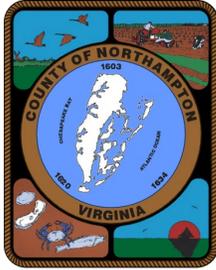
Accomack-Northampton Planning District Commission:

[Signature]
Signature

Executive Director
Title

3.31.2020
Date

Technical Work Group Roles



- **Accomack and Northampton Counties**
 - Attend meetings, provide input, brief respective boards and towns, seek funding;
- **A-NPDC**
 - Secure locations for internal and public meetings, attend meetings, provide input, brief respective board and towns, seek funding, provide geospatial and other data;
- **VDOT Hampton Roads**
 - Attend meetings, provide input, provide data and opinions from VDOT District as needed; and
- **Canonie Railroad**
 - Provide survey and other data, utility information, environmental information, work with DHRT/VBF to seek STB extension, keep stakeholder group informed on STB actions, communicate decisions that affect the planning and engineering study like utilities decisions for broadband, natural gas, and sewer.

Study Work Group Roles



- **Dahlgren Heritage Rail Trail / Virginia Bicycle Federation**

- Work with Canonic Railroad to file extension with STB, keep stakeholder group informed on STB actions;



- **Department of Environmental Quality**

- Provide information on grants, provide available environmental data, answer questions about environmental issues;



- **Department of Rail and Public Transportation**

- Handle state related questions regarding the Surface Transportation Board and other railroad issues, provide available data;



- **Hampton Roads Sanitation District**

- Keep study team apprised on pipeline compatibility and provide any utility data as available; and



- **Department of Conservation and Recreation**

- Coordinate on how this trail will connect to other regional trail systems, how the rail trail fits within the Virginia Outdoors Plan, and provide guidance on operations and maintenance.

Study Goals



Phase 2 Goals

- 1) Determine feasibility of a shared-use path within the abandoned railroad right of way
- 2) Develop a strategy to segment portions of the shared-use path and optimize funding opportunities
- 3) Develop one or more SMART SCALE applications for Round 4
- 4) Evaluate alternative management structures for the new shared-use path
- 5) Determine cost estimates for shared-use path construction

Task Progress

Existing
Conditions
Analysis



Public
Outreach



Identify
Alternative
Alignments



Final
Alignment and
Phasing



Final Cost
Estimation



Implementation
Alternatives



Technical
Report



Online
Study
Map





Data Collection Items

- **Environmental Data**

- ✓ Wetlands
- ✓ Topography

- **Cultural Data**

- ✓ Park and Recreation Facilities
 - **Historic Assets**
- ✓ Population Data
 - **Conservation Lands**

- **Traffic Data**

- ✓ Road Crossing Locations
- ✓ Speed Limit and AADT of Road Crossing Locations

- **Utility Data**

- **Known Utility Locations**
- **Future Utility Possibilities**

- **Land Use Data**

- ✓ Right of Way
- ✓ Surrounding Land Uses
- ✓ Future Developments
- ✓ Pedestrian Generators
- ✓ Possible Development Locations
- ✓ Transit Stop Locations and Ridership
- ✓ School and Residential Locations

- **Other studies**

- ✓ Comprehensive Plans
- ✓ Bike/Pedestrian Plans
- ✓ Previous studies in the vicinity
- ✓ Previous plans within the vicinity to verify ROW and Utilities



Field Work – Drone Photos





Field Work – On-Ground





Distance to Route 13

- **Between 18' and 70' adjacent to the roadway, typically 30'+**





Road Crossings

- **56 Crossings**
 - **5 at signalized intersections**
 - **Typically 2-lane crossings**
 - One 4-lane crossing
 - Three 3-lane crossings
 - **Typically low volume**
 - Route 13 crossing – 13,000 vehicles/day
 - All other crossings < 2,500 vehicles/day
 - **Range of speeds**
 - Typically controlled approaches
 - Few midblock crossings



Road Crossing Opportunities

452 Table 2. Recommendations for Considering Marked Crosswalks and Other Needed
 453 Pedestrian Improvements Across Uncontrolled Approaches

Roadway Configuration	Roadway ADT and Speed Limit															
	1,500 to 9,000 VPD				9,000 to 12,000 VPD				12,000 to 15,000 VPD				More than 15,000 VPD			
	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH
2 Lanes (undivided two-way street or two-lane one-way street)	A	A	B	B	A	A	B	B	A	A	B	B	B	B	B	B
3 Lanes with refuge island OR 2 Lanes with raised median*	A	A	B	B	A	B	B	B	A	A	B	B	B	B	B	B
3 Lanes (center turn lane)	A	A	B	B	A	B	B	B	A	B	B	C	B	C	C	C
4 Lanes (two-way street with no median)	A	B	C	C	B	B	C	C	B	C	C	D	C	C	C	D
5 Lanes with refuge island OR 4 lanes with raised median*	A	A	B	B	A	B	B	C	B	B	C	C	B	B	C	D
5 Lanes (center turn lane)	A	B	C	C	B	B	C	C	C	C	C	D	C	C	C	D
6 Lanes (two-way street with* or without median)	A	B	D	D	B	B	D	D	D	D	D	D	D	D	D	D

