DC TO RICHMOND
SOUTHEAST HIGH SPEED RAIL

TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT

Executive Summary

Prepared by
U.S. Department of Transportation
Federal Railroad Administration
and
Virginia Department of Rail and
Public Transportation

September 2017

DRPT
Virginia Department of Rail and Public Transportation

U.S. Department of Transportation
Federal Railroad Administration

FOR ADDITIONAL INFORMATION

The Draft EIS contains more information on the topics summarized in this document.
The following table lists the topics and where further details may by found in the Draft EIS.

EXECUTIVE SUMMARY TOPIC	DRAFT EIS LOCATION	
PROJECT OVERVIEW	**Chapter 1**	Purpose & Need
PROJECT ALTERNATIVES	**Chapter 2**	Alternatives
	Appendix A	Alternatives Technical Report
	Appendix B	Basis of Design Report
PROJECT EFFECTS & MITIGATION	**Chapter 3**	Affected Environment
	Chapter 4	Environmental Consequences
	Chapter 5	Section 4(f) Evaluation
	Appendix M	Natural Resources Technical Report
	Appendix P	Noise & Vibration Technical Report
	Appendix Q	Community Impact Assessment
	Appendix R	Cultural Resources Reports
	Appendix S	Transportation Technical Report
DRPT RECOMMENDED PREFERRED ALTERNATIVE	**Chapter 7**	DRPT Recommended Preferred Alternative

Refer to Chapter 11 of the Draft EIS for a glossary of commonly used terms.

This Executive Summary provides a high-level overview of the DC2RVA Project's study process, analysis, and effects. It is not intended to inventory all data and analysis, but rather to summarize key results that differentiate the alternatives and assist in the decisions to be made. Readers who are interested in more detailed analysis should refer to the full text of the Draft EIS. Those who want to delve even more deeply into specific aspects of the analysis can consult the technical reports and appendices in the Draft EIS.

1 PROJECT OVERVIEW

WHAT IS THE DC2RVA PROJECT?

The Federal Rail Administration (FRA) and the Virginia Department of Rail and Public Transportation (DRPT) are working to improve intercity passenger rail service in the north-south corridor between Washington, D.C. and Richmond, VA. These passenger rail service and rail infrastructure improvements are collectively known as the Washington, D.C. to Richmond Southeast High Speed Rail (DC2RVA) Project. The purpose of the DC2RVA Project is to increase capacity to deliver higher speed passenger rail, expand commuter rail, and accommodate growth of freight rail service in an efficient and reliable multimodal rail corridor. The DC2RVA Project will enable passenger rail to be a competitive transportation choice for intercity travelers between Washington, D.C. and Richmond, and beyond. It extends 123 miles along an existing rail corridor owned by CSX Transportation (CSXT) from the Long Bridge across the Potomac River in Arlington, VA, to Centralia, VA in Chesterfield County, south of Richmond.

The proposed improvements of the DC2RVA Project include the following:

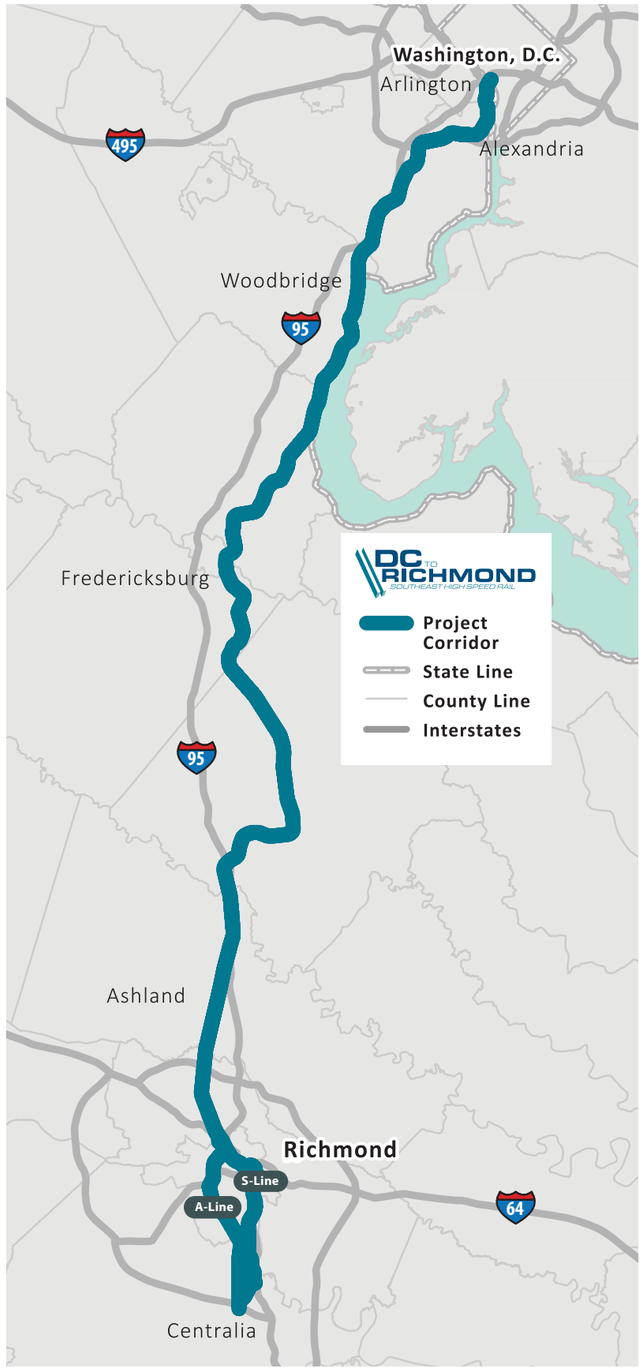
- Construct additional main line tracks and track crossovers
- Straighten curves in existing tracks to allow for higher speeds
- Improve intercity passenger rail stations and station areas
- Improve sidings and signals
- Implement roadway crossing safety improvements

The DC2RVA Project is being evaluated through the mechanism of an Environmental Impact Statement (EIS) to satisfy the requirements of the National Environmental Policy Act (NEPA). NEPA requires projects that have a federal nexus and may have a significant impact on the natural and/or built environment to be analyzed through a rigorous process that allows the public to understand and comment on the benefits and impacts of the project. The environmental effects of the proposed DC2RVA improvements measure to avoid, minimize, and otherwise mitigate those impacts.

DC2RVA PROJECT QUICK FACTS:

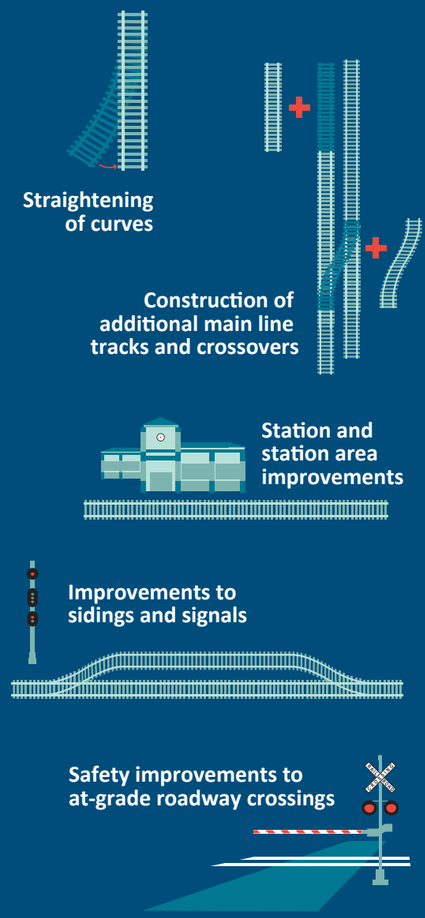
- **123-mile corridor,** generally parallel to the I-95 highway
- **Northern Terminus:** Long Bridge in Arlington, VA (Potomac River)
- **Southern Terminus:** Centralia in Chesterfield County, VA (south of Richmond)
- **Shared passenger rail and freight rail corridor**
  - Amtrak provides several types of passenger rail service *(see page 14)*
  - Virginia Railway Express (VRE) provides commuter rail service
  - CSXT owns the track and provides freight rail service
- **The DC2RVA Project would:**
  - Improve service frequency, travel time, and on-time performance of intercity passenger trains by adding capacity
  - Accommodate freight and commuter rail service
  - Include rail infrastructure and safety improvements
  - Include passenger service upgrades
  - Address rail congestion in the Richmond area
- **Expands on other high speed rail corridors / projects:**
  - The northern section of the larger 500-mile Southeast High Speed Rail (SEHSR) program from Washington, D.C. to Charlotte, NC *(see Page 3)*
  - A Tier II EIS that follows previous federal environmental review and documentation *(see Page 5)*

DC2RVA PROJECT CORRIDOR



The Federal Railroad Administration (FRA) and the Virginia Department of Rail and Public Transportation (DRPT) propose passenger rail service and rail infrastructure improvements in the north-south travel corridor between Washington, D.C. and Richmond, VA – collectively known as the Washington, D.C. to Richmond Southeast High Speed Rail (DC2RVA) Project.

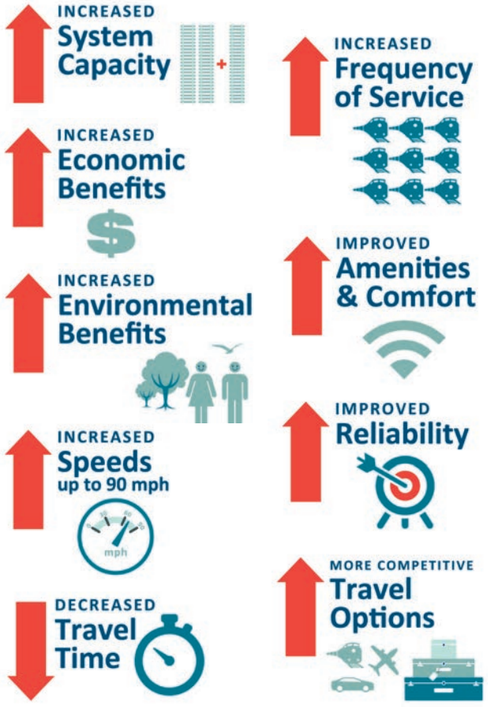
DC2RVA IMPROVEMENT CONCEPTS



WHAT IS THE PURPOSE OF THE DC2RVA PROJECT?

The Intermodal Surface Transportation Efficiency Act of 1991 authorized a program of high speed rail corridors in the United States. In 1992, the United States Department of Transportation designated the Southeast High Speed Rail (SEHSR) corridor, from Washington, D.C. to Charlotte, as one of five original national high speed rail corridors. In 2002, the FRA completed at Tier I EIS for the SEHSR corridor that established the overall purpose and defined the route for providing a competitive transportation choice for travelers within the Washington, D.C. to Richmond, Raleigh, and Charlotte travel corridor. The DC2RVA Tier II EIS carries forward the purpose of the SEHSR Tier I EIS within the Washington, D.C. to Richmond portion of the larger SEHSR corridor by identifying the infrastructure improvements necessary to provide a competitive transportation choice for current and future conditions. *See Page 5.*

DC2RVA IMPROVEMENT BENEFITS



The DC2RVA Project is expected to provide multiple benefits to the traveling public and the Commonwealth of Virginia, including:

- Providing an efficient and reliable multimodal rail corridor between Washington, D.C. and Richmond, and beyond
- Increasing the capacity of the multimodal rail system between Washington, D.C. and Richmond
- Improving the frequency, reliability, and travel time of passenger rail operations in Virginia and beyond, and providing a competitive alternative to highway and air travel
- Accommodating VRE commuter rail service operations
- Accommodating freight rail movement through the corridor, including to and from Virginia's ports
- Improving modal connectivity with other public transportation systems within the corridor to further expand travel options for passengers within Virginia and beyond
- Improving multimodal rail operations safety in the corridor
- Improving air quality and reducing greenhouse gas emissions by diverting passenger trips by automobile and movement of freight by trucks to more environmentally sustainable rail transportation – the 2013 Virginia Statewide Rail Plan found that freight railroads were 12 times more fuel-efficient than freight trucks

Higher speed passenger rail service will encourage economic development in the Commonwealth and along the Eastern Seaboard travel corridors by expanding competitive travel options for business and leisure travelers. Because the DC2RVA Project corridor is shared corridor, the proposed improvements will also enhance the efficiency of freight rail movements within the corridor. Improvements to freight rail operations in the corridor would encourage economic development by increasing freight traffic through Virginia's ports, supporting rail-dependent industries, and present an opportunity for greater diversion of freight transport from congested highways to rail.

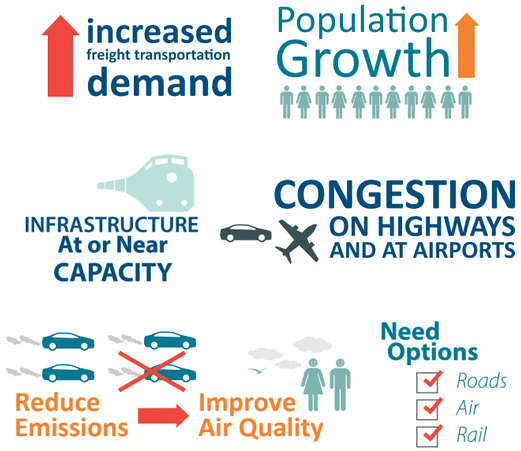
> "Our major interstate corridors such as I–95, I–395, and I–495 have essentially reached their ultimate footprints where future widening will be cost prohibitive, impacts to communities will be too great, or both. This reality means more needs to be done in the future to take more trucks and cars off of I–95. Improving and expanding freight, commuter and Amtrak rail service will provide travel choices for commuters and businesses alike."
>
> *- Virginia Secretary of Transportation Aubrey Layne*

WHY IS THE DC2RVA PROJECT NEEDED?

Current conditions experienced in the DC2RVA Project corridor support the previous Tier I EIS Purpose and Need and are the foundation for the project today. These conditions include:

- **Population Growth.** Population in the corridor and adjacent urban regions continues to grow, increasing demand for reliable and safe travel options for passengers. In addition to overall population growth, changing demographics in the corridor and adjacent urban regions are increasing the demand for passenger rail service.
- **Freight Growth.** Demand for freight movement through and within the corridor is growing as economic activity and population increase within the DC2RVA corridor and along the eastern seaboard. Ongoing expansion of Virginia's deep water ports, rail-dependent industries, and intermodal facilities further increases the need for efficient shipment of freight.
- **Congestion in the I-95 Corridor.** The I-95 corridor between Washington, D.C. and Richmond remains one of the most congested corridors in Virginia, despite ongoing and planned improvements. As a result, trip times by highway are not reliable.
- **Air Travel Congestion.** Travel by air is increasingly at capacity, resulting in frequent delays and causing commercial carriers to reduce flights and increase fares, which limits the transportation options between Washington, D.C. and the entire southeast, resulting in lost productivity for travelers and excessive fuel consumption.
- **Rail Capacity in the Corridor.** The shared freight and passenger rail corridor between Washington, D.C. and Richmond is nearing capacity and requires improvements to effectively and efficiently meet existing and future demands for passenger service, commuter passenger service, and freight service.
- **Providing Options for Reliable and Convenient Movement of Goods and People.** The transportation network must provide options for the reliable and convenient movement of goods and people for the Commonwealth and the southeast region's economy to remain strong and to continue to grow.
- **Air Quality.** There is a need to reduce growth of transportation-related mobile source emissions and their impacts to air quality. Passenger or freight movement by train provides an efficient travel mode, and it uses less energy and produces fewer emissions per passenger or ton of freight moved per mile.

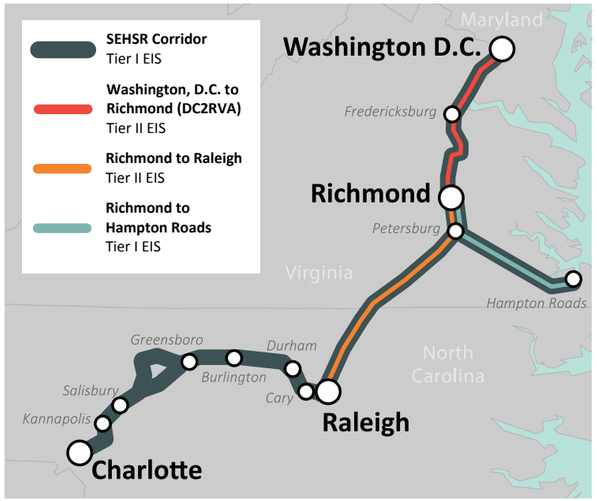
PROJECT NEED



HOW DOES THE DC2RVA PROJECT RELATE TO OTHER HIGH SPEED RAIL PROJECTS IN THE U.S.?

The DC2RVA Project is the northernmost section of the SEHSR corridor, which is part of a larger nationwide high speed intercity passenger rail plan identified by the U.S. Department of Transportation. The SEHSR corridor was one of five originally designated high speed rail corridors identified by the FRA in 1991, and is currently planned to extend from Washington, D.C. to Jacksonville, FL.

This DC2RVA Project expands upon a previous study, a Tier I EIS, that recommended passenger rail improvements in the 500-mile Washington, D.C. to Charlotte, NC portion of the SEHSR corridor. That study established the SEHSR program purpose and selected preferred rail corridors, and provided a programmatic-level environmental analysis. It also selected an incremental approach to develop the SEHSR program and subsequently the SEHSR corridor was separated into discrete sections (Washington, D.C. to Richmond, Richmond to Raleigh, and Raleigh to Charlotte) for further detailed (Tier II) studies. The Washington to Richmond section will provide the critical gateway linking the Northeast Corridor and the rest of the SEHSR corridor.



WHAT IS THE DIFFERENCE BETWEEN THIS TIER II STUDY AND THE PREVIOUS TIER I STUDY?

A two-tiered environmental process is often used on extensive projects before implementing the proposed action. Tier I evaluation is focused on large-scale decisions. For example, the Tier I evaluation of the overall Southeast High Speed Rail between Washington, D.C. and Charlotte identified the type of new rail service needed, and which general corridor would be best for the new service. More detailed Tier II evaluation(s) are conducted that evaluate the specific actions and improvements required to support the Tier I findings. Both Tier I and Tier II studies conclude with a Record of Decision (ROD), which explains the agency's decision and next steps, if applicable. Tier II decisions are supported by more detailed engineering and cost estimating, and include a more rigorous environmental study of potential alternatives, as required by NEPA. A Tier II ROD would establish that the corridor is eligible for federal funding and allow for permitting, final design, railroad right-of-way acquisition, and construction to proceed.

This DC2RVA Project Tier II EIS is the second step in a two-tiered federal environmental review process. The Preferred Alternative identified in the 2002 Tier I ROD called for rail improvements that generate incremental passenger service benefits but minimize impacts by using existing rail infrastructure and railroad right of way. While the Tier I study established the general route connecting the cities along the corridor, the actual alignment is designed as part of this Tier II DC2RVA Project.