454 Source: Guidance for Installation of Pedestrian Crosswalks on Michigan State Trunkline Highways (Michigan Department of
 455 Transportation, 2014)
 456

Condition A	Candidate site for marked crosswalk alone (standard if speed limit is 30 MPH or less, high-visibility if speed limit is 35 MPH or greater). Evaluate need for advance signing
Condition B	Potential candidate site for marked crosswalk. Location should be monitored & consideration given to providing a high-visibility crosswalk and/or warning signs (see Section 7.2)
Condition C	Marked crosswalks alone are insufficient. The crosswalk shall use a high-visibility pattern and other improvements (warning signs and/or geometric/ traffic calming improvements) (see Section 7.2) <u>will likely be necessary.</u>
Condition D	Marked crosswalks <u>shall not</u> be installed

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Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	① 2 4 5 6	① 7 9	① 5 6 ⑦ ⑨	① 4 5 6	① 7 9	① 5 6 ⑦ ⑨	① 4 5 6	① 7 9	① 5 6 ⑦ ⑨
3 lanes with raised median (1 lane in each direction)	① 2 3 4 5	① 5	① ③ 5 6 ⑦ ⑨	① 3 4 5	① ③ 7 9	① ③ 5 6 ⑦ ⑨	① ③ 4 5	① ③ 7 9	① ③ 5 6 ⑦ ⑨
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 ⑦ ⑨	① 3 4 5 6 7 9	① ③ 7 9	① ③ 5 6 ⑦ ⑨	① ③ 4 5 6 7 9	① ③ 5 6 ⑦ ⑨	① ③ 5 6 ⑦ ⑨
4+ lanes with raised median (2 or more lanes in each direction)	① ③ 5	① ③ 5	① ③ 5	① ③ 5	① ③ 5	① ③ 5	① ③ 5	① ③ 5	① ③ 5
4+ lanes w/o raised median (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 7 8 9	① ③ 5 6 8 9	① ③ 5 6 8 9

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

- 1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
- 2 Raised crosswalk
- 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
- 4 In-Street Pedestrian Crossing sign
- 5 Curb extension
- 6 Pedestrian refuge island
- 7 Rectangular Rapid-Flashing Beacon (RRFB)**
- 8 Road Diet
- 9 Pedestrian Hybrid Beacon (PHB)**

Road Crossing Opportunities

High-visibility crosswalk (includes continental crosswalks)



Marked crosswalks that use high-visibility surface markings to indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians. Crosswalks are often installed at signalized intersections and other selected locations with appropriate levels of pedestrian and vehicle traffic.

CRF: 19% to 40%

Situation: Visibility

MUTCD Reference:
VA MUTCD 2011 Section 3B.18

Rectangular Rapid Flashing Beacon (RRFB)



The RRFB is a high-frequency blinking pedestrian warning sign that is used in tandem with a pedestrian cross sign. The flashing pattern can be activated with pushbuttons or automated pedestrian detection (e.g., video or infrared), and should be unlit when not activated.

CRF: 47%

Situation: Midblock crossings

MUTCD Reference: IA-21

Pedestrian countdown signal



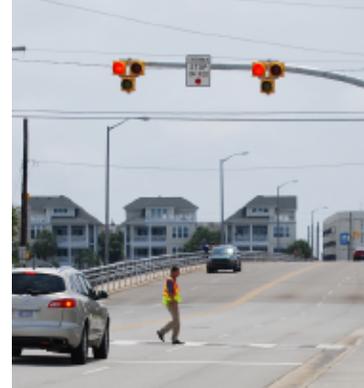
A pedestrian signal head that begins a visible and potentially audible countdown at the beginning of the walk phase or at the beginning of the clearance (i.e., DON'T WALK) interval. The incorporation of a pedestrian countdown signal provides pedestrians with information that has been demonstrated to reduce pedestrian crossings when only a few seconds remain.

CRF: 55% to 70%

Situation: Signalized crossings

MUTCD Reference:
MUTCD Section 4E

Pedestrian Hybrid Beacon (PHB)



A beacon that is used to warn and control traffic at unsignalized marked crosswalks. Key design components of PHBs include: overhead beacons with circular yellow signal indication centered below two horizontally aligned circular red signals facing both directions on the major street; overhead signs labeled "CROSSWALK STOP ON RED" to indicate that the location is associated with a pedestrian crosswalk; a marked crosswalk; countdown pedestrian signal heads; and pedestrian pushbuttons.

CRF: 18% to 37%

Situation: Midblock crossings

MUTCD Reference:
MUTCD Section 4F

Pedestrian warning signs



Highly visible signs that indicate the presence of pedestrian crossings to motorists. Pedestrian warning signs should be used in combination with marked crosswalks at signalized and unsignalized crosswalk locations.

CRF: 4% to 15%

Situation: Awareness of crossing

MUTCD Reference:
VA MUTCD 2011 Section 2C.50 and 7B

Transverse rumble strips



A pavement treatment for motorists where either grooves into the surface or strips of material above the surface alert drivers of an area to reduce speed. A vehicle passing over the rumble strips produces noise and vibration and alerts the driver to a potentially hazardous situation.