SOUTHEAST HIGH SPEED RAIL CORRIDOR TIER I EIS COMPLETED IN 2002

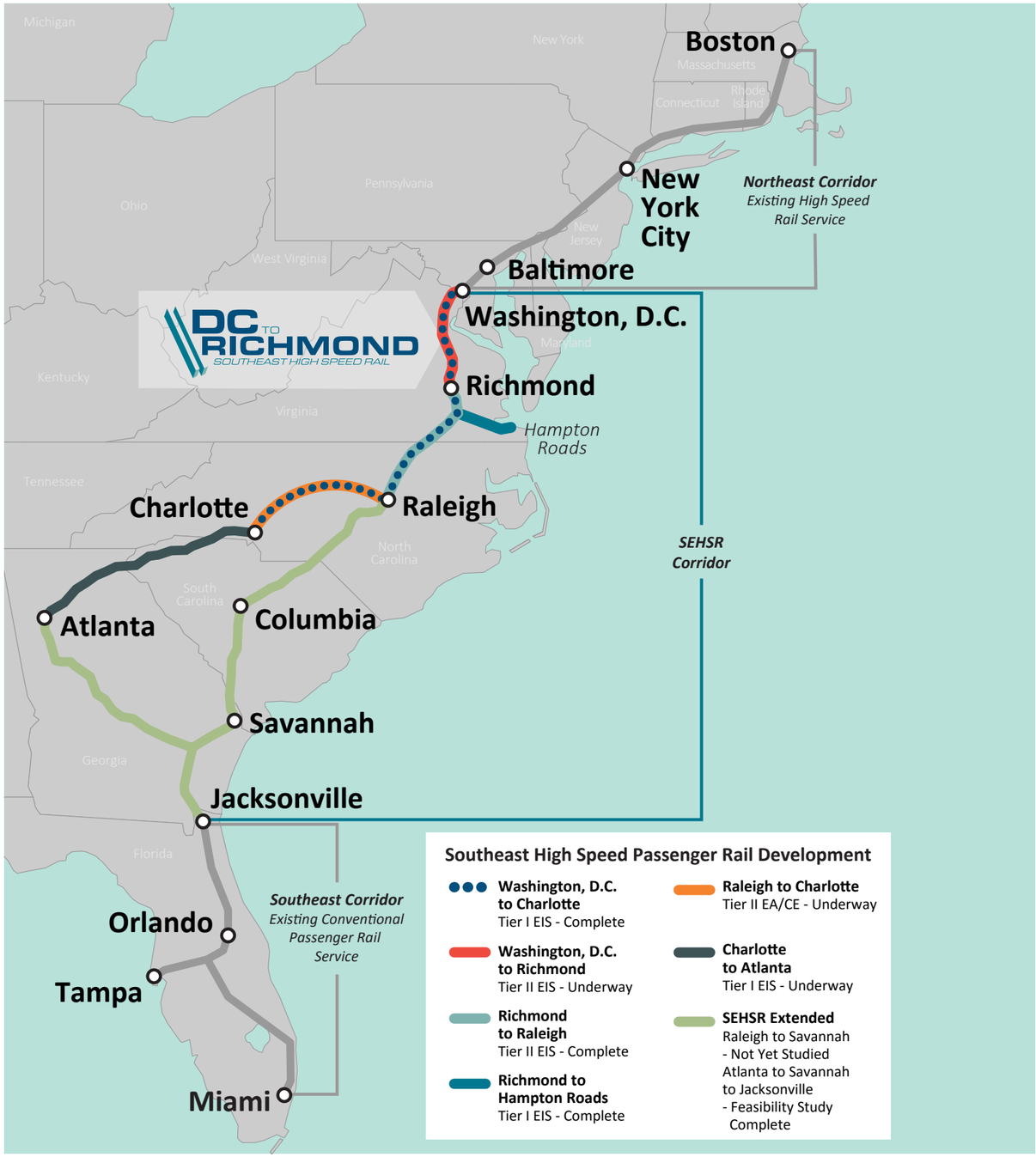
PURPOSE

- Evaluate full 500-mile corridor between Washington, D.C. and Charlotte, NC
- Establish broad program concepts

DECISIONS MADE

- Use an incremental approach for implementation
- Minimize impacts by using existing infrastructure
- Use conventional–powered locomotives

HIGH SPEED RAIL CORRIDORS ON THE EASTERN SEABOARD



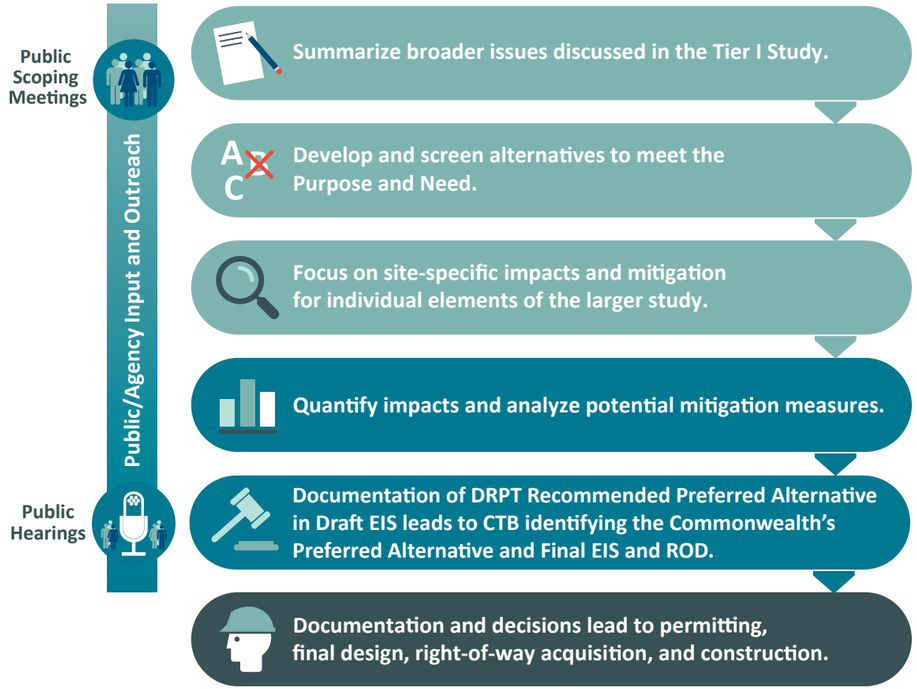
WHAT IS THE TIER II EIS PROCESS FOR THE DC2RVA PROJECT?

The Purpose and Need for the Tier II EIS for the DC2RVA Project is based on the Tier I EIS, which established the Purpose and Need for the larger SEHSR corridor *(see Page 5)*. During the Tier II EIS process for the DC2RVA Project, DRPT and the FRA are evaluating the benefits, costs, and environmental effects of several possible Build Alternatives, which are compared to a baseline No Build Alternative. The process includes consideration of a range of reasonable alternatives and detailed analysis of the potential impacts to the natural and built environments resulting from each, as well as documentation of compliance with other applicable environmental laws, regulations, and executive orders.

The Tier II EIS process is iterative and adds additional levels of detailed analysis as the proposed Build Alternatives are refined. The steps in the process in order of increasing detail, include: confirming the Purpose and Need as established in the Tier I EIS for the Washington, D.C. to Richmond, VA portion of the SEHSR corridor; developing site-specific rail alternatives for placement of a third track and other improvements; incorporating public and stakeholder input; conducting a detailed evaluation of environmental impacts and identifying associated mitigations, as required; and recommending a Preferred Alternative.

Public and agency input is integral throughout the entire DC2RVA Project, and is an ongoing effort, including public scoping meetings early in the project process, and ongoing public and agency meetings. The FRA will consider public comments and input from the Draft EIS and issue a Final EIS to document the selection of the Preferred Alternative.

TIER II ENVIRONMENTAL IMPACT STATEMENT (EIS) PROCESS



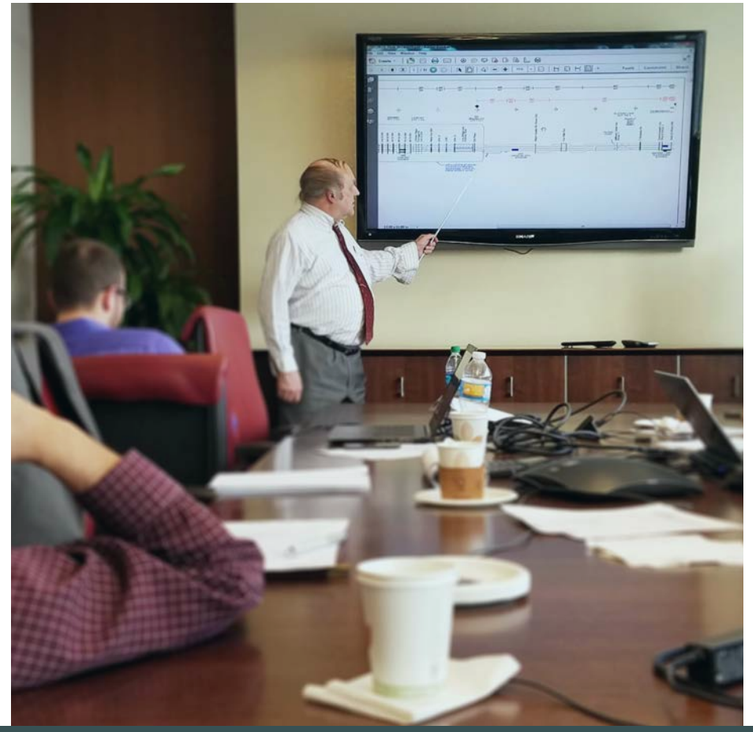
WHO HAS BEEN INVOLVED IN THE ENVIRONMENTAL PROCESS?

Key agencies and stakeholders:

- **Federal Railroad Administration** – *Lead Federal Agency*
- **Virginia Department of Rail and Public Transportation** – *State Sponsor*
- Virginia Department of Transportation (VDOT)
- CSXT
- Amtrak
- Virginia Railway Express (VRE)

The following agencies agreed to be cooperating agencies for the DC2RVA Project:

- Federal Highway Administration
- Federal Transit Administration
- U.S. Army Corps of Engineers, Norfolk District
- U.S. Coast Guard
- U.S. Environmental Protection Agency
- Virginia Department of Transportation



Key agencies are federal and state sponsors and operators on the corridor.

U.S. Department of Transportation
Federal Railroad Administration

DRPT
Virginia Department of Rail and Public Transportation

VDOT
Virginia Department of Transportation

CSX
How tomorrow moves

AMTRAK

VRE

Cooperating agencies include those agencies that have jurisdiction by law or special expertise and typically:

- Participate in scoping
- Provide staff support
- Assist with analyses, field reviews, and public meetings
- Review documentation

WHAT OUTREACH HAS TAKEN PLACE ON THE DC2RVA PROJECT?

The DC2RVA Project has followed an extensive public participation process that began in 2014 with publication of the Notice of Intent in the Federal Register as part of the Tier II EIS and continues today. The outreach plan was developed to comply with NEPA and to promote informed decision-making by federal, state, and local agencies.

The overall goal of the public involvement program is to provide an open, dynamic process that includes as many residents, businesses, agencies, stakeholders, and community groups within the project area as possible. DRPT is using a variety of outreach tools including public meetings, online meetings, mailings and emails, newspaper and social media postings, workshops and informational sessions, and an interactive project website to document all project-related materials. DRPT is committed to involving people early and often and sharing information as it becomes available.

WHEN WOULD THE DC2RVA PROJECT BE BUILT?

Complete build-out of the corridor and full implementation is dependent on future state and federal funding, and the ability to achieve passenger rail benefits. At the conclusion of the Tier II EIS process, the goal is to have successfully completed the NEPA process to meet federal requirements and qualify for federal funding for the DC2RVA Project. The implementation process that follows NEPA and preliminary design can be lengthy, and includes applying for construction permits, equipment selection and manufacturing, ordering materials, and actual construction of the rail corridor improvements.

DRPT and the FRA have adopted an incremental approach to develop new service and achieve passenger rail benefits, and are working with CSXT to identify key opportunities to construct railroad infrastructure and implement improved service in the corridor as quickly as practicable. For planning purposes, DRPT is anticipating the new service could be in operation by 2025, which is dependent on many factors, not the least of which is finalizing the Tier II EIS and ROD.

2 BUILD ALTERNATIVES

HOW WERE THE BUILD ALTERNATIVES FOR THE DC2RVA PROJECT DEVELOPED AND EVALUATED?

The Build Alternatives were designed to increase rail capacity and accommodate higher passenger train speeds, while minimizing potential impacts to natural and cultural resources. Build Alternatives included the following elements:

- Addition of main track along most of the corridor, and additional controlled sidings, crossovers, yard bypasses and leads, and other improvements at certain locations.
- Upgrades to existing track and signal systems to achieve higher operating speeds, including curve realignments, higher-speed crossovers between tracks, passing sidings, and at-grade crossing improvements.
- Station, platform, and parking improvements for intercity passenger rail stations and rail alignments, including accommodation of additional and/or extended VRE platforms and/or other improvements.
- Improvements to adjacent highway and rail crossing infrastructure, including safety improvements to roadway crossings.

Developing potential rail alignments, *i.e.*, the location and configuration of the main line track, was an iterative process. DRPT relied on previous studies and public scoping comments as the starting point, modifications were made to avoid or minimize potential adverse effects on environmental resources and existing infrastructure, and to minimize the need for additional new infrastructure, while preserving the ability to meet the DC2RVA Project's Purpose and Need. The final screening evaluation – to determine the Build Alternatives to be carried forward for evaluation in the Draft EIS – focused on each rail alignment's ability to reduce trip times based on increased track design speed and to increase the reliability of rail operations based upon added capacity, with the least potential environmental impact and consideration of cost to construct.

Build Alternatives developed as part of the DC2RVA Project include two elements:

- Physical improvements along the rail alignment *(See Page 16)*
- Proposed train service that would run through the corridor *(See Page 14)*

WHAT FUTURE YEARS ARE ANALYZED?

FRA and DRPT established two important planning dates. The first is 2025, which is FRA and DRPT's estimate of when construction of the DC2RVA infrastructure could be completed and the new DC2RVA service would be placed in operation *(see page 9)*. FRA and DRPT used 2025 as the date when the physical impacts associated with DC2RVA Project construction would take place – so all physical impact analyses within the Draft EIS on human and natural resources are estimated for 2025, and compared to the No Build Alternative conditions projected for 2025.

The second key planning date is the planning horizon date of 2045. As required by Federal regulation and FRA guidance, DRPT tested the proposed alternatives to determine if the rail capacity would be adequate for opening day (2025) projected rail traffic and if it would remain adequate over the 20-year planning horizon. DRPT also used the 2045 planning horizon date to estimate some of the longer-term effects of the proposed service such as ridership, energy use, and effects on air quality, as well as indirect and cumulative effects.

WHAT IS THE NO BUILD ALTERNATIVE?

The No Build Alternative defines the future infrastructure and service levels that will result from planned investments in the Washington, D.C. to Richmond rail corridor, independent of the improvements planned by the DC2RVA Project. If a project was under construction, fully-funded, or was the focus of advanced collaborative planning, it was assumed to be complete by 2025 for the purposes of the Draft EIS evaluation.

The purpose of the No Build Alternative is to serve as a baseline for comparison of potential effects and impacts of the DC2RVA Build Alternatives. The No Build Alternative was fully evaluated and dismissed by the FRA in the 2002 SEHSR Tier I ROD because it does not meet the SEHSR Purpose and Need. Although previously dismissed as not a viable alternative, the No Build Alternative is fully considered as part of the Tier II Draft EIS for the DC2RVA Project because the baseline is required by NEPA.

RAIL ALIGNMENT ALTERNATIVE SCREENING PROCESS

Stage I Screening: Fatal Flaw

Direct Effects - Outside Existing Railroad Right-of-Way (ROW) Only

- *Historic resources listed on or eligible for the National Register of Historic Places*
- *Federal, state, or local parks and recreation areas*
- *Federal or state wildlife/waterfowl refuges*
- *Military bases*

II Stage II Screening: Order of Magnitude Impacts

Compare Order of Magnitude Impacts Outside Existing Railroad ROW

- *Area outside existing ROW (urban/developed and agricultural)*
- *Hazardous waste sites*
- *Agricultural/forestal districts*
- *Wetlands*
- *Cemeteries*

III Stage III Screening: Infrastructure Constraints

Compare to Potential and Existing Infrastructure

- *Existing rail bridges*
- *New rail bridges*
- *Existing road overpasses*
- *Existing at-grade crossings*

IV Stage IV Screening: Area Options

Evaluate Areas Where Options May Not Follow Existing Rail Alignment

- *Bypass options in Fredericksburg and Ashland*
- *Station options in Richmond*

Identify Reasonable Alternatives for evaluation in the Draft EIS

WHAT IS THE PROJECT CORRIDOR?

For evaluation in the Tier II Draft EIS for the DC2RVA Project, DRPT identified six alternative areas along the corridor, each with unique existing conditions, constraints, and/or needs. Area-specific Build Alternatives were developed and will be linked to form a single DRPT Recommended Preferred Alternative for the corridor *(See Page 56)*.

- **Alternative Area 1: Arlington**
  1-mile section that includes approach alignments to the Long Bridge, which crosses the Potomac River between VA and D.C.
- **Alternative Area 2: Northern Virginia**
  47-mile section that includes additional track within existing railroad right-of-way.
- **Alternative Area 3: Fredericksburg**
  14-mile section that includes alignments through or around the city.
- **Alternative Area 4: Central Virginia**
  29-mile section that includes additional track primarily within the existing railroad right-of-way.
- **Alternative Area 5: Ashland**
  10-mile section including alignments through or around the town.
- **Alternative Area 6: Richmond**
  23-mile section including different station locations and routing options on separate alignments, as follows:

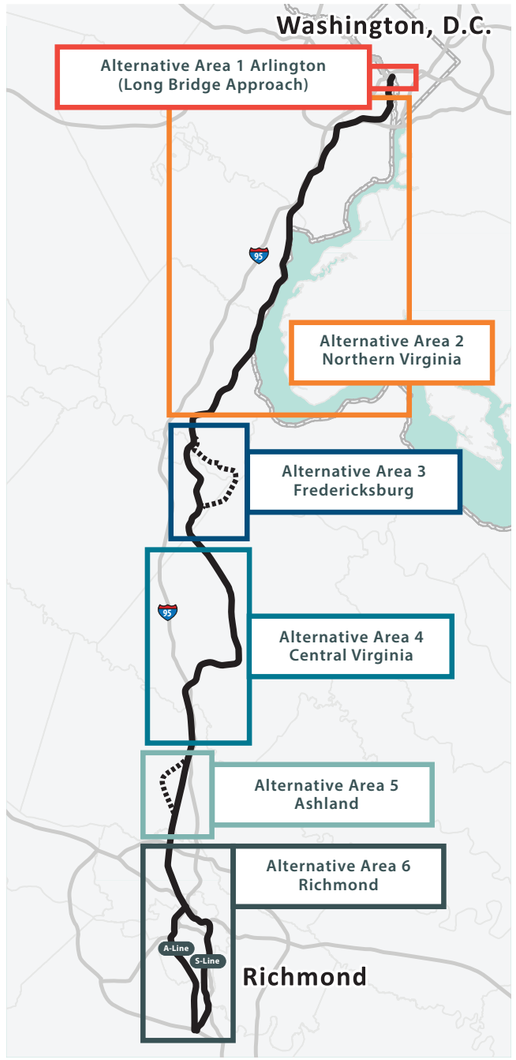
Four station locations in Richmond area *(see Page 13)*:

- Staples Mill Road Station — existing station in Henrico County
- Boulevard Station — proposed new station location adjacent to the Boulevard Street roadway overpass
- Broad Street Station — proposed new station location near the historic Broad Street Station building (now the Science Museum of Virginia) in Richmond
- Main Street Station — existing station in downtown Richmond

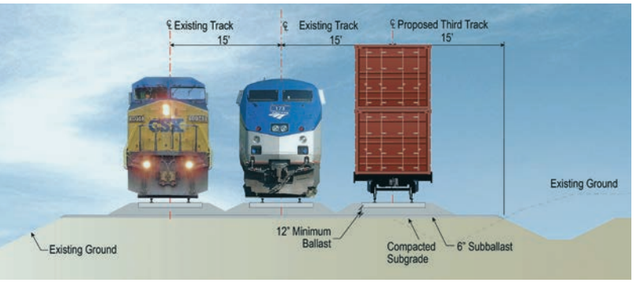
Two rail routes diverge at Acca Yard and reconnect at Centralia:

- **A-Line:** Western rail line. Used by majority of north-south passenger and freight trains. CSXT's principal freight route to points south. Approximately 14.3 miles.
- **S-Line:** Eastern rail line. Used primarily by local freight to serve industry and passenger rail service to Newport News. Approximately 15.6 miles.

PROJECT ALTERNATIVE AREAS



TYPICAL TRACK CROSS SECTION



WHAT IS THE TYPICAL CROSS SECTION OF THE PROPOSED RAIL CORRIDOR?

The DC2RVA Project proposes to increase rail capacity by adding one additional main track – in most areas, a new third track in addition to the existing two tracks. The location of the new track, either on the east or west side of existing tracks, varies by location. DRPT developed the location of alternatives based on physical constraints and minimization of impacts.

The proposed Build Alternatives additionally vary within the City of Fredericksburg and the Town of Ashland, where alignments outside of the existing railroad right-of-way were considered (such as bypass alignments around the downtown areas); the typical cross section of all new alignments in these areas included a total of two tracks.

WHAT STATIONS WOULD DC2RVA TRAINS SERVE?

DRPT is evaluating both existing and potential new passenger rail stations in the DC2RVA corridor. DRPT plans to incorporate the proposed passenger train service into Amtrak's intercity passenger rail network *(see graphic on Page 14)*.

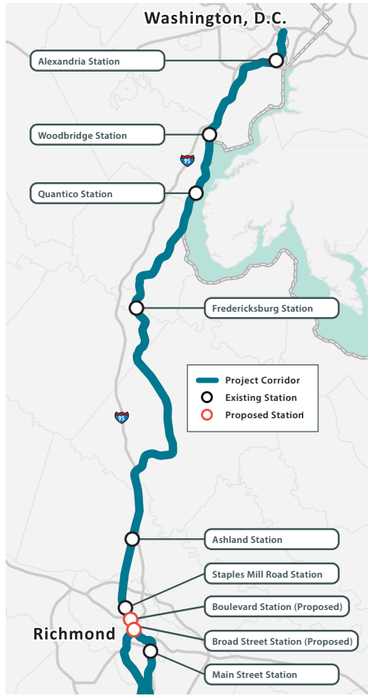
Along the DC2RVA corridor, these existing stations include: Alexandria, Woodbridge, Quantico, Fredericksburg, Ashland, and Staples Mill Road and Main Street in Richmond. In Richmond, DRPT is considering two proposed new locations: Boulevard Station and Main Street Station. Not all proposed DC2RVA trains would necessarily serve all existing or proposed stations.

HOW FAST WOULD DC2RVA TRAINS TRAVEL?

Federal designation of high speed rail corridors requires trains to achieve 110 mph where reasonably possible. Through analysis of existing geography, environmental conditions, and operational efficiency, the DC2RVA Project established a design speed of 90 mph. Elsewhere on the overall SEHSR corridor south of Richmond, geography and operating conditions are more suitable to support speeds at 110 mph.

There are limiting speeds within certain portions of the DC2RVA Project corridor where trains may not be able to operate at the 90 mph maximum authorized speed for the full length between station stops, due to localized speed restrictions, track curvature, geometrical reasons and/or station proximity *(see Area Build Alternatives for details, Pages 17 through 34)*.

EXISTING + PROPOSED INTERCITY PASSENGER TRAIN STATIONS



WHAT PASSENGER TRAINS ARE IN THE DC2RVA CORRIDOR?

Amtrak operates four types of intercity passenger service:

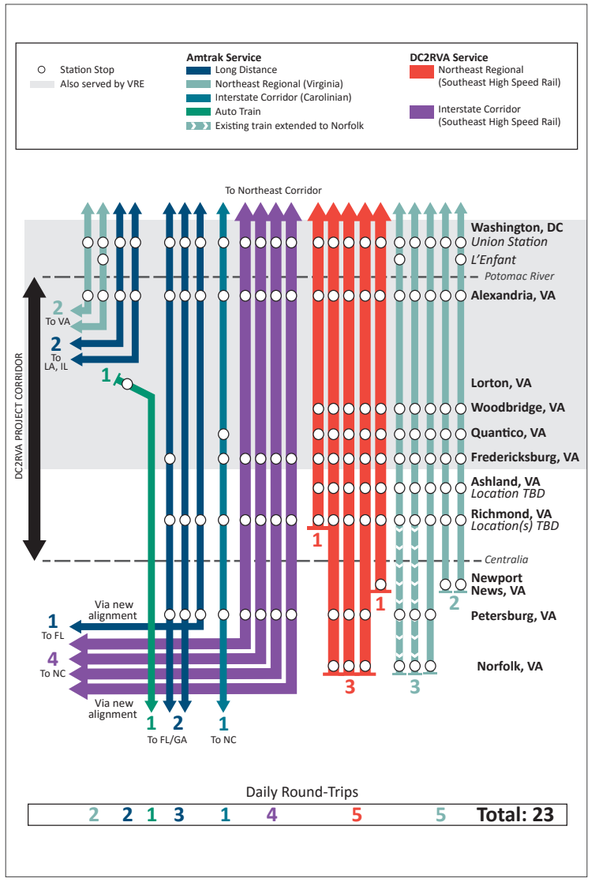
- **Northeast Regional (Virginia)** service provides regional passenger rail service along the length of the Northeast Corridor from Boston and New York and continues south to serve routes in Virginia. Trains make local station stops.
- **Interstate Corridor (North Carolina)** operates between New York and North Carolina (one single daily round trip) through Virginia, making fewer stops in the DC2RVA corridor than the Northeast Regional service.
- **Long Distance** Amtrak service operates from New York and continues through Washington, D.C. and Virginia to other out-of-state locations. Long distance trains serve the fewest of Amtrak station stops within the DC2RVA corridor.
- **Auto Train** Amtrak service operates as a daily nonstop, overnight train between dedicated station facilities in Lorton, VA and Florida, and carries passengers and their automobiles.

WHAT TRAINS WOULD THE DC2RVA PROJECT ADD?

DRPT is proposing to add nine daily round trip SEHSR passenger trains to the corridor by 2025, which would be incorporated into Amtrak's passenger rail network and serve the Northeast Corridor north of Washington, D.C. as part of the DC2RVA Project.

- Four new round trip **Interstate Corridor (SEHSR)** passenger trains to North Carolina, with stops in the DC2RVA corridor in: Alexandria; Fredericksburg; and Richmond. This service will complement Amtrak's current Interstate Corridor (Carolinian) service by providing additional frequencies to North Carolina. The SEHSR trains will have slightly different service patterns in the DC2RVA corridor than the existing Amtrak service, and use different routes south of the DC2RVA corridor, where SEHSR trains are expected to provide a faster and more direct route to Raleigh and Charlotte, NC.
- Five new round trip **Northeast Regional (SEHSR)** passenger trains (3 to Norfolk, 1 to Newport News, and 1 to Richmond), with stops in the DC2RVA corridor in: Alexandria; Woodbridge; Quantico; Fredericksburg; Ashland; and Richmond. This service will provide additional frequencies on the same routes of existing Amtrak Northeast Regional (Virginia) services, terminating within Virginia (either Newport News, Norfolk, or Richmond).

TRAIN SERVICE BUILD CONDITIONS (2025)



WHY AREN'T THE FREIGHT AND PASSENGER RAIL LINES BEING SEPARATED?

The SEHSR Tier I EIS recommended adding additional track capacity within the existing railroad right-of-way, which is owned and operated by CSXT. Sharing the rail system allows access to existing stations and infrastructure. This, in turn, allows the project to be implemented more economically and minimizes impacts to the environment. Building a new rail system dedicated only to passenger trains would cost more, cause more environmental impacts, and require extensive property acquisition. Outside of the railroad right-of-way, bypass alternatives are being considered around the downtown areas of Fredericksburg and Ashland to minimize potential community impacts as part of the DC2RVA Project.

In accordance with the FRA's High Speed Passenger Rail Safety Strategy, the DC2RVA Project will provide a minimum of active gates and lights at public at-grade crossings or a locked gate with signal warning at private at-grade crossings.

WHAT WILL HAPPEN AT THE ROADWAY CROSSINGS OF THE RAIL CORRIDOR?

- **Existing At-Grade Crossings**
  The following types of crossing treatments were recommended at each highway-rail crossing for each Build Alternative to improve safety and both road and rail traffic flow:
  - Grade Separation
  - Four-Quadrant Gates
  - Center Median Treatment with Gates
  - Closure
  - Locking Gate *(private crossings only)*
  - No Action
- **Existing Grade-Separated Crossings**
  Grade-separated crossings in the corridor include rail crossings over public roadways, private roadways, or waterways, and public or private roadways over rail. In all locations for all Build Alternatives, the existing crossing structure can either accommodate the proposed DC2RVA improvements, or will be widened (either the existing structure or a parallel structure).
- **New Crossings**
  Virginia state code restricts the creation of new at-grade crossings; this means that any new crossings of existing roadways recommended by the DC2RVA Project should be grade-separated, with potential roadway realignment and/or closure to preserve safety and traffic flow.

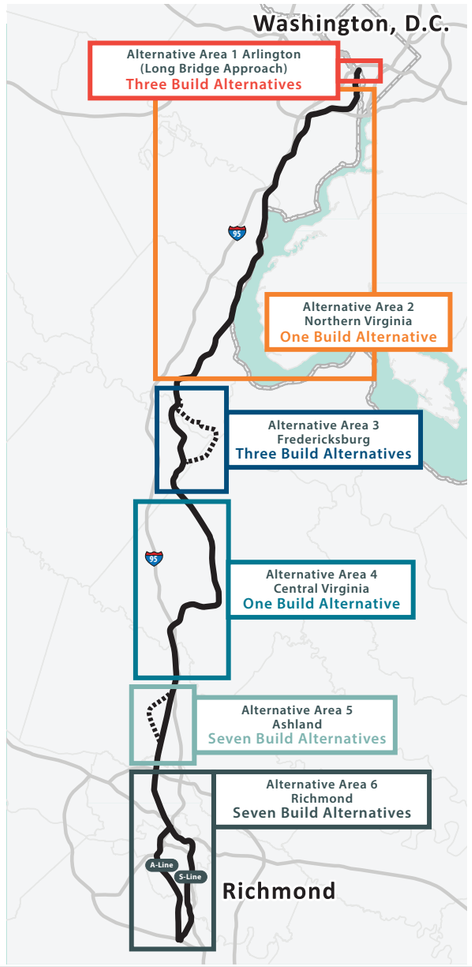
Most existing public at-grade crossings are proposed to remain at-grade with the addition of four-quadrant gates or gates with center median treatment. There are fewer proposed grade separations and closures, which vary by Build Alternative.

Most existing private at-grade crossings are proposed to have locking gates or four-quadrant gates, unless a property is being acquired or alternate access can be provided.

WHAT BUILD ALTERNATIVES ARE BEING FULLY ANALYZED IN THE DRAFT EIS?

A wide range of options were considered during the alternatives development process. Of those options, the 23 Build Alternatives described on the following pages were found to be feasible through the alternatives development process and are included for evaluation in the Draft EIS. Each alternative includes build-alternative-specific improvements to features such as stations and at-grade roadway crossings.

BUILD ALTERNATIVES IN PROJECT CORRIDOR



Full information on each Build Alternative, including detailed maps and lists of proposed improvements, is provided in Chapter 2 of the Draft EIS, as well Draft EIS Appendix C through Appendix H.

Chapter 2 also provides details of the alternative options that were considered but dismissed from further evaluation within the Draft EIS.

HOW MANY BUILD ALTERNATIVES ARE IN EACH ALTERNATIVE AREA?

Alternative Area 1: Arlington
Three Build Alternatives - add two tracks east, west, or one track on either side of the existing alignment in the approach to Long Bridge, which crosses the Potomac River from VA to D.C. Each alternative would result in a total of four tracks in this area.

Alternative Area 2: Northern Virginia
One Build Alternative - add one main track where possible for a total of four tracks through Alexandria and Arlington and three tracks through most of the remaining Northern Virginia area.

Alternative Area 3: Fredericksburg
Three Build Alternatives - minor improvements with no additional track, one additional track along existing alignment, or a two-track bypass around the east side of Fredericksburg.

Alternative Area 4: Central Virginia
One Build Alternative - add one new track for a total of three tracks through this area.

Alternative Area 5: Ashland
Seven Build Alternatives- to include no additional or one additional track (either to the east of or centered on the existing alignment) through town, and a two-track bypass around the west side of the town and relocation of the station to south of Ashland.

Alternative Area 6: Richmond
Eight Build Alternatives along either or both existing rail line routes - to include four single-station alternatives that would consolidate passenger service to one station, and three two-station alternatives that offer combinations of services using Staples Mill Road Station and Main Street Station.

ALTERNATIVE AREA 1: ARLINGTON (LONG BRIDGE APPROACH)

- There are three Build Alternatives in Area 1
- All three Build Alternatives:
  - Add two main tracks, with minor shifts to improve speed
  - Equally support expanded intercity service (all passenger train types), expanded VRE commuter service, and expanded CSXT freight service
  - Would be constructed within the existing railroad right-of-way
- The major difference among the alternatives is which side of the existing track the new track would be added (as indicated in the Build Alternative names)
- Improvements developed to accommodate alignments associated with the Long Bridge Study (separate study by District of Columbia Department of Transportation (DDOT))
- No stations within area
- No changes to existing public roadway crossings
- Track maximum authorized speed: ≤ 45 mph

BUILD ALTERNATIVE 1A
Add Two Tracks on the East
Length: 0.7 miles Approximate Cost: $35.6 million

BUILD ALTERNATIVE 1B
Add Two Tracks on the West
Length: 0.7 miles Approximate Cost: $46.6 million

BUILD ALTERNATIVE 1C
Add One Track East and One Track West
Length: 0.7 miles Approximate Cost: $42.3 million

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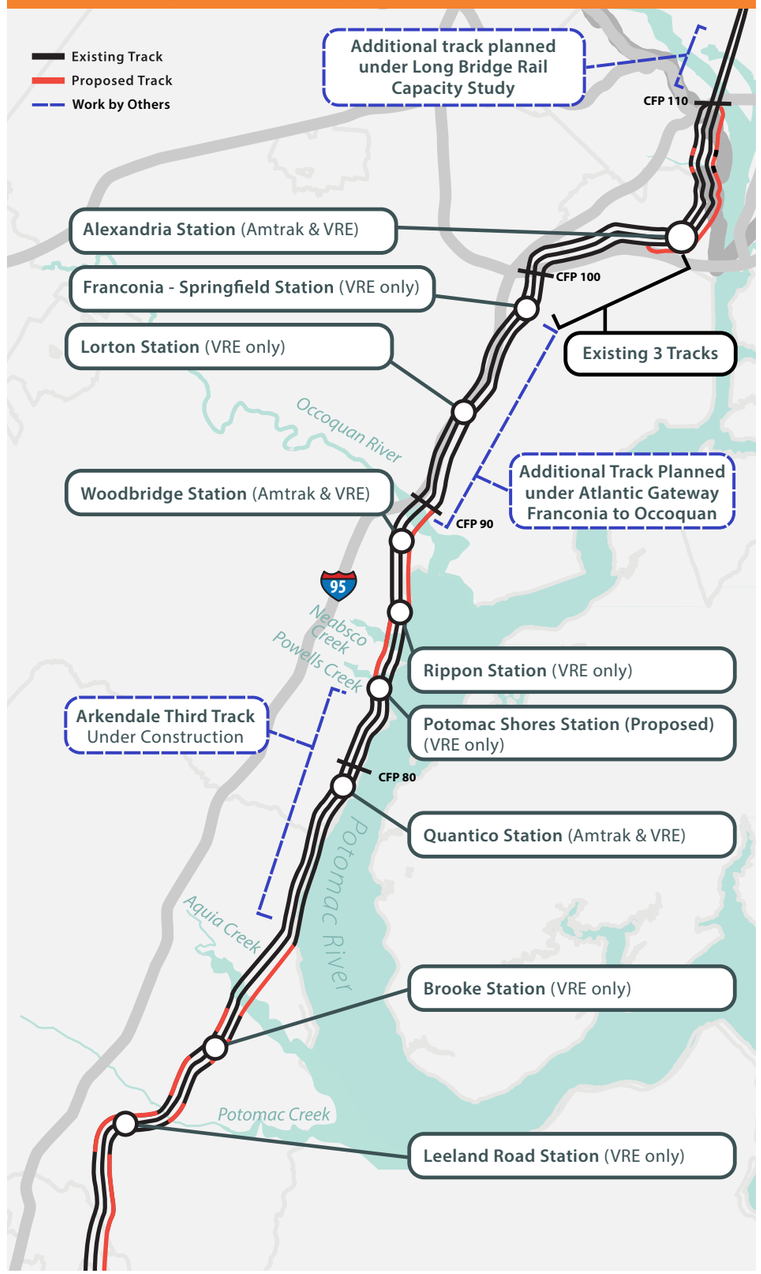
ALTERNATIVE AREA 2: NORTHERN VIRGINIA
(CRYSTAL CITY STATION TO DAHLGREN SPUR)

- There is one Build Alternative in Area 2
- Add one main track, with realignment of some curves to improve speed, to create:
  - Fourth track from Crystal City to Alexandria
  - Third track from Alexandria to Spotsylvania
- Rail improvements generally within existing railroad right-of-way
- Proposed new DC2RVA service at the following stations:
  - Alexandria: **Northeast Regional (SEHSR)** and **Interstate Corridor (SEHSR)**
  - Woodbridge: **Northeast Regional (SEHSR)**
  - Quantico: **Northeast Regional (SEHSR)**
- No changes to Amtrak (Interstate Corridor (Carolinian), Northeast Regional (Virginia), Auto Train, and Long Distance) or VRE commuter stations served
- Close one existing public roadway crossing (Mount Hope Church Road) with alternate access provided / No grade separations proposed
- All other public roadway crossings remain at-grade with safety improvements
- Major water crossings at Occoquan River, Neabsco Creek, and Aquia Creek
- Track maximum authorized speed: ≤ 79 mph
- Work completed / underway by others in this section includes: AF-Franconia 3rd track; Franconia-Occoquan 3rd Track; Arkendale – Powells Creek 3rd Track; Fredericksburg – Spotsylvania 3rd Track; and VRE platform improvements

BUILD ALTERNATIVE 2A
Add One Track/improve Existing Track
Length: 47.3 miles Approximate Cost: $1.653 billion



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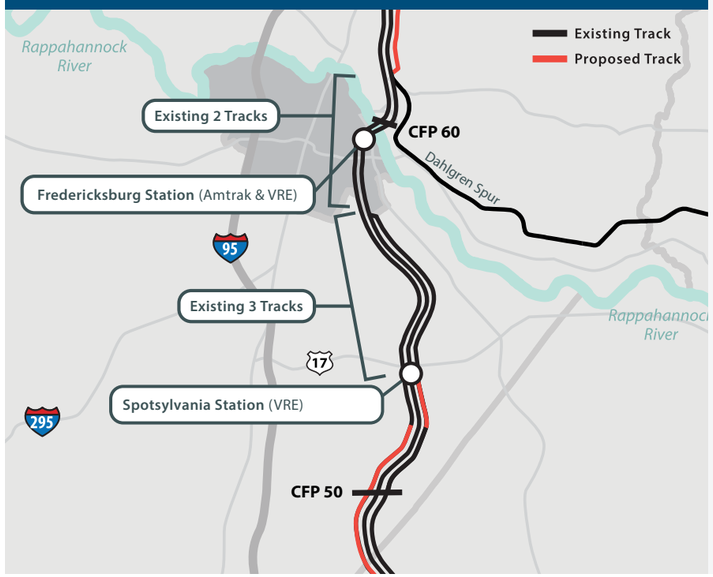
ALTERNATIVE AREA 3: FREDERICKSBURG (DAHLGREN SPUR TO CROSSROADS)

- There are three Build Alternatives in Area 3, all of which:
  - Support expanded intercity passenger (all passenger train types), VRE commuter, and CSXT freight rail service
  - Provide proposed new DC2RVA service at Fredericksburg Station: **Northeast Regional (SEHSR)** and **Interstate Corridor (SEHSR)**
  - Include a new Fredericksburg Station, including building, platform, and parking improvements (varies by alternative)
  - No changes to stations served by Amtrak passenger service (Interstate Corridor (Carolinian), Northeast Regional (Virginia), and Long Distance) or VRE commuter service
  - Improvements to major rail bridge over the Rappahannock River
- Track maximum authorized speed: ≤ 79 mph

BUILD ALTERNATIVE 3A
Maintain Two Tracks Through Town

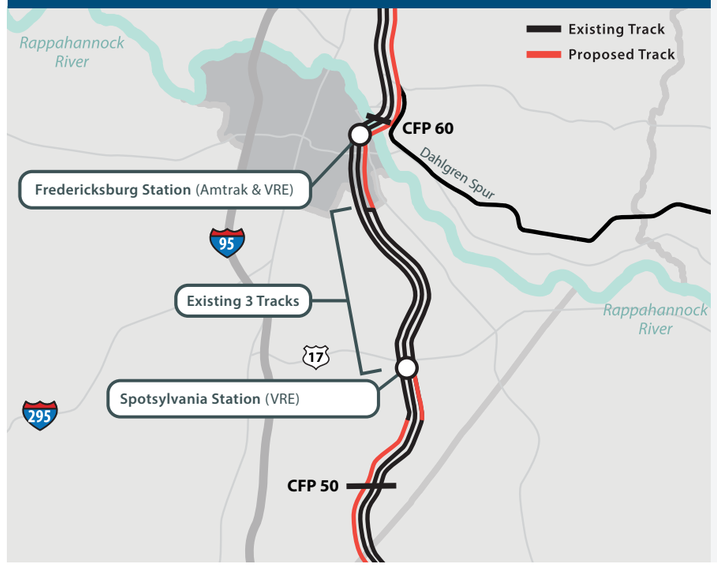
Length: 14 miles Approximate Cost: $240.2 million