CRF: 24%

Situation: Speed reduction

MUTCD Reference:
MUTCD Section 3J-02

Task Progress

Existing
Conditions
Analysis



Public
Outreach



Final Cost
Estimation



Technical
Report



Identify
Alternative
Alignments



Final
Alignment and
Phasing



Implementation
Alternatives

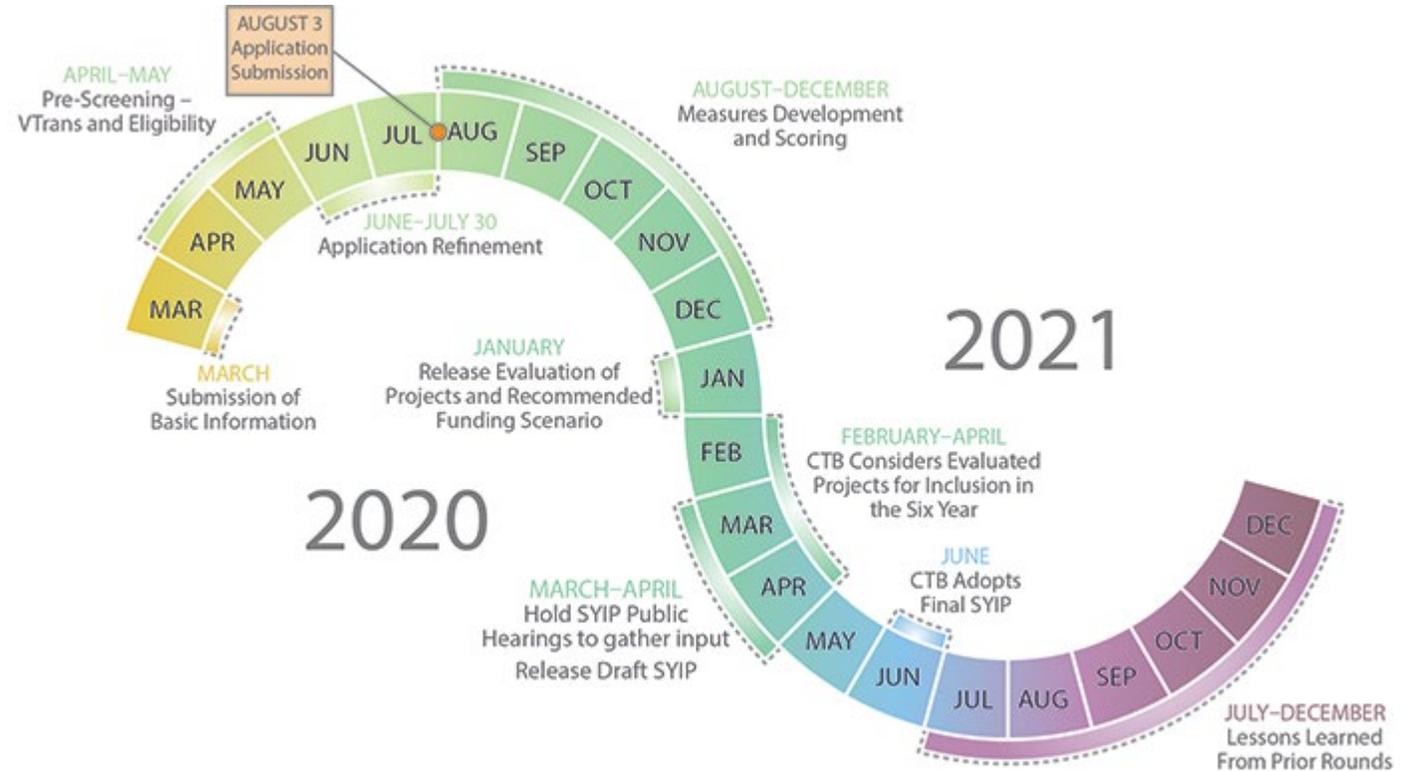


Online
Study
Map



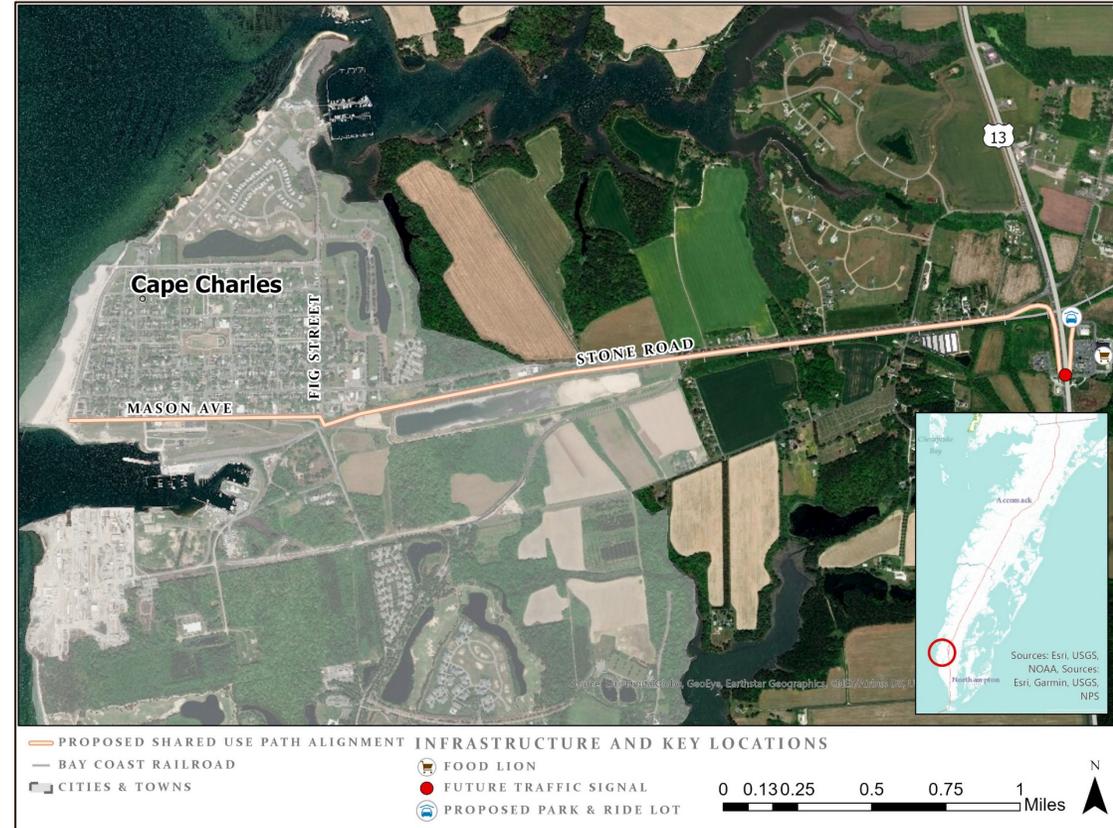
SMART SCALE Pre-Applications

- **3 Submitted**
 - Cape Charles
 - Onley
 - Accomack
- **Under Review**
 - Full Applications Due August 3, 2020



Town of Cape Charles

- **Connects Mason Avenue to Food Lion Shopping Center**
 - **3.1 Miles**
- **Park and Ride Lot**
- **Ped/Bike Upgrades on Mason Avenue**
- **Preliminary Cost Estimate**
 - **\$ 2,522,000**
 - **Submitted as \$ 3,049,200**

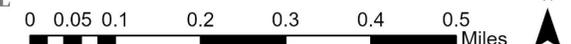


Town of Onley