- Within Fredericksburg, no construction of new track / no additional rail capacity
  - Maintain existing two main line tracks
  - Shift tracks in some sections to improve speed
  - Freight, passenger, and commuter train operations through town similar to existing conditions
- Construction of one additional track, with some shifts to improve speed, north and south of the city
- All improvements within existing railroad right-of-way
- All public roadway crossings remain at-grade with safety improvements

BUILD ALTERNATIVE 3B
Add One Track East of Existing

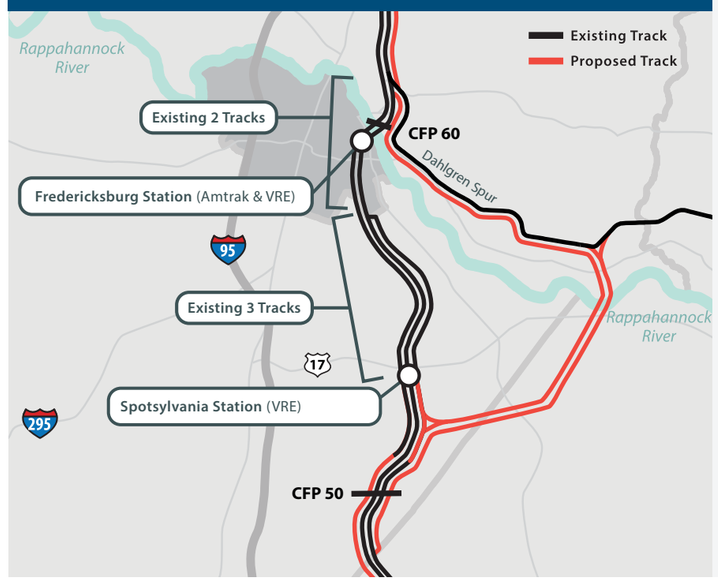
Length: 14 miles Approximate Cost: $506.9 million



- Construct one main line track in most sections, with track shifts to improve speed, and a new elevated railway at the station
  - Within town, the additional track would be added east of the existing two tracks
  - A third track already exists between Fredericksburg and the Spotsylvania Station (*i.e.*, no improvements required)
- Rail improvements generally within existing railroad right-of-way
- No public roadway crossing closures / Grade separate one at-grade roadway crossing (Landsdowne Road)
- All other public roadway crossings would remain at-grade with safety improvements
- Consistent with City of Fredericksburg Comprehensive Plan (2015)

BUILD ALTERNATIVE 3C
Add Two-Track Bypass East

Length: 18 miles Approximate Cost: $977.5 million



- Maintain existing two-track corridor through the city, with some track shifts to improve speed
- Construct new two-track bypass east of the city
  - Serves all freight rail as well as all Interstate Corridor (SEHSR and Carolinian), Long Distance, and Auto Train passenger trains
  - Existing public roadway crossings, including along existing Dahlgren Spur, would remain at-grade, with safety improvements
  - Any new public roadway crossings on the bypass would be grade separated
  - Requires additional railroad right-of-way
- Construct one main line track north and south of the city, with track shifts to improve speed

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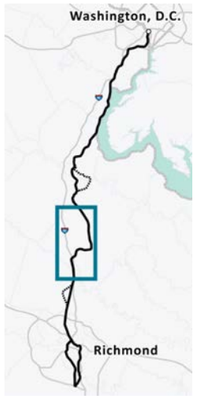
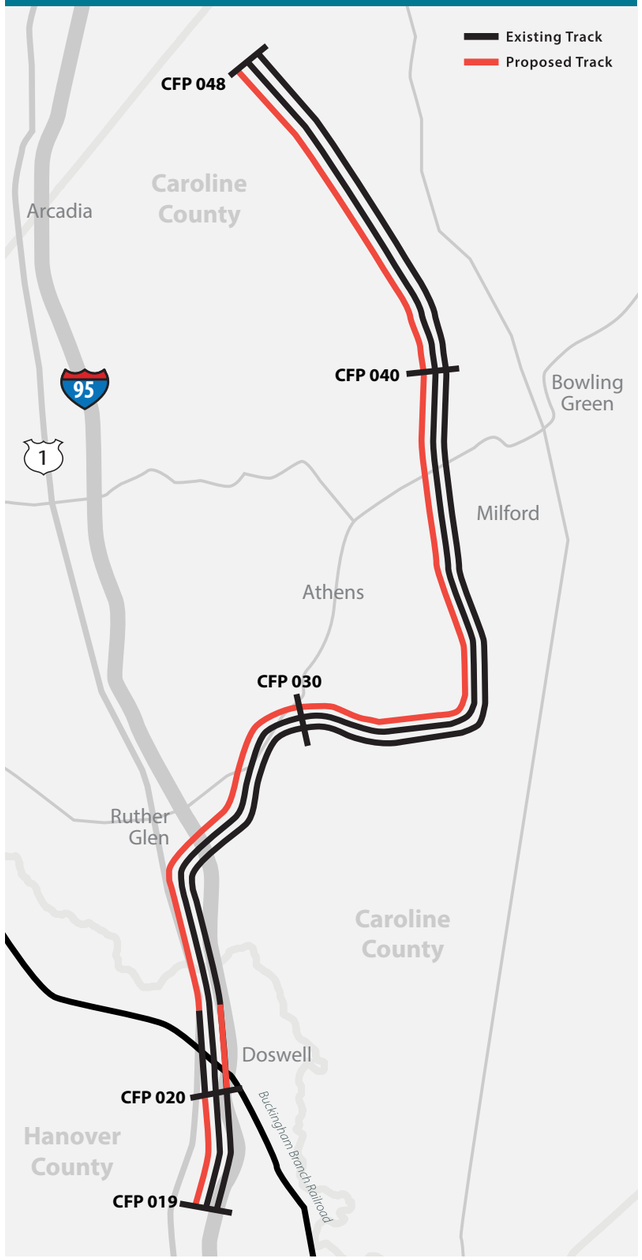
ALTERNATIVE AREA 4: CENTRAL VIRGINIA (CROSSROADS TO DOSWELL)



- There is one Build Alternative in Area 4
- Construct one main line track with track shifts to improve speed
- Improvements generally within existing railroad right-of-way
- Supports expanded intercity passenger service (all types) and CSXT freight service
- No stations within the area
- Close one existing public roadway crossing (Colemans Mill Road) / No grade separations of at-grade crossings
- All other public roadway crossings remain at-grade with safety improvements
- Multiple crossings of small waterways and wetlands
- Track maximum authorized speed: ≤ 90 mph

BUILD ALTERNATIVE 4A
Add One Track / Improve Existing Track
Length: 29 miles Approximate Cost: $643.2 million



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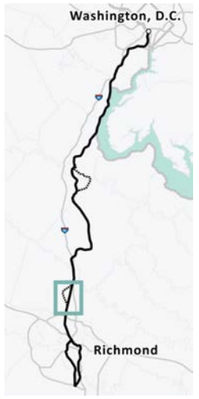
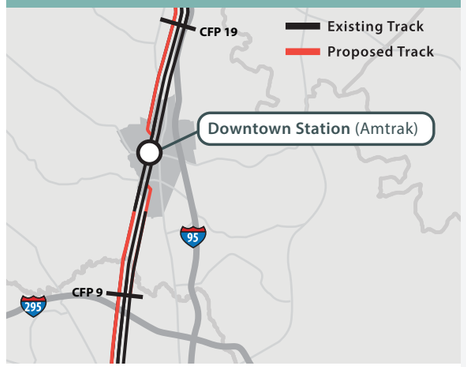
ALTERNATIVE AREA 5: ASHLAND (DOSWELL TO I-295)



- There are seven Build Alternatives in Area 5
- Alternatives include different station locations:
  - **Downtown Station:** Maintain existing station location with improvements, including extended platforms (850 feet long), which requires closure of the existing roadway crossing at College Avenue; use of shorter, 350-foot platforms is an option to minimize impacts *(not shown on figures)*
  - **Ashcake Station:** Close the existing station location and relocate service to a new station south of Ashcake Road
- All Build Alternatives provide **Northeast Regional (SEHSR)** service, with no change to Northeast Regional (Virginia) service
- Track maximum authorized speed: ≤ 90 mph, with existing 35 mph municipal slow order within Ashland

BUILD ALTERNATIVE 5A
Maintain Two tracks Through Town

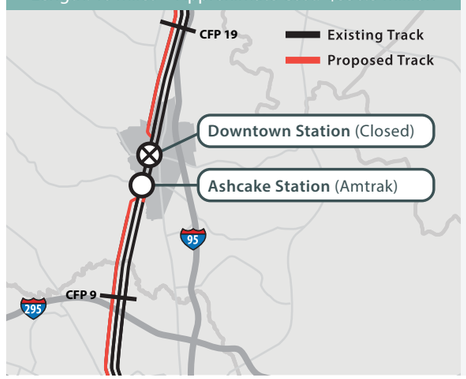
Length: 10 miles Approximate Cost: $349.5 million



- There are two Build Alternatives in Area 5 that maintain two tracks through town but provide Northeast Regional (SEHSR and Virginia) service at different station locations, as denoted by the name of each *(see top of Page 25 for station descriptions)*
- Both alternatives:
  - Maintain two existing tracks (no construction of new track/ no additional rail capacity) within Ashland
  - Construct one additional track, with some track shifts to improve speed, north and south of the town
  - Grade separate two public roadway at-grade crossings in Ashland: West Vaughan Road and Ashcake Road
- All other public roadway crossings within town remain at-grade, with safety improvements
- All rail improvements generally within existing railroad right-of-way

BUILD ALTERNATIVE 5A–Ashcake
Maintain Two tracks Through Town (Relocate Station to Ashcake)

Length: 10 miles Approximate Cost: $350.3 million



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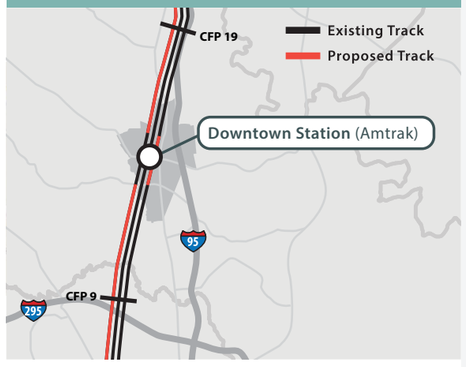
BUILD ALTERNATIVE 5B
Add One Track East of Existing

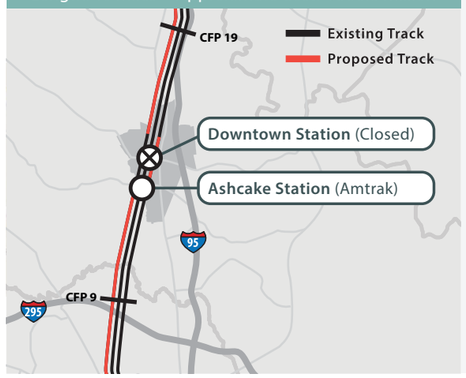
Length: 10 miles Approximate Cost: $388.3 million



- There are two Build Alternatives in Area 5 that add one track east of the existing tracks, but provide Northeast Regional (SEHSR and Virginia) service at different station locations, as denoted by the name of each *(see top of Page 25 for station descriptions)*
- Both alternatives:
  - Construct one additional main line track adjacent to the existing tracks, which generally requires additional railroad right-of-way, especially within the town of Ashland
  - Grade separate two public roadway at-grade crossings in Ashland: West Vaughan Road and Ashcake Road
- All other public roadway crossings within town remain at-grade, with safety improvements
- The addition of a third track through town on the east side of the existing railroad tracks requires closure of a short portion of Railroad Avenue / Center Street, parallel to the railroad corridor

BUILD ALTERNATIVE 5B–Ashcake
Add One Track East of Existing (Relocate Station to Ashcake)

Length: 10 miles Approximate Cost: $388.8 million



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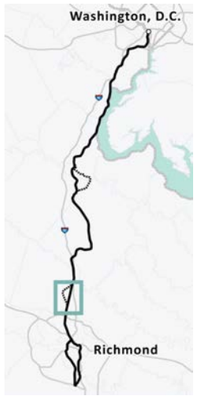
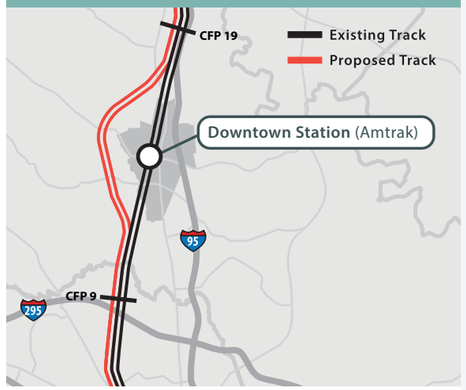
ALTERNATIVE AREA 5: ASHLAND (DOSWELL TO I-295)



BUILD ALTERNATIVE 5C
Add Two-Track West Bypass

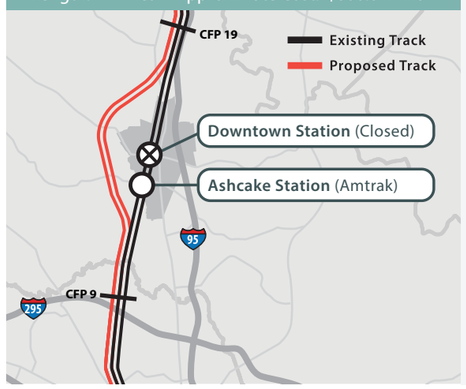
Length: 11 miles Approximate Cost: $599.2 million



- There are two Build Alternatives in Area 5 that bypass the town of Ashland, but provide Northeast Regional (SEHSR and Virginia) service at different station locations, as denoted by the name of each *(see top of Page 25 for station descriptions)*
- Both alternatives construct a new two-track bypass west of Ashland, to serve freight rail as well as Interstate Corridor (SEHSR and Carolinian), Long Distance, and Auto Train passenger trains
  - Bypass requires new railroad right-of-way
  - Grade separate new public roadway crossings on the bypass
- Both alternatives maintain the existing two-track corridor through town
  - All public roadway crossings within town remain at-grade, with safety improvements
  - No additional railroad right-of-way needed in town
- Both alternatives construct one additional track, with some track shifts to improve speed, north and south of the town

BUILD ALTERNATIVE 5C–Ashcake
Add Two-Track West Bypass
(Relocate Station to Ashcake)

Length: 11 miles Approximate Cost: $600.0 million



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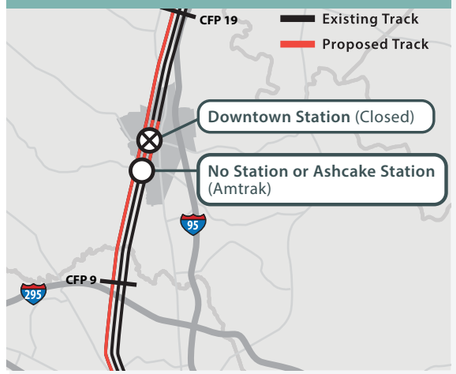
BUILD ALTERNATIVE 5D–Ashcake
Three Tracks Centered Through Town
(Add One Track; Relocate Station to Ashcake)

Length: 10 miles Approximate Cost: $398.8 million



- There is one Build Alternative in Area 5 that centers improvements within existing right-of-way, with a new station south of Ashcake Road to provide Northeast Regional (SEHSR and Virginia) service (*see top of Page 25 for station description)*
- Construct one additional main line track, with centering of all main line tracks on the existing alignment, through the entire area
  - Requires additional railroad right-of-way, especially within the town of Ashland
  - Requires closure of a short portion of Railroad Avenue / Center Street, parallel to the railroad corridor
  - Precludes use of the existing station building and platforms, which will be removed
- Grade separate two public roadway at-grade crossings in Ashland: West Vaughan Road and Ashcake Road
- All other public roadway crossings within town remain at-grade, with safety improvements

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ALTERNATIVE AREA 6: RICHMOND (I-295 TO CENTRALIA)

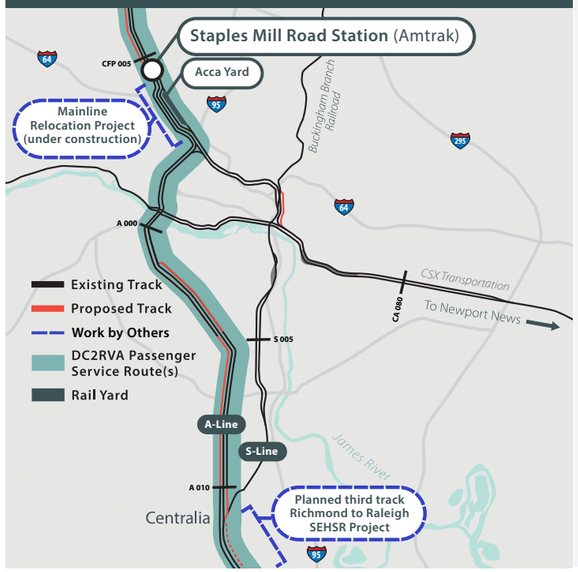
- There are eight Build Alternatives in Area 6
  - Five are single-station alternatives
  - Three are two-station alternatives *(see Page 33)*
- Track maximum authorized speed: ≤ 79 mph, with top speeds of 40 mph through the Acca Yard area
- All alternatives include a major waterway crossing of James River
- No changes to CSXT freight service routes due to DC2RVA passenger train routes
- Auto Train (Amtrak) does not stop in Richmond
- All roadway crossings that remain at-grade include safety improvements

SINGLE STATION ALTERNATIVES – STATION SERVICE

- Single station alternatives include four potential station locations:
  - Existing Staples Mill Road Station
  - Existing Main Street Station
  - Proposed Boulevard Station
  - Proposed Broad Street Station
- Use of the A-Line or the S -Line varies by alternative, based primarily on the ability to serve station locations and passenger and freight train routes
- All alternatives consolidate **Northeast Regional (SEHSR)** and **Interstate Corridor (SEHSR)** service, as well as all Amtrak Long Distance, Interstate Corridor (Carolinian), and Northeast Regional (Virginia) service, to a single station
  - All Northeast Regional service to Newport News on the S-Line
  - One Northeast Regional (SEHSR) round trip terminates at the single station

BUILD ALTERNATIVE 6A
Staples Mill Road Station Only

Length: 23 miles Approximate Cost: $1.088 billion



- One of five single-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and A-Line (through Richmond), with track shifts to improve speed
- Improve Staples Mill Road Station to become the single passenger rail station to serve Richmond
  - Close existing Main Street Station
  - Relocate and consolidate all passenger service to the new station facility, which includes new platforms and parking
  - Does not meet FRA requirement for Central Business District (CBD) location
- Freight and passenger rail service operating together on the A-Line, CSXT's principal freight corridor, would increase rail congestion/delay
- Close four public roadway crossings / Grade separate three at-grade roadway crossings

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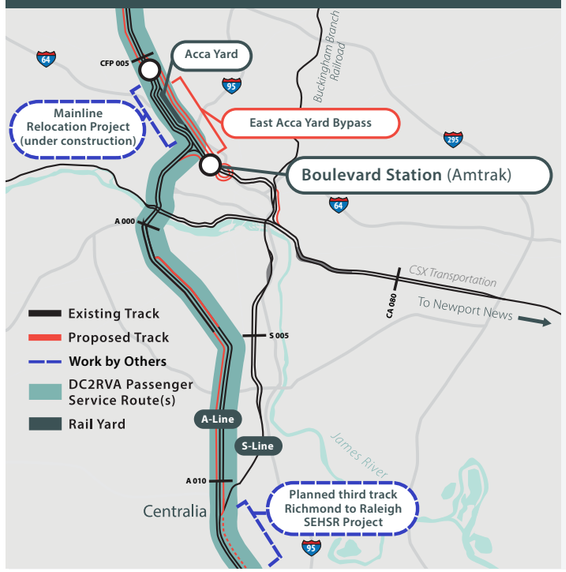
BUILD ALTERNATIVE 6B–A-Line
Boulevard Station Only, A–Line

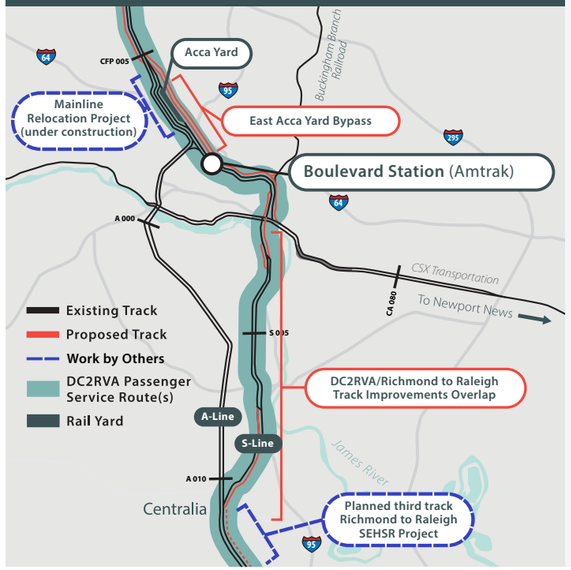
Length: 24 miles Approximate Cost: $1.524 billion



- One of two Boulevard Station-Only alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and A-Line (through Richmond), with track shifts to improve speed
- Construct new Boulevard Station to become the single passenger rail station to serve Richmond
  - Close Main Street and Staples Mill Road Stations
  - Relocate and consolidate all passenger service to the new station facility, which includes new platforms and parking, located adjacent to existing Greyhound station *(station improvements identical to 6B–S-Line)*
  - Elevated loop track at new station
  - May not meet FRA requirement for CBD location
- Freight and passenger rail service operating together on the A-Line, CSXT's principal freight corridor, would increase rail congestion/delay
- Close four public roadway crossings / Grade separate three at-grade roadway crossings

BUILD ALTERNATIVE 6B–S-Line
Boulevard Station Only, S-Line

Length: 24 miles Approximate Cost: $1.451 billion



- Second of two Boulevard Station-Only alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and S-Line (through Richmond), with track shifts to improve speed
- Construct new Boulevard Station to become the single passenger rail station to serve Richmond
  - Close existing Main Street and Staples Mill Road Stations
  - Relocate and consolidate all passenger service to the new station facility, which includes new platforms and parking, located adjacent to existing Greyhound station *(station improvements identical to 6B–A-Line)*
  - May not meet FRA requirement for CBD location
- Locating all passenger train service that stops in Richmond to S-Line (i.e., separate from CSXT's principal freight corridor) would reduce rail congestion/delay
- Close five public roadway crossings / Grade separate four at-grade roadway crossings

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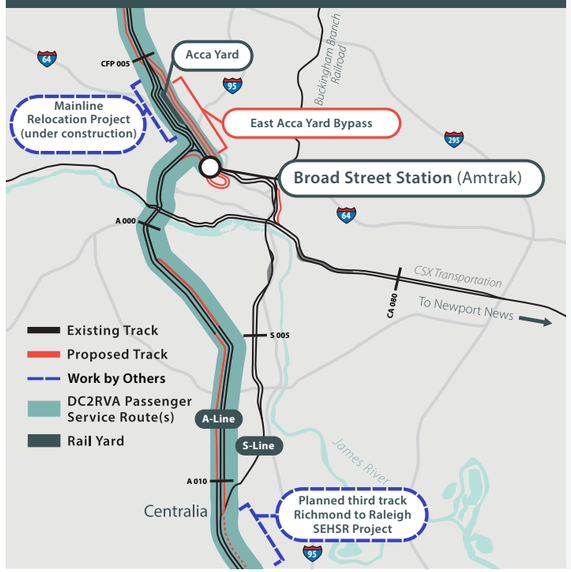
ALTERNATIVE AREA 6: RICHMOND (I-295 TO CENTRALIA)

BUILD ALTERNATIVE 6C
Broad Street Station Only

Length: 24 miles Approximate Cost: $1.489 billion



- One of five single-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and A-Line (through Richmond), with track shifts to improve speed
- Construct new Broad Street Station to become the single passenger rail station to serve Richmond
  - Close existing Main Street and Staples Mill Road Stations
  - Relocate and consolidate all passenger service to the new station facility, which includes new platforms and parking, adjacent to Science Museum of Virginia
  - At-grade loop track at the new station
  - Requires two new at-grade crossings on West Leigh Street adjacent to the station, which would require a variance from state code and/or coordination with VDOT
  - May not meet FRA requirement for CBD location
- Freight and passenger rail service operating together on the A-Line, CSXT's principal freight corridor, would increase rail congestion/delay
- Close four public roadway crossings / Grade separate three at-grade roadway crossings

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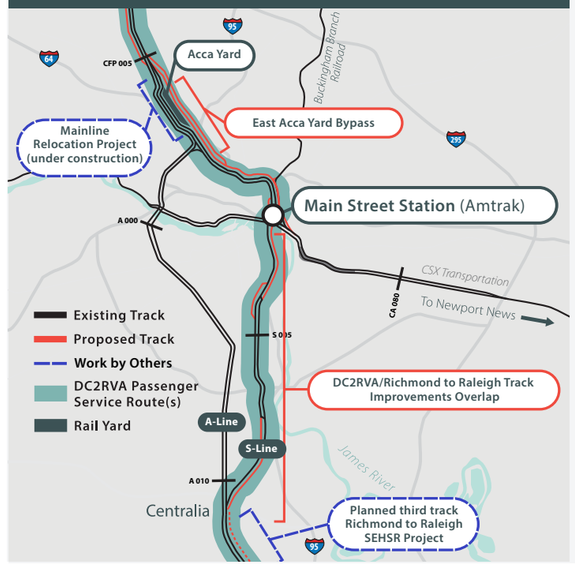
BUILD ALTERNATIVE 6D
Main Street Station Only

Length: 23 miles Approximate Cost: $1.324 billion



- One of five single-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and S-Line (through Richmond), with track shifts to improve speed
- Improve Main Street Station to become the single passenger rail station to serve Richmond
  - Close existing Staples Mill Road Station
  - Relocate and consolidate all passenger service to the modified station facility, which includes new platform and parking improvements
  - Potential increases in passenger and freight delay, as proximity to I-95 prevents adding sufficient station platforms / track on the west side of the station to serve all passenger trains
  - Meets FRA requirement for CBD location
- Locating all passenger train service that stops in Richmond to S-Line (i.e., separate from CSXT's principal freight corridor) would reduce rail congestion/delay
- Close five public roadway crossings / Grade separate three at-grade roadway crossings

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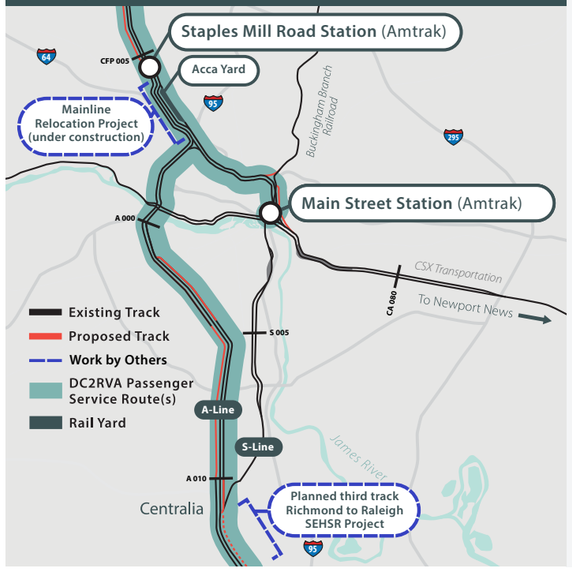
ALTERNATIVE AREA 6: RICHMOND (I-295 TO CENTRALIA)

TWO-STATION ALTERNATIVES – STATION SERVICE

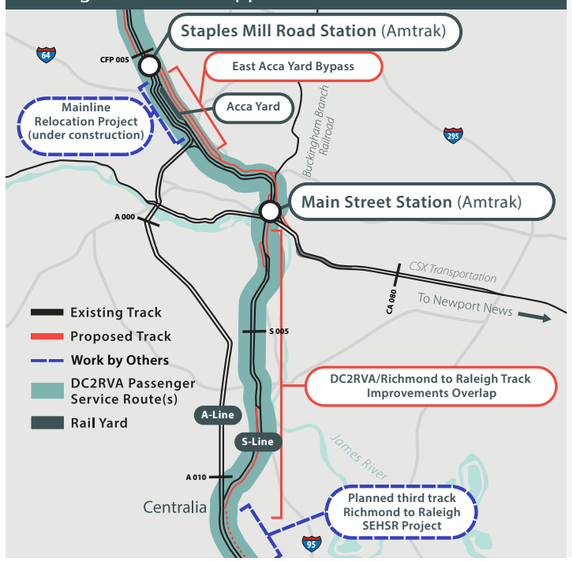
- There are three two-station build alternatives in Area 6
- All two-station alternatives use:
  - Existing Staples Mill Road Station
  - Existing Main Street Station
- Use of the A-Line or the S -Line varies by alternative, based primarily on the ability to serve station locations and passenger and freight train routes
- All alternatives provide **Northeast Regional (SEHSR)** and **Interstate Corridor (SEHSR)** service to at least one station; which station, as well as Amtrak Long Distance, Interstate Corridor (Carolinian), and Northeast Regional (Virginia) service, varies by alternative. *Details provided in each build alternative description as well as in Chapter 2 of the Draft EIS.*
- One Northeast Regional (SEHSR) round trip terminates at Main Street Station

BUILD ALTERNATIVE 6E
Split Service
Staples Mill Road/Main Street Stations
Length: 26 miles Approximate Cost: $1.267 billion



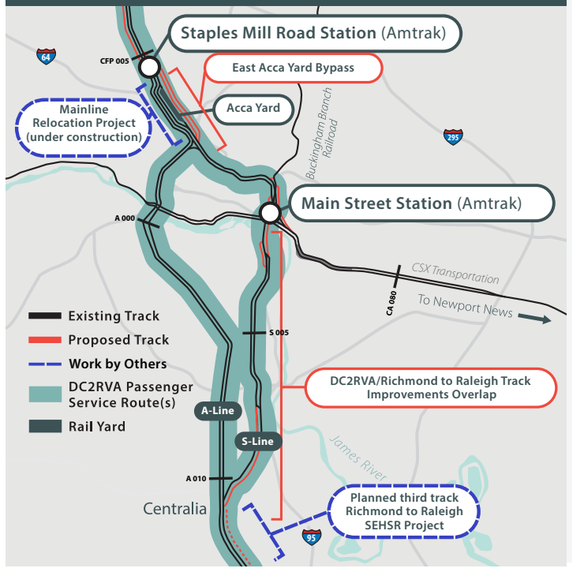
- One of three two-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and A-Line (through Richmond), with track shifts to improve speed
- Both existing stations remain operational
  - All intercity passenger trains, including new Interstate Corridor (SEHSR) and Northeast Regional (SEHSR) trains, that stop in Richmond serve an expanded Staples Mill Road Station (new station, platforms, and parking)
  - All Northeast Regional trains to Newport News additionally stop at an improved Main Street Station (platform and parking)
  - Meets FRA requirement for CBD location
- Freight and passenger rail service operating together on the A-line, CSXT's principal freight corridor, would increase rail congestion/delay
- Close four public roadway crossings / Grade separate three at-grade roadway crossings

BUILD ALTERNATIVE 6F
Full Service
Staples Mill Road/Main Street Stations
Length: 23 miles Approximate Cost: $1.483 billion



- One of three two-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and S-Line (through Richmond), with track shifts to improve speed
- Both existing stations remain operational:
  - All intercity passenger trains, including new Interstate Corridor (SEHSR) and Northeast Regional (SEHSR) trains, that stop in Richmond serve both Staples Mill Road Station and Main Street Station
  - Improve both stations to include new / modified station buildings, platforms, and parking
  - Meets FRA requirement for CBD location
- Locating all passenger train service that stops in Richmond to S-Line, (i.e., separate from CSXT's principal freight corridor) would reduce rail congestion/delay
- Close five public roadway crossings / Grade separate three at-grade roadway crossings

BUILD ALTERNATIVE 6G
Shared Service
Staples Mill Road/Main Street Stations
Length: 23 miles Approximate Cost: $1.599 billion



- One of three two-station alternatives in Area 6
- Construct one main track along portions of the RF&P (north of Richmond) and S-Line (through Richmond), with track shifts to improve speed
  - A-Line used for service but does not require proposed track
- Both existing stations remain operational:
  - Interstate Corridor (SEHSR) and Northeast Regional (SEHSR and Virginia) trains serve both stations
  - Interstate Corridor (Carolinian) and Long Distance (Amtrak) trains serve Staples Mill Road Station only
  - Station improvements at both locations include new / modified station buildings, platforms, and parking
  - Meets FRA requirement for CBD location
- Freight and passenger rail service operating together on the A-Line, CSXT's principal freight corridor, would increase rail congestion/delay
- Close five public roadway crossings / Grade separate three at-grade roadway crossings

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HOW DO THE RICHMOND STATION ALTERNATIVES AFFECT OPERATIONS THROUGHOUT THE CORRIDOR?

Travel time, ridership, and on-time performance vary by Build Alternative depending upon the Richmond station alternatives, as shown in the table on the facing page:

- The time it takes to travel between Washington, D.C. and Richmond is dependent on the number and location of station stops as well as the track design.
- DC2RVA passenger train performance differs for the Interstate Corridor and Regional passenger trains: the limited-stop Interstate Corridor passenger trains have quicker travel times and better on-time performance.
- The quickest travel time is not always the Build Alternative that has the most ridership or best on-time performance.
- For freight trains, the greatest delay in the corridor would occur for the two no additional track Build Alternatives (in the Fredericksburg and Ashland areas).

Corridor-wide operations, such as travel time and on-time performance, are determined by the specifics of each of the eight Richmond station alternatives, as shown in the table below.

Currently, intercity passenger trains traveling between Washington, D.C. and Richmond reach the end of their trip on the DC2RVA corridor on-time approximately 66% of the time – meaning that 34% of the trains are late.

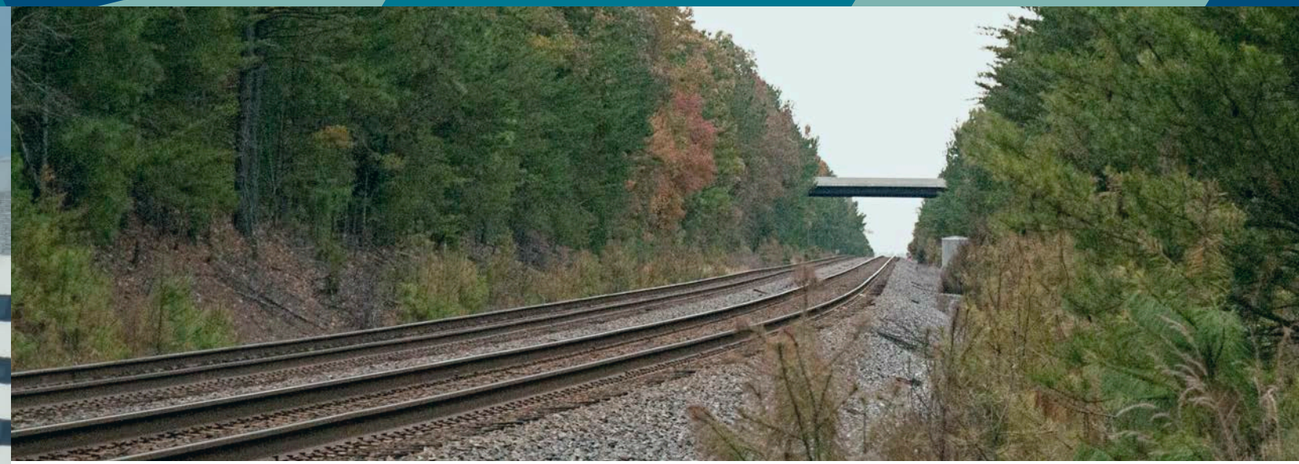
By increasing capacity and interoperability of the main tracks, the DC2RVA Project would improve the reliability of intercity passenger trains within the corridor. The added track capacity and additional crossovers of the DC2RVA Project would provide additional opportunities for higher-speed passenger trains to pass slower-speed freight trains and commuter trains making frequent station stops. Additionally, it would allow trains that operate outside of the D2RVA corridor to closely adhere to their scheduled travel time between Washington, D.C. and Richmond without incurring delays in that segment of their total trip.

RICHMOND STATION ALTERNATIVES EFFECT ON CORRIDOR OPERATIONS

Build Alternative		Annual	Travel Time D.C. - Richmond[1,2]	Meets On-Time Performance of 90%	Serves Central Business District	Consistent with FRA and CTB Prior Decisions	Accommodates Freight Operations and Growth
Single-Station Alternatives							
6A	Staples Mill Road Station Only (A-Line)	**3.30**	**1:50**	✗	✗	✗	✗
6B–A-Line	Boulevard Station Only (A-Line)	**3.20**	**1:56**	✗	●	✗	✗
6B–S-Line	Boulevard Station Only (S-Line)	**3.20**	**1:56**	✓	●	✗	✓
6C	Broad Street Station Only (A-Line)	**3.16**	**2:01**	✗	●	✗	✗
6D	Main Street Station Only (S-Line)	**3.21**	**2:06**	✗	✓	✓	✗
Two-Station Alternatives							
6E	Split Service: Staples Mill Road/ Main Street Stations	**3.22**	**1:50**	✗	✓	✗	✗
6F	Full Service: Staples Mill Road/ Main Street Stations	**3.26**	**2:15**	✓	✓	✓	✓
6G	Shared Service: Staples Mill Road/ Main Street Stations	**3.26**	**2:15**	✗	✓	●	✗

1 - Draft Results; **2** - Travel times are for limited-stop southbound Interstate Corridor (SEHSR) trains only. Northbound Interstate Corridor trains are about 2 minutes longer. Regional trains, which make more stops, operate 6 to 8 minutes longer

✓ **Meets Requirement** ✗ **Does Not Meet Requirement** ● **May or May Not Meet Requirement**



3 PROJECT EFFECTS & MITIGATION

WHAT IS BEING EVALUATED IN THE DC2RVA TIER II DRAFT EIS?

Environmental resources are the elements of the human environment, including both natural and built (man-made) resources. A Draft EIS inventories the existing conditions of the environmental resources within the project area (known as the "affected environment"), and analyzes how the different Build Alternatives may affect those resources. The resulting potential effects of the project on the human environment are referred to as the "Environmental Consequences." The effects presented in the Draft EIS are based on the conceptual engineering designs developed by DRPT for the DC2RVA Project Build Alternatives. The Draft EIS also considered the potential environmental impacts that would occur with the freight growth on the corridor under the No Build Alternative.

The study area encompasses the anticipated area of effects to each resource type from project construction and operations and therefore vary in size depending on the environmental resource. For example, the study areas for the human environment, noise, and air quality are typically larger than the natural environment boundaries. The larger study areas are defined by regions of influence in which a resource may potentially have noticeable project-related effects such as changes in regional transportation patterns. Regions of influence for human resources account for factors such as community sizes, geographical and political boundaries, and census boundaries. Natural resources are generally more affected by direct encroachments or physical effects of the built improvements such as loss of wetlands and other natural habitats.

The environmental resources that are included in the Draft EIS, as well as the analysis that was conducted for each resource, are listed and defined on the following pages, with references made to pertinent sections of the Draft EIS where additional details can be found. **Note that the analyses listed in bold text are quantifiable, with results presented within the Build Alternative Effects tables of this document** *(see Pages 47 – 52)*.

TRANSPORTATION FACILITIES

Transportation considerations include the roadway and rail networks as well as the interface where the two modes overlap, such as highway-rail crossings and access to stations. The existing rail corridor serves eight intercity passenger rail stations and crosses more than 200 public and private roadways, the majority of which are grade-separated; 55 are public at-grade crossings.