- **Madison Avenue to Savage Street**
 - 1.5 Miles
- **Uses existing VDOT Right of Way**
- **Pedestrian Upgrades to the Signalize Intersections**
- **Preliminary Cost Estimate**
 - \$ 1,141,000
 - Submitted as \$ 1,379,000



- PROPOSED SHARED USE PATH ALIGNMENT
- BAY COAST RAILROAD
- CITIES & TOWNS
- VIRGINIA PARCELS
- INFRASTRUCTURE AND KEY LOCATIONS
- EXISTING TRAFFIC SIGNAL



Accomack County

- **Eastern Shore Community College to Bloxom**
 - 15.5 Miles
- **Uses existing VDOT Right of Way**
- **Pedestrian Upgrades to the Signalized Intersections**
- **Preliminary Cost Estimate**
 - \$ 11,794,000
 - Submitted as \$ 14,247,800

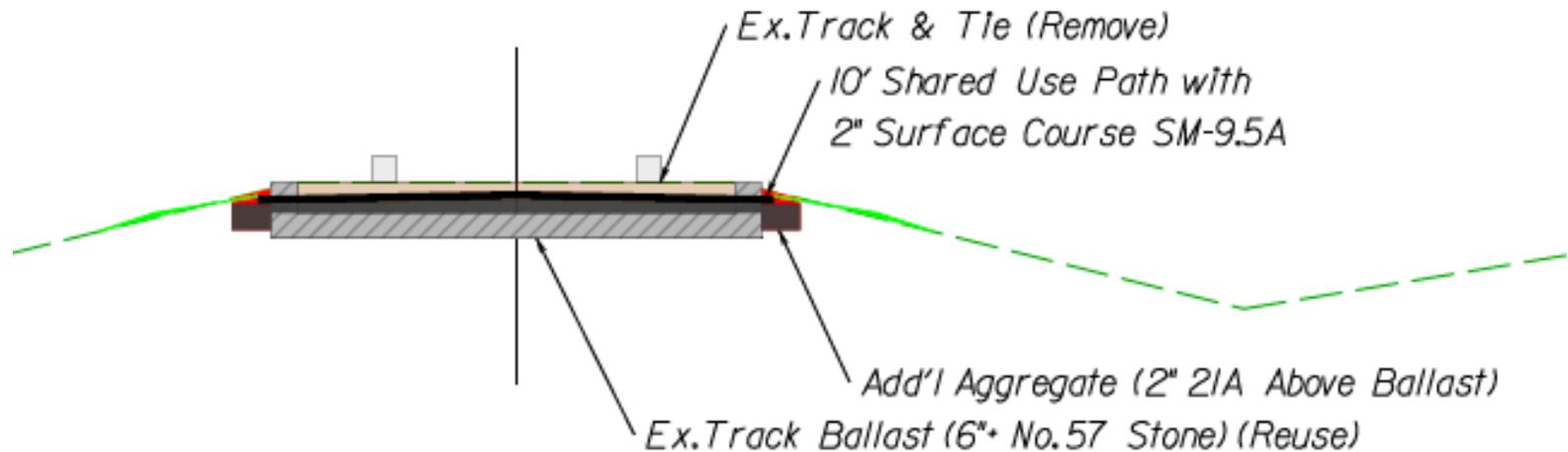


— PROPOSED SHARED USE PATH ALIGNMENT INFRASTRUCTURE AND KEY LOCATIONS
— BAY COAST RAILROAD
🏫 EASTERN SHORE COMMUNITY COLLEGE
🏘️ CITIES & TOWNS
● FUTURE TRAFFIC SIGNAL