Analysis in the Draft EIS includes:

- Project ridership effects on:
  - Traffic diverted from or added to the regional roadway network
  - **Traffic volumes on the roadways that provide access to intercity passenger rail stations**
  - Parking needs at intercity passenger rail stations
- **Proposed crossing improvements at each highway-rail crossing**
- Identification of effects on the transportation network due to proposed crossing improvements
- Effects of crossing closures on roadway and intersection volumes and operations
- **Daily vehicle delay at existing at-grade crossings, including identification of any crossing that may exceed the total daily delay threshold (40 hours),** which is one of FHWA's 11 criteria for which grade separation of at-grade crossings should be considered

Refer to:
Affected Environment • Section 3.15
Environmental Consequences • Section 4.15

NATURAL RESOURCES

Natural resources include water and biologic resources, such as rivers, streams, wetlands, floodplains, wildlife, and habitats. The existing rail corridor is rich in natural resources, spanning more than 350 rivers and streams and over 50 major floodplains; nearly one-third of the lands within 500 feet of the rail bed are forested and contain nearly 500 acres of wetlands as well as potential habitat for 12 species of threatened and endangered plants and animals.

Analysis in the Draft EIS includes:

- **Physical use of areas containing rivers, streams, and wetlands**
- Effects to water quality including rivers, streams and drinking water resources
- **Effects on floodplains**
- **Effects to wildlife including threatened and endangered species and other species of concern**
- Physical use of habitat and effects on adjacent habitats including conservation lands

Refer to:
Affected Environment • Sections 3.1, 3.10
Environmental Consequences • Sections 4.1, 4.10

GEOLOGIC RESOURCES

Geologic resources include: topography, geology, and soils; mineral resources; and agricultural lands, which includes agricultural/ forestal districts and prime, unique, and state-wide important farmland soils. The landscape of the existing rail corridor is dominated by low rolling hills with sharper topography along streams and rivers. Approximately one-quarter of the acreage within 500 feet of the existing rail line and proposed bypasses are prime and unique farmland, and nearly 100 acres are located within designated agricultural/ forestal districts. Additionally, well over half of the soils are very or somewhat unsuitable for transportation-related construction.

Analysis in the Draft EIS includes:

- Effects on geology
- Project potential to alter local topography
- **Factors that should be taken into consideration for the construction of transportation projects (*i.e.*, construction limiting conditions)**
- Effects on or use of existing or abandoned mines or known mineral resource locations
- **Effects on agricultural/forestal districts**
- **Effects on farmland soils, including analysis of U.S. National Resources Conservation Service (NRCS) threshold by build alternative**

Refer to:
Affected Environment • Sections 3.2, 3.3 3.4
Environmental Consequences • Sections 4.2, 4.3, 4.4

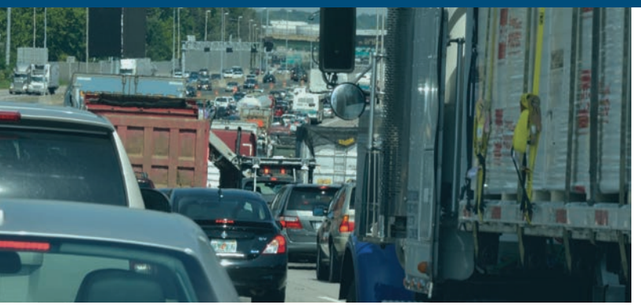
SOLID WASTES & HAZARDOUS MATERIALS

Hazardous materials include substances with the potential to cause harm to humans, animals, or the environment. Solid wastes and hazardous materials produced or uncovered by the project must be disposed of per regulations specific to those substances. Documented reports show that there are just over 1,000 hazardous material sites and facilities within 500 feet of the existing rail bed. The majority of these sites are petroleum facilities or locations of past spills.

Analysis in the Draft EIS includes:

- **Analysis of known release sites and facilities that may store or produce hazardous materials, their proximity to the project, and potential for construction activities to disturb these locations**

Refer to:
Affected Environment • Section 3.5
Environmental Consequences • Section 4.5



AIR QUALITY

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to establish air quality standards for pollutants considered harmful to public health and the environment. As part of the NEPA process, transportation projects are evaluated to determine their potential effect on air quality relative to the EPA standards. All cities and counties along the corridor are in compliance with applicable national air quality standards, except for the Northern Virginia area. A DC2RVA Project Purpose is to improve air quality by diverting automobile and other trips to rail, as well as increasing the reliability and efficiency of freight to divert movement of goods to rail.

Analysis in the Draft EIS includes:

- Project air quality effects from project-related locomotive emissions
- Project air quality effects from vehicular traffic at existing at-grade crossings and around station areas
- **Project air quality effects on greenhouse gas emissions from all modes of travel**
- Project air quality effects from construction

Refer to:
Affected Environment • Section 3.6
Environmental Consequences • Section 4.6

NOISE & VIBRATION

Noise is defined as sound that is undesirable because it interferes with communication and sleep, or is otherwise disturbing. Vibration is an oscillatory motion, and it can annoy humans and interfere with sensitive equipment. Noise-and vibration-sensitive land uses within the project area were identified in accordance with the FRA and the Federal Transit Administration land use categories. Existing train noise measurements were taken at various residential and industrial sites along the corridor.

Analysis in the Draft EIS includes:

- **Determining the project effect on noise-sensitive land uses by category and severity:**
  - **Category 1:** Land where quiet is an essential element
  - **Category 2:** Residences and buildings where people normally sleep
  - **Category 3:** Institutional land uses with primarily daytime use
  - **Levels of Effect.** No effect indicates project noise levels are unlikely to cause annoyance. A moderate noise effect is a noise level increase that is noticeable to most people, yet generally not sufficient enough to cause adverse reactions. A severe noise effect is a noise level increase that could cause annoyance to a significant percentage of people.
- **Determining the project effect on the number of vibration-sensitive receptors by category:**
  - **Category 1:** Buildings where vibration would interfere with interior operations
  - **Category 2:** Residences and buildings where people normally sleep
  - **Category 3:** Institutional land uses with primarily daytime use

Refer to:
Affected Environment • Section 3.7
Environmental Consequences • Section 4.7

ENERGY

Intercity travel consumes energy regardless of the mode of travel: rail, air, automobile, or bus. Passenger rail is considered the most energy efficient of these modes on a Passenger Miles of Travel (PMT) basis. Additionally, rail is the most efficient ground transportation mode on a mile per ton basis.

Analysis in the Draft EIS includes:

- Effects on intercity travel by mode
- **Effects on energy consumption**

Refer to:
Affected Environment • Section 3.8
Environmental Consequences • Section 4.8

AESTHETIC & VISUAL ENVIRONMENT

The DC2RVA Project corridor exhibits a wide variety of visual elements ranging from undisturbed natural lands to densely developed urban areas. The rail line has long been a part of the corridor's landscape and includes many visual elements as well, including bridges over major waterways, stations, and other railroad structures.

Analysis in the Draft EIS includes:

- **Qualitative identification of potential changes to the visual environment, based on the following qualitative visual impact rating system:**
- **Low.** Project elements are consistent with the existing visual elements in the landscape such as line, form, texture, and color, and the alternative blends with the existing visual character. Viewers are generally not very sensitive to these changes.
- **Moderate.** Project elements are notably visible in the landscape but do not dominate or detract from or enhance the existing visual features. Viewers may notice these changes, but the changes are generally not seen as negative.
- **High.** Project elements are obvious and dominate the landscape detracting from or enhancing the existing landscape characteristics or scenic qualities. Viewers are sensitive to these changes and may perceive them negatively.

Refer to:
Affected Environment • Section 3.9
Environmental Consequences • Section 4.9

COMMUNITY RESOURCES & ENVIRONMENTAL JUSTICE

This category includes land uses, public facilities, populations, neighborhoods, and community cohesion, as well as consideration of employment trends and effects. The DC2RVA rail corridor includes parts of 150 census tracts. While most of the land use surrounding the rail corridor is agricultural and forest, there are approximately 100 community facilities, including 35 religious facilities and 22 schools, within 1,000 feet of the edge of the rail line.

Special attention is paid to Title VI of the Civil Rights Act of 1964 which prohibits discrimination in federal programs and funding. Executive Order 12898 on Environmental Justice directs federal agencies to identify and address disproportionately high and adverse human health and environmental effects to minority and low-income populations.

Analysis in the Draft EIS includes:

- **Social and economic demographic patterns** and trends
- **Commercial relocations**
- **Residential relocations**
- Community facility relocations
- Land use within the project area
- **Project compatibility with Comprehensive Land Use Plans**
- **Potential effects on environmental justice communities through:**
  - **Residential relocations**
  - Noise and vibration effects

Refer to:
Affected Environment • Sections 3.11, 3.12
Environmental Consequences • Sections 4.11, 4.12

PARK RESOURCES

Park resources include federal, state, and locally owned parks, outdoor recreational areas, wildlife refuges, and recreational trails. Resources along the existing rail corridor include three federal, two state, one regional, and 63 local parks and recreational areas; 19 trails; and three wildlife refuges.

Analysis in the Draft EIS includes:

- **Effects to parks, recreational areas, wildlife refuges and trails**
- Resources protected under Section 6(f) of the Land and Water Conservation Fund Act and potential effects to those Section 6(f) resources

Refer to:
Affected Environment • Section 3.14
Environmental Consequences • Section 4.14

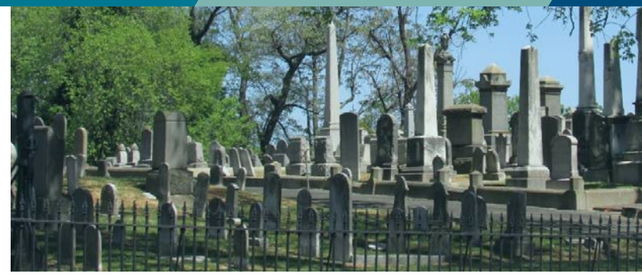
CULTURAL RESOURCES

Traversing some of the most historic landscapes in the nation, the rail corridor includes a wide range of cultural resources such as historic battlefields, homes, cemeteries, industrial sites and districts, as well as archaeological remains. In all 158 resources that are eligible for, or listed on, the National Register of Historic Places have been identified within the project's Area of Potential Effect (APE) as defined by the National Historic Preservation Act (NHPA).

In accordance with Section 106 of the NHPA and the Advisory Council on Historic Preservation regulations, effects to cultural resources in the Draft EIS were identified and evaluated by:

- Determining the APE
- Identifying cultural resources present in the APE that are either listed on or eligible to be listed on the National Register of Historic Places (NRHP)
- **Applying the criteria of effect and adverse effect resulting in recommendations for each resource of:**
  - **No Effect.** There would be no effect, neither adverse nor beneficial, on historic properties.
  - **No Adverse Effect.** There would be an effect, but it is determined that the effect would not compromise those characteristics that qualify the property for listing on the NRHP.
  - **Adverse Effect.** There would be an effect that would compromise the physical and/or historic integrity of the resource. Archaeological sites may be "adversely affected" when they are threatened with unavoidable physical destruction or damage.

Refer to:
Affected Environment • Section 3.13
Environmental Consequences • Section 4.13



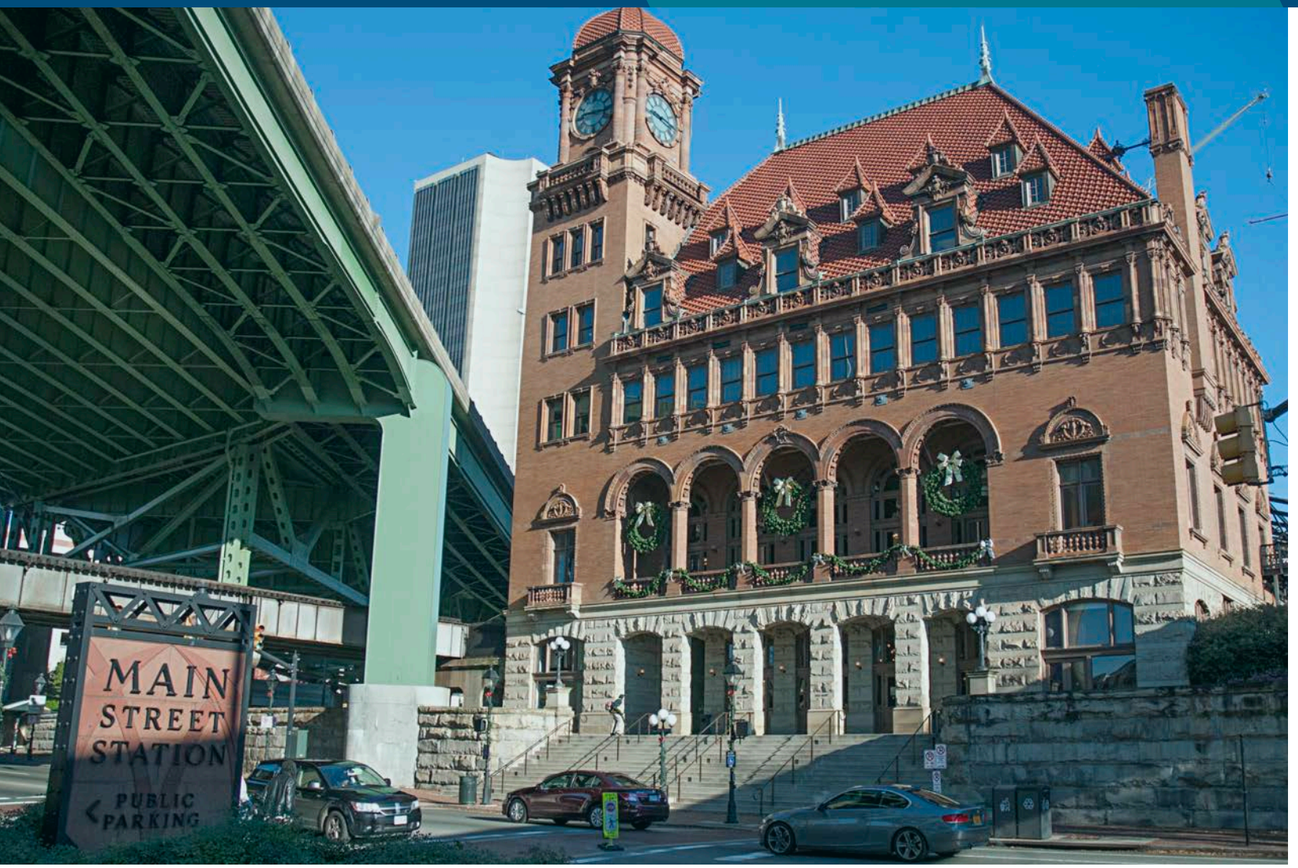
SECTION 4(f) RESOURCES

Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 USC 138) applies to the use for transportation purposes of publicly-owned parks, recreation areas, and wildlife and waterfowl refuges; historic sites listed on or eligible for listing on the NRHP regardless of whether the site is in public or private ownership; and all archaeological sites listed on or eligible for inclusion on the NRHP, excluding those for which there is minimal value to preservation in place as determined by the FRA in consultation with the Virginia Department of Historic Resources. Examples of each of these protected resources are found along the rail corridor, including the historic rail line itself.

Analysis in the Draft EIS includes:

- **Identification of resources protected under Section 4(f)**
- Identification of Section 4(f) use (*i.e.*, effects) of those resources
- Discussion of *de minimis* effects, measures to minimize harm, avoidance alternatives, and Section 4(f) related coordination

Refer to:
Affected Environment • Section 3.14
Section 4(f) Evaluation • Chapter 5



SAFETY & SECURITY

Safety considerations along the corridor include the operations of the freight, commuter and intercity passenger services operating on the corridor today, as well as the projected future increases. Safety is also a major consideration for vehicular operations at the 79 public and private at-grade crossings. Security considerations include existing stations and rail yards, as well as along the railroad right-of-way.

Analysis in the Draft EIS includes:

- Qualitative assessment of safety and security along the project corridor

Refer to:
Environmental Consequences • Section 4.17

PUBLIC HEALTH & SAFETY

FRA is the primary authorized agency for railway safety. FRA administers safety regulations over all aspects of rail operations along the existing corridor.

Analysis in the Draft EIS includes:

- Qualitative assessment of public health and safety for passengers, employees, construction workers, residents, pedestrians, and the motoring public along the project corridor

Refer to:
Affected Environment • Section 3.17
Environmental Consequences • Section 4.18

CONSTRUCTION IMPACTS

Construction impacts associated with the proposed transportation project are by definition those effects that are temporary or short-term in nature and that occur only during construction.
Analysis in the Draft EIS includes:

- Identification of construction effects associated with rail, land use and access, air quality, noise, water resources, wildlife, and habitat

Refer to:
Environmental Consequences • Section 4.19

INDIRECT & CUMULATIVE EFFECTS

The corridor connects several of the most rapidly developing regions in Virginia - where residential, commercial, industrial, and other transportation projects are constantly emerging.

Indirect effects are those effects, positive or negative, that are caused by an action and occur later in time or are farther removed in distance, but are still reasonably foreseeable, such as those related to induced changes in the pattern of land use, population density or growth rate, and related effects on natural resources. The qualitative analysis of indirect effects included in the Draft EIS follows the seven-step process based on the National Cooperative Highway Research Program Report 466, and is consistent with Council on Environmental Quality (CEQ) and FHWA regulations for implementing NEPA.

Cumulative effects are defined as the effects, positive or negative, on the environment which result from the incremental effect of the action when added to other past, present, and reasonable foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over time. The qualitative analysis of indirect and cumulative effects included in the Draft EIS uses a multi-part process based on CEQ and FHWA guidance.

Refer to:
Environmental Consequences • Section 4.20

IRREVERSIBLE & IRRETRIEVABLE COMMITMENT OF RESOURCES

Construction of transportation projects requires certain irreversible and irretrievable commitments of natural resources, manpower, materials, and fiscal resources.

Analysis in the Draft EIS includes:

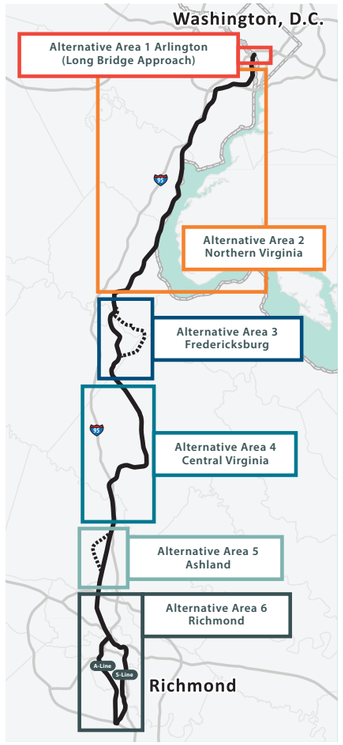
- Qualitative assessment of the Project's commitment of resources

Refer to:
Environmental Consequences • Section 4.22

WHAT ARE THE EFFECTS OF EACH BUILD ALTERNATIVE ON THE NATURAL AND HUMAN ENVIRONMENT?

This section of the Executive Summary provides an overview of how the DC2RVA Project would affect the built and natural environments. The effects are presented for each Build Alternative, by environmental resource. It is the intent of this section to summarize key results that differentiate the Build Alternatives and assist in the decisions to be made. There is a more detailed summary of DC2RVA Project effects for each environmental discipline evaluated in Chapter 4 of the Draft EIS.

All impacts shown are permanent impacts (*i.e.*, not temporary disturbances due to construction activities). Any "Change" shown compares 2025 Build Alternatives to 2025 No Build conditions. Air Quality and Energy are analyzed for each of the station alternatives in Richmond.



Area #	Area Name and CSX Milepost Limits	Alternative	Description	Additional ROW (Acres)	TRANSPORTATION FACILITIES														NATURAL RESOURCES			
					Proposed Crossing Improvements: Public At-Grade Crossings					New Public Crossings	Proposed Crossing Improvements: Private At-Grade Crossings				New Private Crossings	Roadway Travel Patterns: (% Change in Traffic, Adjacent Roadways at Stations)	At-Grade Crossing Impacts: Total Daily Delay		Wetland Impacts (Acres)	Flood-plains Impacts (Acres)	Stream & River Crossings (Linear Feet)	Threatened & Endangered Species and Habitat (Presence Yes/No)
					Grade Separated	Closure	Four Quad Gates	Median Treatment	No Action		Closure	Four Quad Gates	Locking Gate	No Action			% Change (No Build to Build)	Crossing that Exceed FHWA 40-hour				
1	**Arlington** (Long Bridge Approach) CFP 110 - 109.3	1A	Add Two Tracks on the East	0.0	0	0	0	0	0	0	0	0	0	0	0	n/a	n/a	0	0.02	0.3	0	No
		1B	Add Two Tracks on the West	1.5	0	0	0	0	0	0	0	0	0	0	0	n/a	n/a	0	0	0.1	0	No
		1C	Add One Track East and One Track West	0.4	0	0	0	0	0	0	0	0	0	0	0	n/a	n/a	0	0.01	0.1	0	No
2	**Northern Virginia** CFP 109.3 - 62	2A	Add One Track/ Improve Existing Track	33.0	0	1	2	0	1	0	0	3	1	1	0	<1%	-1%	0	5.19	15.1	7,198	Yes
3	**Fredericksburg** (Dahlgren Spur to Crossroads) CFP 62 - 48	3A	Maintain Two Tracks Through Town	2.2	0	0	3	1	0	0	0	0	0	0	0	7-8%	6%	0	5.24	7.7	1,101	Yes
		3B	Add One Track Through Town East of Existing	19.8	1	0	2	1	0	0	0	0	0	0	0		-60%	0	5.29	10.5	1,506	Yes
		3C	Add Two-Track Bypass East	140.5	0	0	5	4	0	5	1	0	4	0	4		-10%	0	23.82	8.0	4,597	Yes
4	**Central Virginia** (Crossroads to Doswell) CFP 48 - 19	4A	Add One Track/ Improve Existing Track	2.4	0	1	4	2	0	0	0	0	10	0	0	n/a	-6%	0	8.39	17.2	3,627	Yes
5	**Ashland** (Doswell to I-295) CFP 19 - 9	5A	Maintain Two Tracks Through Town	21.9	2	1	7	1	0	0	0	0	0	0	0	<1%	-24%	1	0.41	5.9	6,928	Yes
		5A-A	Maintain Two Tracks Through Town (Relocate Station to Ashcake)	20.5	2	0	8	1	0	0	0	0	0	0	0		-24%	0	0.41	7.1	6,928	Yes
		5B	Add One Track Through Town East of Existing	29.4	2	1	7	1	0	0	0	0	0	0	0		-26%	1	0.41	6.5	9,114	Yes
		5B-A	Add One Track Through Town East of Existing (Relocate Station to Ashcake)	29.9	2	0	8	1	0	0	0	0	0	0	0		-26%	0	0.45	10.7	9,101	Yes
		5C	Add Two-Track West Bypass	147.8	0	1	9	1	0	8	0	0	0	0	7		-87%	0	8.44	9.2	9,005	Yes
		5C-A	Add Two-Track West Bypass (Relocate Station to Ashcake)	146.4	0	0	10	1	0	8	0	0	0	0	7		-87%	0	8.48	10.4	9,005	Yes
		5D-A	Three Tracks Centered Through Town (Add One Track, Relocate Station to Ashcake)	36.4	2	0	8	1	0	0	0	0	0	0	0		-26%	0	0.45	11.5	8,163	Yes
6	**Richmond** (I-295 to Centralia) CFP 9 - A 011	6A	Staples Mill Road Station Only	76.0	3	4	2	1	1	0	0	0	0	0	0	2%	-66%	0	3.21	8.1	7,523	Yes
		6B-A	Boulevard Station Only, A-Line	101.0	3	4	2	1	1	0	0	0	0	0	0	5%	-66%	0	2.91	11.3	9,650	Yes
		6B-S	Boulevard Station Only, S-Line	78.7	4	5	4	3	1	0	0	2	2	0	0		-76%	0	3.47	48.6	8,819	Yes
		6C	Broad Street Station Only	128.1	3	4	2	2	1	2	0	0	0	0	0	5%	-38%	0	2.99	16.1	10,886	Yes
		6D	Main Street Station Only	73.7	3	5	4	4	1	0	0	2	2	0	0	4%	-59%	0	3.47	51.9	8,819	Yes
		6E	Split Service, Staples Mill Road/ Main Street Stations	89.1	3	4	2	1	1	0	0	0	0	0	0	1-2%	-66%	0	3.31	22.2	7,952	Yes
		6F	Full Service, Staples Mill Road/ Main Street Stations	83.0	3	5	4	4	1	0	0	2	2	0	0	1-2%	-59%	0	3.52	50.7	8,869	Yes
		6G	Shared Service, Staples Mill Road/ Main Street Stations	81.0	3	5	4	4	1	0	0	2	2	0	0	1-2%	-60%	0	3.74	48.1	8,235	Yes
For more information, refer to the following Draft EIS Sections:					4.15														4.1			4.10

Area #	Area Name and CSX Milepost Limits	Alternative	Description	GEOLOGIC RESOURCES				HAZARDOUS MATERIALS				AIR QUALITY	NOISE & VIBRATION										
													Impacted Noise Receptors							Impacted Vibration Receptors			
				Construction-Limiting Soils (Presence Yes/No)	Prime Farmland		Agricultural & Forestal Districts (Acres)	Superfund/ CERCLA Sites	Recorded Release/ Potential Contamination Sites	HAZMAT Facilities	Petroleum Storage Tanks	CO_2 Emissions (Tons per Year), Change Compared to No Build	Category 1 *Moderate*	Category 1 *Severe*	Category 2 *Moderate*	Category 2 *Severe*	Category 3 *Moderate*	Category 3 *Severe*	Total	Category 1	Category 2	Category 3	Total
					Soils (Acres)	NRCS Form 106 Score (points)																	
1	**Arlington** (Long Bridge Approach) CFP 110 - 109.3	1A	Add Two Tracks on the East	Unknown/ Not Rated	0	0	0	0	0	0	0	–	0	0	0	0	0	0	0	0	0	0	0
		1B	Add Two Tracks on the West	Unknown/ Not Rated	0	0	0	0	2	0	0	–	0	0	0	0	0	0	0	0	0	0	0
		1C	Add One Track East and One Track West	Unknown/ Not Rated	0	0	0	0	2	0	0	–	0	0	0	0	0	0	0	0	0	0	0
2	**Northern Virginia** CFP 109.3 - 62	2A	Add One Track/ Improve Existing Track	Yes	53.56	66	0	0	12	2	1	–	0	0	670	99	6	0	775	0	15	0	15
3	**Fredericksburg** (Dahlgren Spur to Crossroads) CFP 62 - 48	3A	Maintain Two Tracks Through Town	Yes	26.84	80	0	1	7	0	0	–	0	0	66	8	1	0	75	0	0	0	0
		3B	Add One Track East of Existing	Yes	34.01	80	0	0	10	4	3	–	0	0	67	8	1	0	76	0	0	0	0
		3C	Add Two-Track Bypass East	Yes	69.05	118	0	0	11	1	1	–	2	1	2,392	1,524	8	5	3,932	0	43	0	43
4	**Central Virginia** (Crossroads to Doswell) CFP 48 - 19	4A	Add One Track/ Improve Existing Track	Yes	99.17	93	0	1	0	0	0	–	0	0	51	18	1	0	70	0	2	0	2
5	**Ashland** (Doswell to I-295) CFP 19 - 9	5A	Maintain Two Tracks Through Town	Yes	27.18	51	0	0	5	0	1	–	0	0	135	14	1	4	154	0	25	1	26
		5A-A	Maintain Two Tracks Through Town (Relocate Station to Ashcake)	Yes	28.04	46	0	0	5	0	1	–	0	0	135	14	1	4	154	0	25	1	26
		5B	Add One Track East of Existing	Yes	31.20	51	0	0	5	1	3	–	1	0	133	20	1	4	159	0	30	1	31
		5B-A	Add One Track East of Existing (Relocate Station to Ashcake)	Yes	33.82	51	0	0	5	1	3	–	1	0	133	20	1	4	159	0	30	1	31
		5C	Add Two-Track West Bypass	Yes	89.83	171	73.7	0	5	0	2	–	0	0	272	51	2	4	329	0	35	1	36
		5C-A	Add Two-Track West Bypass (Relocate Station to Ashcake)	Yes	90.88	171	73.7	0	5	0	2	–	0	0	272	51	2	4	329	0	35	1	36
		5D-A	Three Tracks Centered Through Town (Add One Track, Relocate Station to Ashcake)	Yes	39.38	52	0	0	8	1	5	–	1	0	135	18	1	4	159	0	30	1	31
6	**Richmond** (I-295 to Centralia) CFP 9 - A 011	6A	Staples Mill Road Station Only	Yes	45.20	29	0	0	13	4	7	-6,696	0	0	366	8	6	0	380	0	8	0	8
		6B-A	Boulevard Station Only, A-Line	Yes	49.04	23	0	0	23	4	14	-6,003	0	0	386	9	6	0	401	0	8	0	8
		6B-S	Boulevard Station Only, S-Line	Yes	30.79	22	0	0	39	7	8	-6,003	1	0	416	15	7	0	439	0	8	0	8
		6C	Broad Street Station Only	Yes	49.93	22	0	0	27	6	16	-5,663	0	0	387	9	7	0	403	0	8	0	8
		6D	Main Street Station Only	Yes	30.93	22	0	1	40	6	6	-5,947	1	0	416	15	7	0	439	0	8	0	8
		6E	Split Service, Staples Mill Road/ Main Street Stations	Yes	45.20	24	0	1	17	6	7	-6,051	0	0	379	9	6	0	394	0	8	0	8
		6F	Full Service, Staples Mill Road/ Main Street Stations	Yes	31.78	19	0	1	38	6	5	-6,518	1	0	416	15	7	0	439	0	8	0	8
		6G	Shared Service, Staples Mill Road/ Main Street Stations	Yes	32.48	19	0	1	38	6	5	-6,869	1	0	298	10	4	0	313	0	8	0	8
For more information, refer to the following Draft EIS Sections:				4.2	4.3			4.5				4.6	4.7										

– : Analyzed by each of the Richmond station alternatives

Area #	Area Name and CSX Milepost Limits	Alternative	Description	ENERGY	AESTHETICS & VISUAL ENVIRONMENT	COMMUNITY & ENVIRONMENTAL JUSTICE				PARKLAND RESOURCES	CULTURAL RESOURCES			SECTION 4(f) RESOURCES			
				Energy Consumption (Billions of BTUs), Change Compared to No Build	Visual Impact Rating (Low, Medium, or High)	Commercial Relocations	Residential Relocations	Compatability with Comprehensive Land Use Plans (Yes/No)	Environmental Justice Census Tracks with Residential Relocations	Park Impacts (# Resources/ Acres Impacted)	Effects on Archaeological Sites	Effects on Buildings, Districts, Structures and Objects	Effects on Battlefields	Parkland Resources De Minimis (# Resources/ Acres Impacted)	Wildlife Refuges (# Resources/ Acres Impacted)	Historic Resources (Use)	Historic Resources (De Minimis)
1	**Arlington** (Long Bridge Approach) CFP 110 - 109.3	1A	Add Two Tracks on the East	–	Low	0	0	Yes	0	0/0	0	1	0	0/0	0/0	1	1
		1B	Add Two Tracks on the West	–	Low	0	0	Yes	0	1/1.45	0	1	0	1/1.45	0/0	1	1
		1C	Add One Track East and One Track West	–	Low	0	0	Yes	0	1/0.36	0	1	0	1/0.36	0/0	1	1
2	**Northern Virginia** CFP 109.3 - 62	2A	Add One Track/ Improve Existing Track	–	Low-Medium	0	2	Yes	0	1/0.04	0	1	0	1/0.04	0/0	1	6
3	**Fredericksburg** (Dahlgren Spur to Crossroads) CFP 62 - 48	3A	Maintain Two Tracks Through Town	–	Low	0	0	Yes	0	0/0	0	1	0	0/0	0/0	0	0
		3B	Add One Track East of Existing	–	High	1	0	Yes	0	0/0	1	4	0	0/0	0/0	3	10
		3C	Add Two-Track Bypass East	–	High	1	19	No	2	0/0	0	1	0	0/0	0/0	1	3
4	**Central Virginia** (Crossroads to Doswell) CFP 48 - 19	4A	Add One Track/ Improve Existing Track	–	Low	0	0	Yes	0	0/0	0	3	0	0/0	0/0	3	10
5	**Ashland** (Doswell to I-295) CFP 19 - 9	5A	Maintain Two Tracks Through Town	–	Medium	1	0	Yes	0	0/0	0	0	0	0/0	0/0	0	0
		5A-A	Maintain Two Tracks Through Town (Relocate Station to Ashcake)	–	Medium	1	0	Yes	0	1/0.01	0	0	0	1/0.01	0/0	0	4
		5B	Add One Track East of Existing	–	Medium	1	0	Yes	0	1/0.03	0	7	0	1/0.03	0/0	3	11
		5B-A	Add One Track East of Existing (Relocate Station to Ashcake)	–	Medium	1	0	Yes	0	2/0.04	0	7	0	2/0.04	0/0	3	11
		5C	Add Two-Track West Bypass	–	High	1	21	No	1	0/0	0	1	0	0/0	0/0	1	3
		5C-A	Add Two-Track West Bypass (Relocate Station to Ashcake)	–	High	1	21	No	1	1/0.01	0	1	0	1/0.01	0/0	1	3
		5D-A	Three Tracks Centered Through Town (Add One Track, Relocate Station to Ashcake)	–	Medium	1	0	Yes	0	1/0.01	0	7	0	1/0.01	0/0	3	11
6	**Richmond** (I-295 to Centralia) CFP 9 ww- A 011	6A	Staples Mill Road Station Only	-307	Low-Medium	10	12	Yes	2	1/0.19	0	8	0	1/0.19	0/0	4	36
		6B-A	Boulevard Station Only, A-Line	-277	Low-High	18	12	Yes	2	1/0.19	0	16	0	1/0.19	0/0	5	25
		6B-S	Boulevard Station Only, S-Line	-277	Low-High	10	7	Yes	0	1/0.17	3	13	0	1/0.17	0/0	8	30
		6C	Broad Street Station Only	-265	Low-High	15	112	Yes	3	1/0.19	0	16	0	1/0.19	0/0	5	28
		6D	Main Street Station Only	-280	Low-High	10	7	Yes	0	1/0.17	3	7	0	1/0.17	0/0	7	36
		6E	Split Service, Staples Mill Road/ Main Street Stations	-286	Low-High	10	12	Yes	2	1/0.19	0	7	0	1/0.19	0/0	3	47
		6F	Full Service, Staples Mill Road/ Main Street Stations	-293	Low-High	10	7	Yes	0	1/0.17	3	7	0	1/0.17	0/0	7	35
		6G	Shared Service, Staples Mill Road/ Main Street Stations	-299	Low-High	10	7	Yes	0	1/0.17	3	10	0	1/0.17	0/0	7	43
For more information, refer to the following Draft EIS Sections:				4.8	4.9	4.11			4.12	4.14	4.13			Chapter 5			

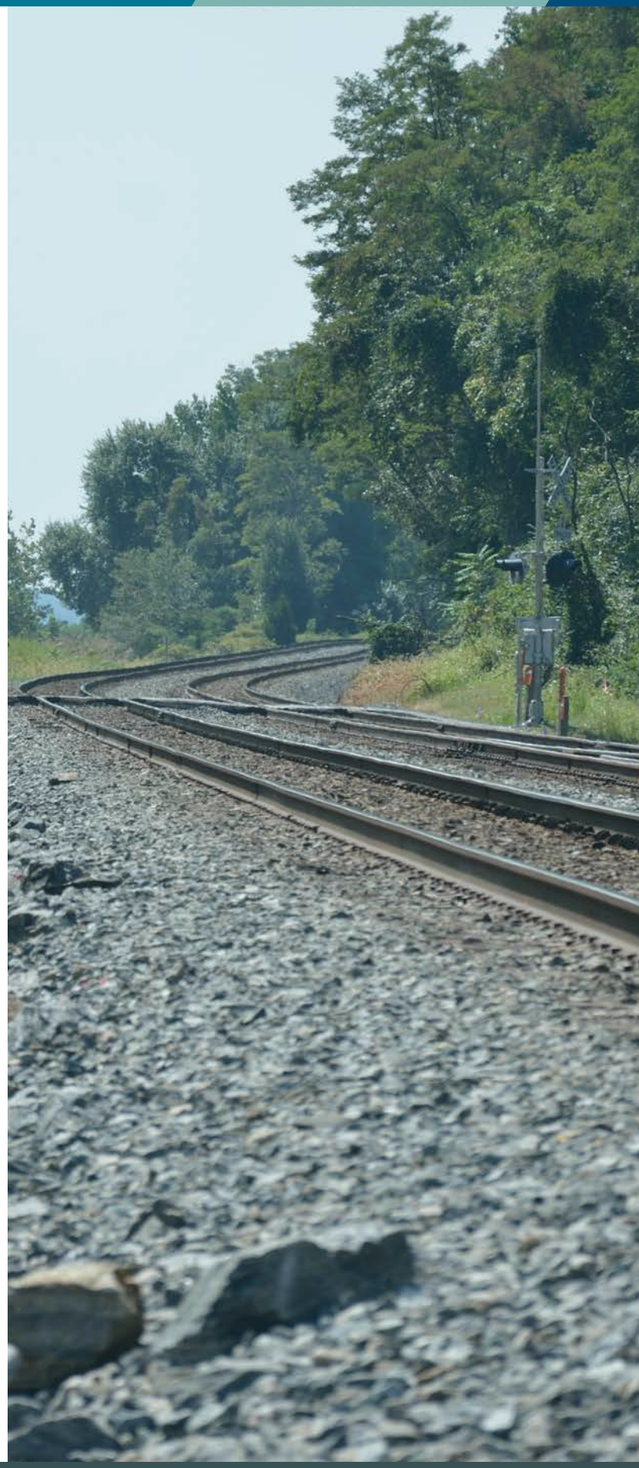
– : Analyzed by each of the Richmond station alternatives

HOW ARE THE EFFECTS TO THE ENVIRONMENT REDUCED OR MITIGATED?

Effects to the natural and built environments were avoided or minimized where feasible as part of the conceptual engineering that was conducted in support of the Draft EIS. Where negative effects cannot be avoided or minimized, or when no other reasonable or feasible alternative is available, the effects are mitigated where required. Mitigation can be accomplished through repairing, rehabilitating, or restoring the affected environment. Sometimes effects are compensated for by replacing or providing substitute resources.

Mitigation will continue to be addressed throughout the NEPA process. Specific mitigations identified for consideration to date in the Draft EIS include the following:

- **Natural Resources:** For every wetland acre that is destroyed, compensatory wetlands must be created or purchased from a wetland bank. Use of Best Management Practices would ensure sufficient measures are employed during and after construction. Construction would be regulated to adhere to a strict schedule with possible time-of-year restrictions as necessary.
- **Geologic Resources:** Minimization was considered throughout the alternatives development process to compensate for limiting soil characteristics.
- **Hazardous Materials:** Any hazardous material discovered will be removed and disposed of in compliance with all applicable federal, state, and local regulations. All necessary remediation would be conducted in compliance with applicable federal, state, and local environmental laws and would be coordinated with the EPA, Virginia DEQ, and other federal or state agencies as necessary. All solid waste material resulting from clearing and grubbing, demolition, or other construction operations would be removed and disposed of according to regulations.
- **Air Quality:** Dust and airborne dirt generated by construction activities will be controlled through dust control procedures or a specific dust control plan in accordance with the provisions on fugitive dust control in the VDOT Road and Bridge Specifications.
- **Noise & Vibration:** Use of continuously welded rail can reduce the effects of noise and vibration from train operations and/or use of buffer zones between the tracks and receptors. Additionally, FHWA's "supplemental and alternative safety measures" (SSMs) can compensate for the absence of the train horn safety requirements at at-grade crossings. Therefore, it is not anticipated that DC2RVA Project would adversely affect any existing or future Quiet Zone designations because improvements that qualify as SSMs are proposed at all existing public at-grade crossings, including those with existing Quiet Zone designations. The FRA Office of Safety authorizes quiet zones, which are voluntary by the operating railroad.
- **Visual:** Visual impact would be minimized through the construction of any new rail structures to generally reflect the horizontal and vertical profiles of existing structures.
- **Community Resources:** The acquisition of railroad right-of-way and the relocation of displaced persons and businesses would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Assurance is given that relocation resources would be available to residential, business, farm, and nonprofit displacees without discrimination.
- **Environmental Justice:** Where avoidance is not possible, coordination with affected communities would be conducted where any disproportionate effects are identified.
- **Park Resources:** Where avoidance of park resources is not possible, Section 4(f) and Section 6(f) regulations will be followed, as applicable.
- **Cultural Resources:** Where avoidance of historic properties is not possible, Section 106 stipulations will be followed.