Preliminary Cost Estimates

- Compared Estimates from Previous Rail to Trail Projects
- Performed Preliminary Per-Mile Cost Estimate Build Up
 - One estimate assumes construction on existing rail bed
 - One estimate assumes construction of new trail off the rail bed



Task Progress

- Developed draft Metro Quest online survey
- Virtual public meeting

Existing
Conditions
Analysis



Identify
Alternative
Alignments

Public
Outreach



Final
Alignment and
Phasing



Final Cost
Estimation



Implementation
Alternatives



Technical
Report



Online
Study
Map

Future Tasks

- **Determine the final alignment of the trail**
 - Including stub locations and trail heads
 - Develop guidelines for amenity placement

Existing
Conditions
Analysis



Public
Outreach



Final Cost
Estimation



Technical
Report



Identify
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Implementation
Alternatives

Online
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Future Tasks

- **Refine existing per-mile cost developed**
 - Determine preliminary engineering, construction, utility, and maintenance costs
 - Develop cost estimate for additional included treatments, such as road crossings

Existing
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Future Tasks

- Identify considerations for management agencies
- Identify potential funding sources
 - Submit 3 full SMART SCALE Applications if Pre-Applications are accepted.

Existing
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Final Cost
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Future Tasks

- **Technical Report**
- **Concept Sheets for Recommended Alignment**
- **Typical Sections**
- **Map Segment Summary Packages**

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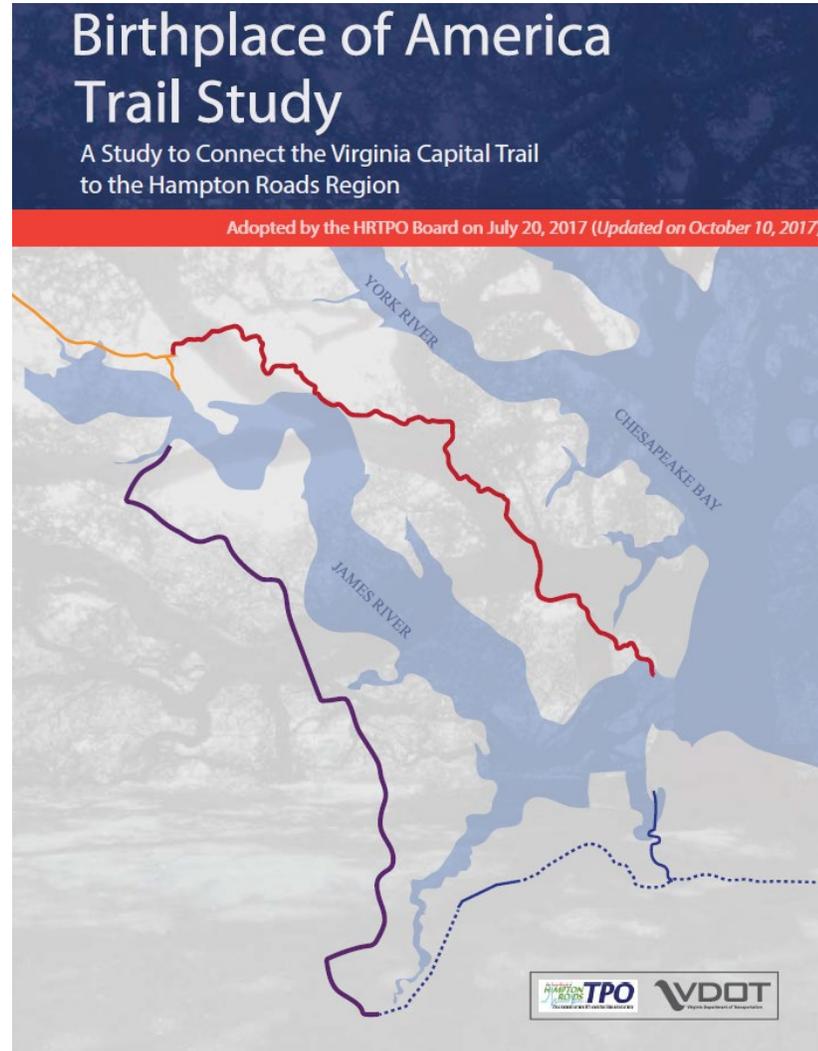


Online
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Map



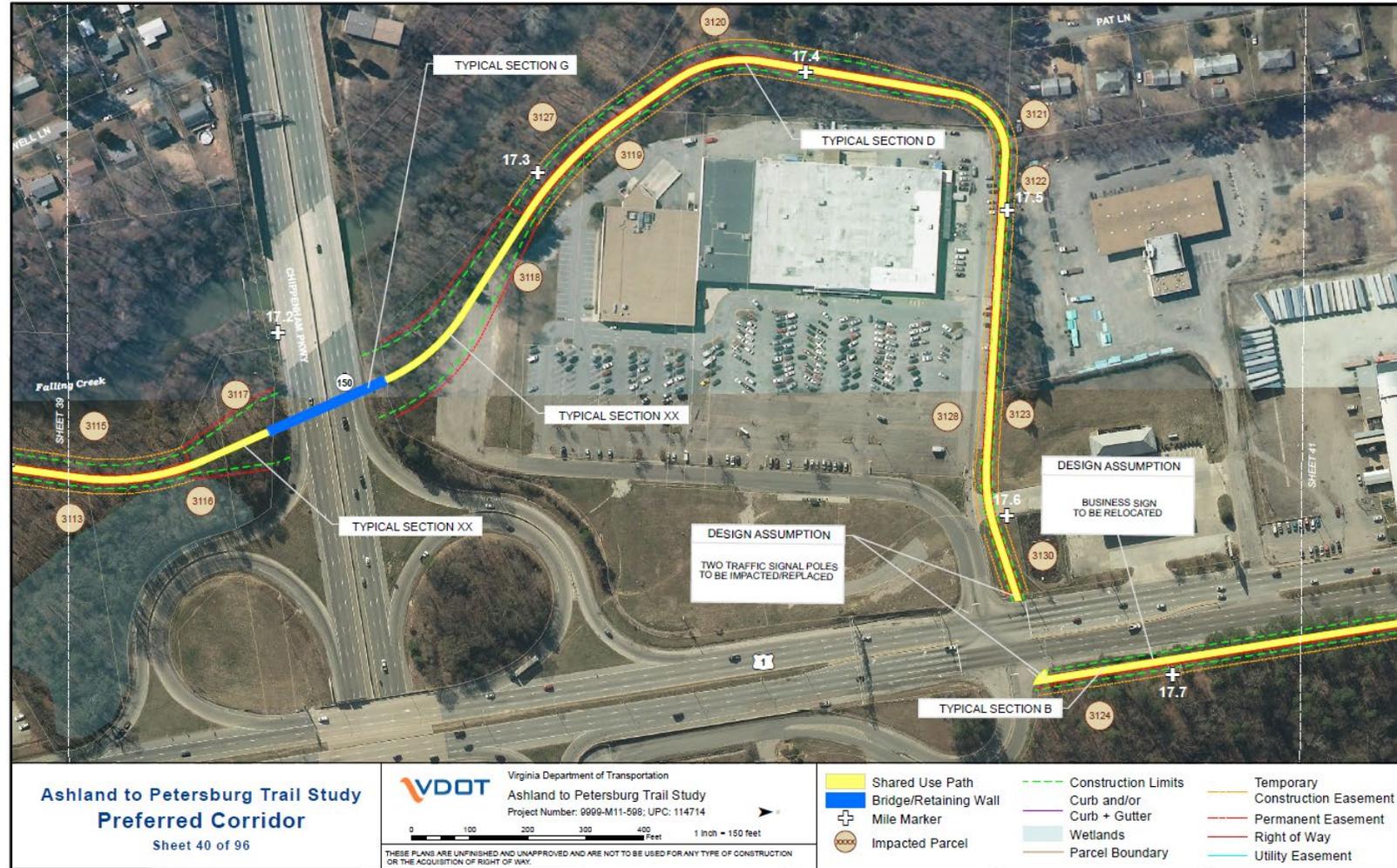
Example Deliverables

**Technical
Report**



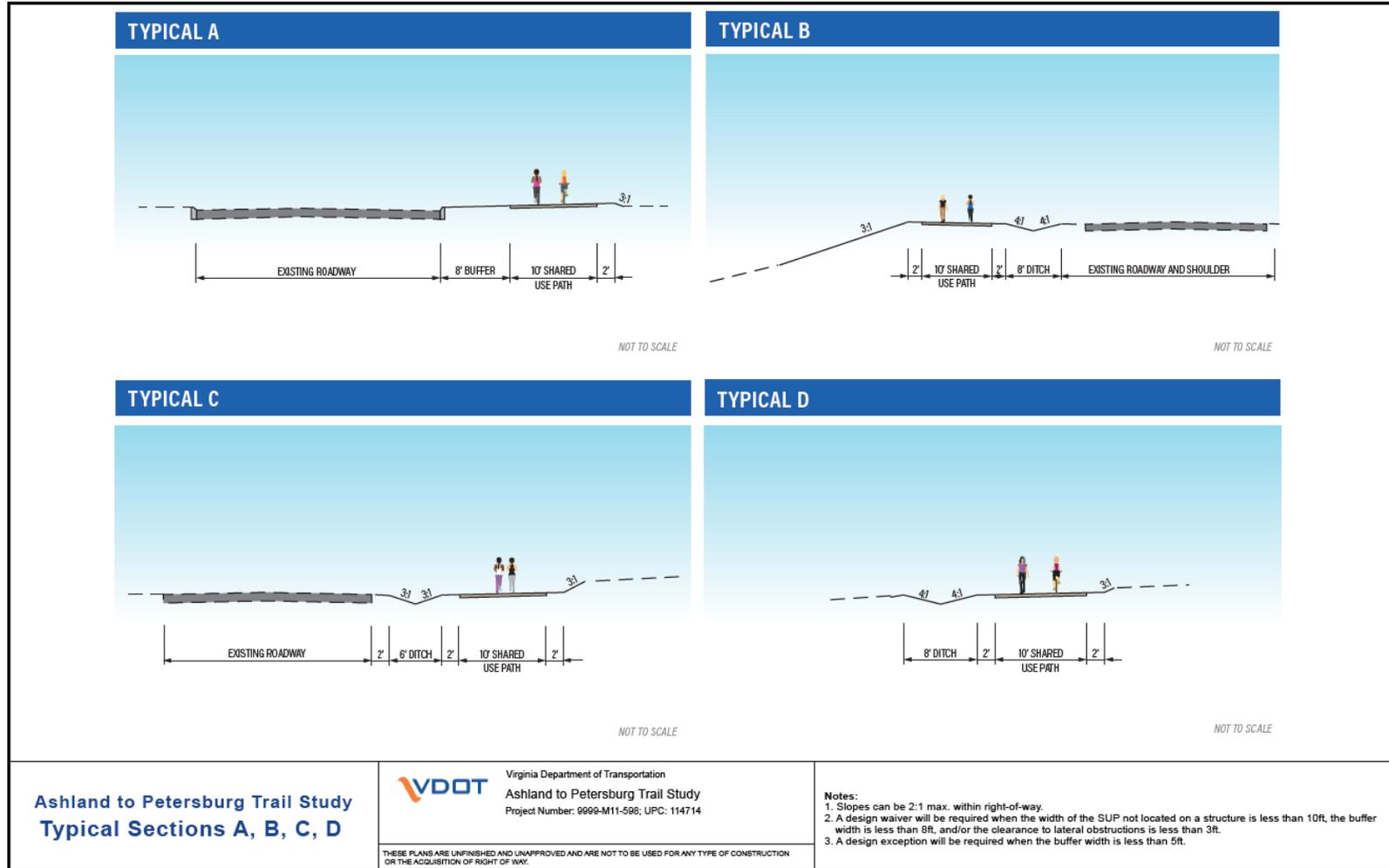
Example Deliverables

Concept
Sheets

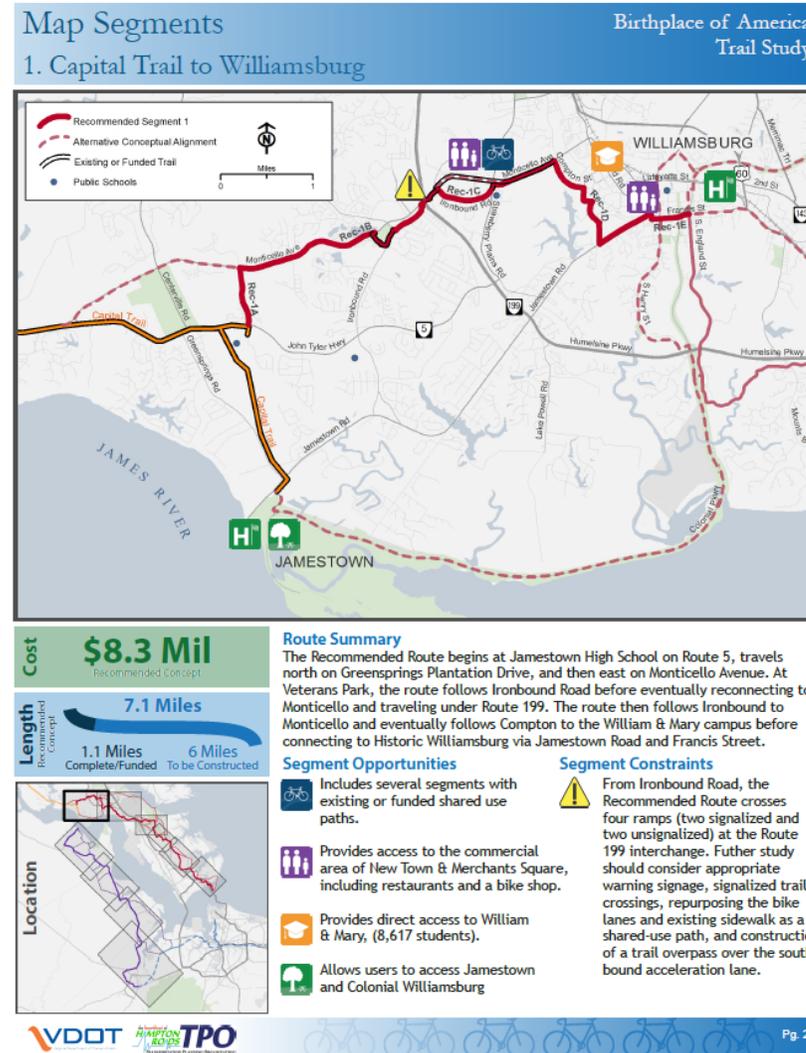


Example Deliverables

Typical Sections



Example Deliverables



Map Segment Summary Package

Future Tasks

- GIS-Based interactive study map
- Showing alignment, phasing, and cost estimate

Existing
Conditions
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Public
Outreach



Final Cost
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PROJECT SCHEDULE

Eastern Shore Rail to Trail Study

Proposed Tasks and Schedule

Existing
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Analysis



Public
Outreach



Final Cost
Estimation



Technical
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May
2020

May
2020

June
2020

July
2020

July
2020

August
2020

October
2020

October
2020

Stakeholder Meeting

Stakeholder Meeting

Proposed Tasks and Schedule





PUBLIC OUTREACH

Eastern Shore Rail to Trail Study

Task Progress

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MetroQuest Survey

Eastern Shore Rail Trail Study

WELCOME

Provide Your Input!

The Eastern Shore Rail to Trail Study will assess the feasibility of converting the former Bay Coast Railroad into a shared use path connecting communities along the Eastern Shore of Virginia.

Study Area Map

Begin

The study area extends approximately 50 miles between the Town of Cape Charles and the Town of Hallwood on Virginia's Eastern Shore.

VDOT
Virginia Department of Transportation

2 SURVEY

3 PHASING

4 MAP

5 WRAP UP

?



STAKEHOLDER UPDATES



Eastern Shore Rail to Trail Study

Stakeholders



Northampton County



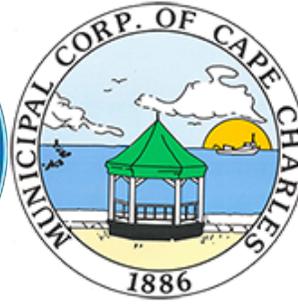
Accomack County



Accomack-Northampton Planning District Commission



Accomack-Northampton District Commission



Town of Cape Charles



Virginia Commonwealth Transportation Board, At-Large Rural



Canonie Atlantic Company



Virginia Bicycling Federation



The Nature Conservancy



Virginia Department of Conservation and Recreation



Virginia Department of Transportation



U.S. Fish and Wildlife Service



Virginia Department of Environmental Quality



Hampton Roads Sanitation District



Virginia Department of Rail and Public Transportation



Dahlgren Railroad Heritage Trail Alliance



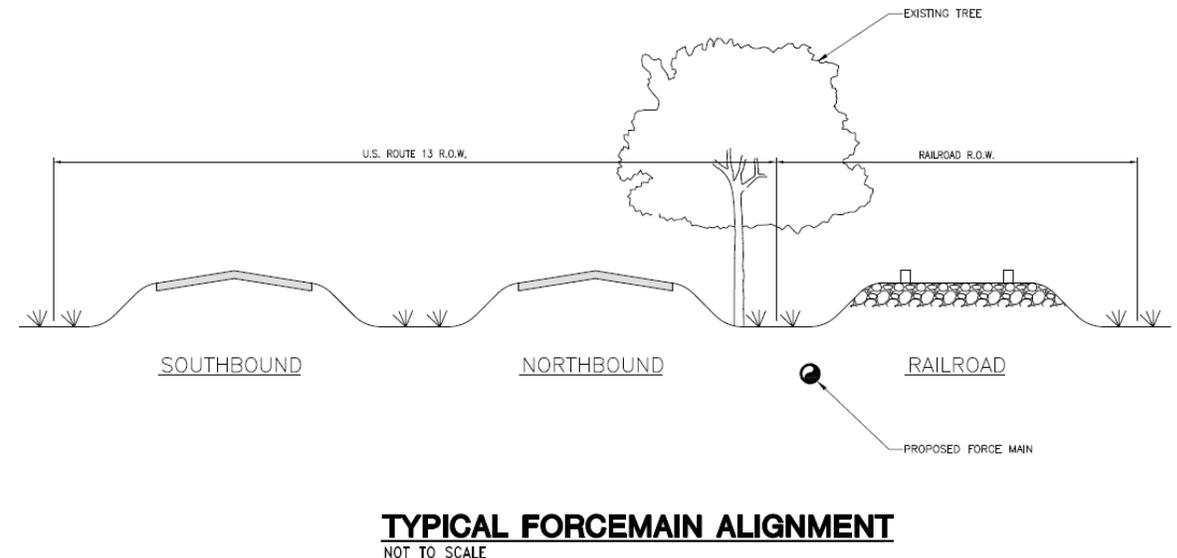
DISCUSSION OPPORTUNITY



Eastern Shore Rail to Trail Study

Utility Considerations

- **Broadband (Existing in some parts)**
- **Natural Gas (Future Possibility)**
- **Sewer (Planned – HRSD)**
 - **Should not preclude co-alignment within 66' ROW**
- **Benefits of Shared ROW**
 - **Efficient use of ROW**
 - **Makes utility space more functional and visually attractive**
 - **Uninterrupted access to utility for maintenance**
 - **Simplifies easement coordination to one agency, not multiple property owners**





Next Steps



MetroQuest Survey
Deployment



Preliminary Environmental



Sketch-Level Concept and
Planning-Level Cost



Preparing for Public
Meeting



www.co.northamptoncounty.va.us

Contact Information



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(571) 389-8121