4 DRPT RECOMMENDED PREFERRED ALTERNATIVE

WHY IS DRPT RECOMMENDING A PREFERRED ALTERNATIVE?

DRPT is identifying a Recommended Preferred Alternative as part of the DC2RVA Tier II Draft EIS in order to provide the public with a clear understanding of DRPT's conclusions at this project milestone. FRA will fully consider comments received on DRPT's Recommended Preferred Alternative from the Draft EIS, or any subsequent additional analysis if required, and will confirm a selected Preferred Alternative for the full DC2RVA corridor in the Final EIS and ROD.

DRPT's Recommended Preferred Alternative is non-binding. DRPT invites the public, elected officials, and agencies to provide comments on the Draft EIS and DRPT's Recommended Preferred Alternative. After reviewing all of the comments received on the Draft EIS and DRPT's Recommended Preferred Alternative, DRPT will finalize the Preferred Alternative. In addition, DRPT will provide the CTB with a full summary of the comments received. DRPT anticipates that the CTB will formally identify the Commonwealth of Virginia's Preferred Alternative as a recommendation for FRA to consider and confirm in the Final EIS and ROD for the DC2RVA Project.

WHAT IS DRPT'S RECOMMENDED PREFERRED ALTERNATIVE?

DRPT developed and evaluated rail alignment build alternatives in the six geographic alternative areas shown on the figure on the facing page. DRPT's Recommended Preferred Alternative also includes a service plan that would add nine additional daily intercity passenger round trips (18 trains per day). The new service would be incorporated into Amtrak's intercity passenger rail network. DRPT's service plan also proposes a maximum authorized speed for the corridor of 90 mph (where practicable), and improved reliability of the intercity passenger train service.

The Recommended Preferred Alternative is a combination of one Build Alternative from each of the six alternative areas to form a contiguous "best-fit" alternative for the DC2RVA corridor, with the exception of two areas where further consideration is required: Area 1 (Arlington) and Area 5 (Ashland). A summary discussion of DRPT's Recommended Preferred Alternative for each area is provided in the following pages. *(See Chapter 7 of the Draft EIS.)*

ALTERNATIVE AREA 1: ARLINGTON (LONG BRIDGE APPROACH)
Location: CFP 110 - CFP 109.3
Recommendation: Retain Alternative 1A, 1B, and 1C to support a deferred selection until after completion of Long Bridge Study
Approximate Length: 1 Mile
Approximate Cost Range: $36-47 Million (2025)
All alternatives have similar impacts (within existing ROW) and equally support expanded rail service. Deferring decision maximizes flexibility of Long Bridge Study solutions.

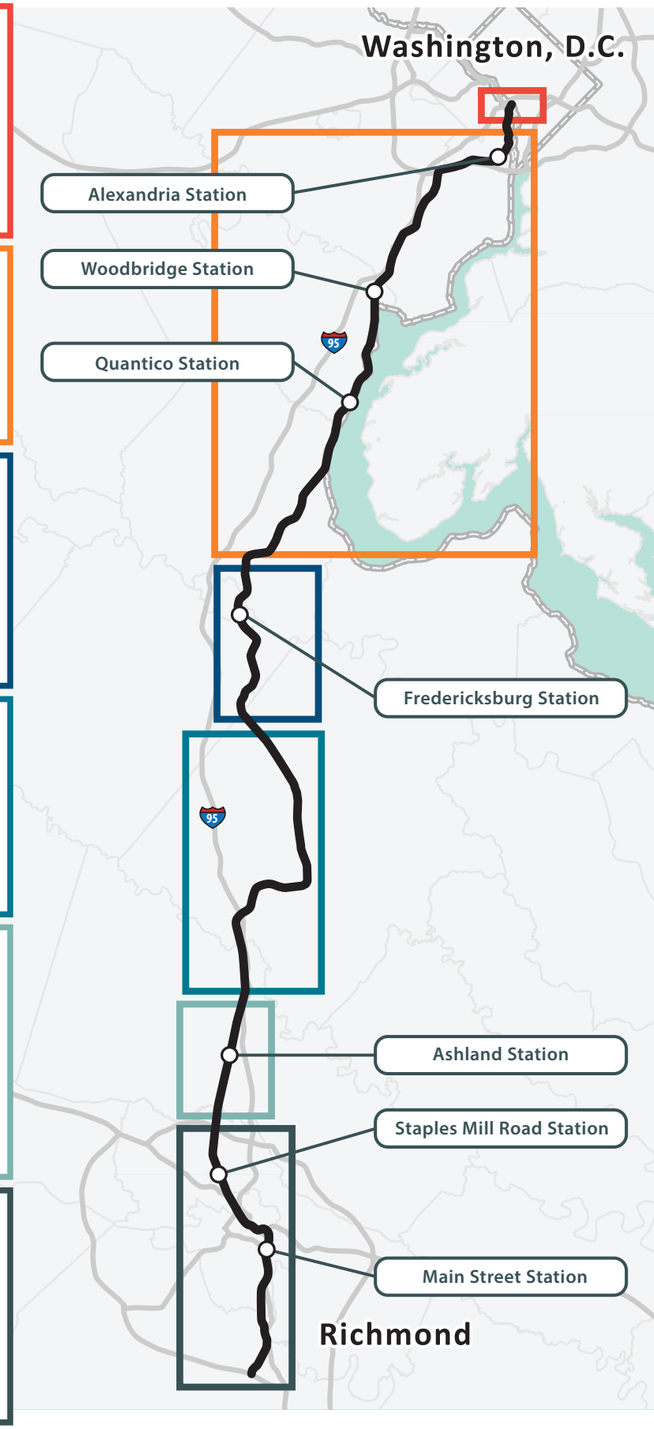
ALTERNATIVE AREA 2: NORTHERN VIRGINIA
Location: CFP 109.3 - CFP 062
Recommendation: Alternative 2A - Third or Fourth Track
Approximate Length: 47.3 Miles
Approximate Cost: $1.7 Billion (2025)
Avoids impacts to extent practicable (generally within existing ROW) while providing additional required rail capacity. Includes unavoidable impacts associated with several new bridge crossings.

ALTERNATIVE AREA 3: FREDERICKSBURG
Location: CFP 062 - CFP 048
Recommendation: Alternative 3B Additional Third Main Track through City
Approximate Length: 14 Miles
Approximate Cost: $507 Million (2025)
Maximizes ability to add train service and improve reliability, while minimizing overall cost and impacts (fewer relocations/wetlands impacts). Includes unavoidable impacts associated with historic properties and crossing of Rappahannock River.

ALTERNATIVE AREA 4: CENTRAL VIRGINIA
Location: CFP 048 - CFP 019
Recommendation: Alternative 4A Additional Third Track
Approximate Length: 29 Miles
Approximate Cost: $643 Million (2025)
Avoids impacts to extent practicable (generally within existing ROW) while providing additional required rail capacity. Includes some unavoidable impacts associated with the location of the additional track on either the east or west side of existing alignment.

ALTERNATIVE AREA 5: ASHLAND
Location: CFP 019 - CFP 009
Recommendation: Additional study of rail capacity improvements
Approximate Length: 10-11 Miles
Defer selection of a Recommended Preferred Alternative until the Final EIS. To provide greater opportunity for community and stakeholder input into the Preferred Alternative, DRPT has created the Town of Ashland / Hanover County Community Advisory Committee (CAC). The CAC will look at the alternatives developed in this Draft EIS, as well as any new alternatives generated by the additional study.

ALTERNATIVE AREA 6: RICHMOND
Location: CFP 009 - A011 Centralia
Recommendation: Alternative 6F - Main Street Station and Staples Mill Road Station Full Service with S-Line Improvements
Approximate Length: 23 Miles
Approximate Cost: $1.5 Billion (2025)
The only Richmond Build Alternative that fully meets the Purpose and Need. Provides most flexible service options. Reduces conflicts of passenger operations with freight and makes stations most accessible to riders.



ALTERNATIVE AREA 1: ARLINGTON (LONG BRIDGE APPROACH)

CFP 110 – 109.3

DRPT has determined that any of the three Build Alternatives in the Arlington area (Alternatives 1A, 1B and 1C) are acceptable and will meet the Purpose and Need of the DC2RVA Project. Retaining each of the three Build Alternatives will support a deferred selection of a Preferred Alternative until the completion of the Long Bridge EIS.

DISCUSSION

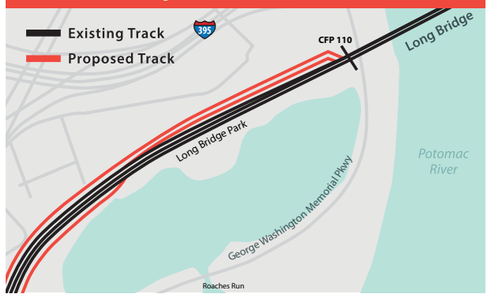
This less than one-mile-long section of the DC2RVA corridor provides the transition between the DC2RVA corridor and the approach to the Long Bridge across the Potomac River. DRPT is working with DDOT and the FRA to evaluate possible alternatives for increasing the rail corridor's capacity across the Potomac River via Long Bridge as part of a separate study (Long Bridge Rail Capacity Study). DRPT anticipates that a decision on the preferred alternative for the Long Bridge study to be completed in 2019. The DC2RVA Project assumes that expanded capacity across the Potomac River will be required to accommodate both the future year No Build and Build service plans expanded service south of Washington, D.C.

In this Draft EIS, DRPT is evaluating three different configurations for the short section of track at the Potomac River, which will become the connection between the Long Bridge preferred alternative and the DC2RVA corridor. The maximum authorized speed in this section is designed for 45 mph where feasible. DRPT considered the environmental, social, and economic impacts of each of the three build alternatives, in addition to each alternative's ability to meet the Purpose and Need for the DC2RVA Project. DRPT determined that each of the three alternatives is very similar in their impacts and there are no overriding issues which would drive DRPT to select one over the other. Therefore, to avoid unnecessarily limiting the options that could be considered as part of the separate DDOT Long Bridge study, DRPT determined that any of the three build alternatives would be acceptable, and recommends retaining all three Build Alternatives in order to support a deferred selection of a DC2RVA Preferred Alternative to physically align with the preferred alignment of the Long Bridge study.

DRPT is participating as a cooperating agency in the Long Bridge Study and will more fully discuss the selection of a Preferred Alternative for Area 1 in the DC2RVA Final EIS.

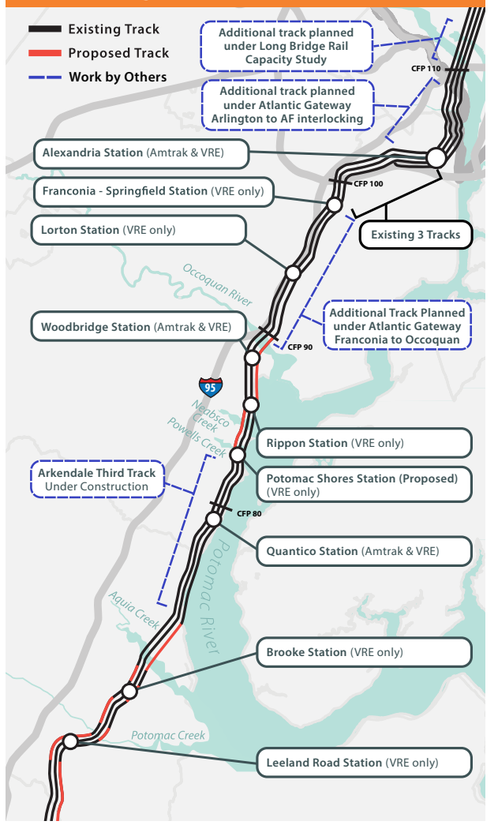
BUILD ALTERNATIVE 1A
Add Two Tracks on the East
Length: 0.7 miles Cost: $35.6 million

BUILD ALTERNATIVE 1B
Add Two Tracks on the West
Length: 0.7 miles Cost: $46.6 million



BUILD ALTERNATIVE 1C
Add One Track East and One Track West
Length: 0.7 miles Cost: $42.3 million

BUILD ALTERNATIVE 2A
Add One Track/improve Existing Track
Length: 47.3 miles Cost: $1.653 billion



ALTERNATIVE AREA 2: NORTHERN VIRGINIA

CFP 109.3 – 62

DRPT recommends **Build Alternative 2A: Add One Track/Improve Existing Track** as the Recommended Preferred Alternative in the Northern Virginia area. This would result in a fourth track between Arlington and Alexandria, and a third track south of Alexandria, generally within existing CSXT railroad right-of-way.

DISCUSSION

DRPT determined that additional rail capacity is required in the Northern Virginia area to increase train service and improve reliability. The Draft EIS evaluates the impacts of a single alternative: constructing one additional main line track adjacent to the existing tracks to create at least three interoperable main tracks. DRPT determined that this alternative would generally be within the existing CSXT railroad right-of-way and avoids impacts to the extent practicable. Due to constraints of the geography through this location, the maximum authorized speed in this section is designed for 79 mph where feasible. This alternative does have some unavoidable environmental impacts, including those associated with several new bridge crossings.

ALTERNATIVE AREA 3: FREDERICKSBURG

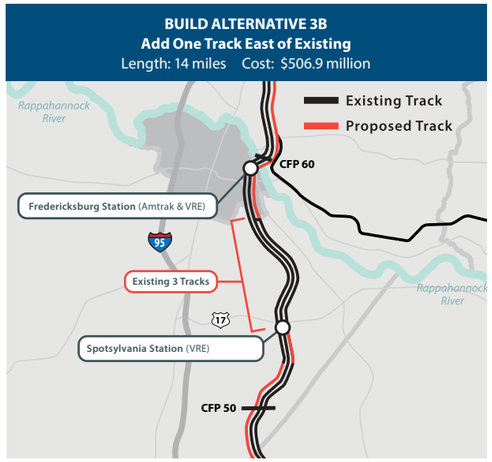
CFP 62 – 48

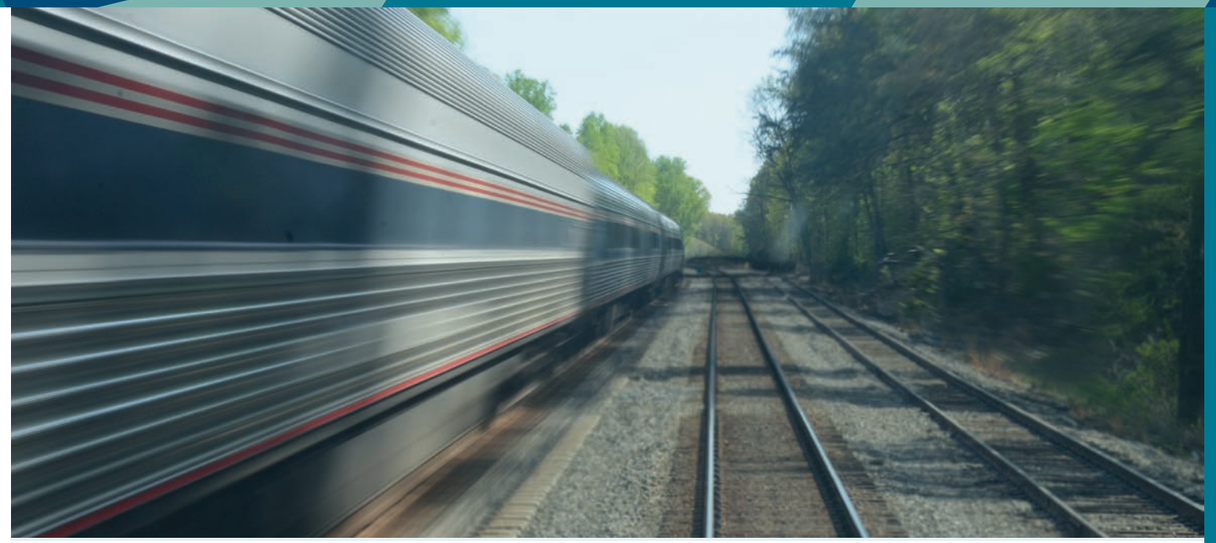
DRPT recommends **Build Alternative 3B: Add One Track East of Existing** alignment through the city of Fredericksburg, which is primarily located within existing CSXT railroad right-of-way, in the Fredericksburg area.

DISCUSSION

DRPT evaluated three options in the Fredericksburg area. The Recommended Preferred Alternative (Build Alternative 3B) would add the capacity needed to add train service and improve reliability. Due to constraints of the geography through this location, the maximum authorized speed in this section is designed for 79 mph where feasible. Build Alternative 3A would maintain the existing two tracks through Fredericksburg without adding the capacity needed to increase and improve train service. Build Alternative 3C would add capacity via a two-track bypass to the east of Fredericksburg. However, DRPT concludes that, compared with the third line through Fredericksburg, the bypass alternative would have far greater cost and would result in more relocations and impacts to the natural environment.

While the Recommended Preferred Alternative's impacts to historic properties would be greater than those of the two other alternatives, it remains primarily within the existing CSXT right-of-way, and its impacts to wetlands and residential and commercial properties would be substantially lower than the bypass alternative. Both Build Alternatives with additional track include new bridge crossings of the Rappahannock River. The construction costs for Build Alternative 3B would be less than the bypass, and Build Alternative 3B is included in the City of Fredericksburg Comprehensive Plan. In summary, DRPT prefers Build Alternative 3B, adding one track in the existing alignment through the city, because it remains primarily within the existing CSXT right-of-way and minimizes impacts and costs while still providing improved operations for the DC2RVA corridor.





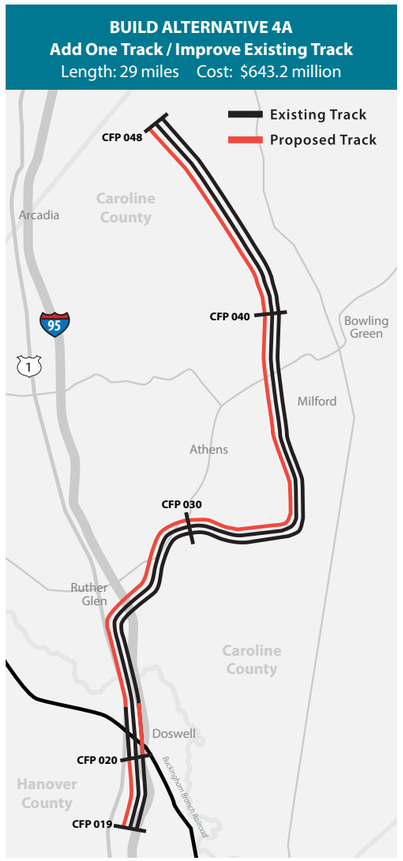
ALTERNATIVE AREA 4: CENTRAL VIRGINIA

CFP 48 – 19

DRPT recommends **Build Alternative 4A: Add One Track/Improve Existing Track,** which is generally within CSXT railroad right-of-way, as the Recommended Preferred Alternative in the Central Virginia area.

DISCUSSION

DRPT determined that additional rail capacity is required in the Central Virginia area to increase train service and improve reliability. Based on geography throughout this area, this section is most suitable for higher-speed passenger rail service. The Draft EIS evaluates the impacts of constructing one additional main line track adjacent to the existing tracks, identified as Build Alternative 4A. DRPT prefers this alternative because it would generally be within the existing CSXT railroad right-of-way, avoids impacts to the extent practicable, and provides the greatest contiguous section along the DC2RVA corridor with a maximum authorized speed up to 90 mph.



ALTERNATIVE AREA 5: ASHLAND

CFP 19 – 9

DRPT recommends additional study of rail capacity improvements through Alternative Area 5 and deferred selection of a Preferred Alternative, which will be recommended for inclusion in the Final EIS.

DISCUSSION

DRPT considered more than 26 different options and alternatives for adding rail capacity in Ashland and evaluated 7 build alternatives in this Draft EIS. During the course of preparing this Draft EIS, DRPT met with the Town of Ashland, Hanover County, the public, and other stakeholders, and conducted a tour of the Ashland area with the Commonwealth Transportation Board (CTB). In addition, DRPT received numerous comments and input from stakeholders in the Town of Ashland and Hanover County communities, as well as Randolph-Macon College.

Based on analysis to-date, DRPT has concluded the following:

- The existing railroad ROW through Ashland is limited and any alternative which adds a new track or new infrastructure will require additional ROW.
- The Town of Ashland, Hanover County, and other community stakeholders have requested additional opportunities to be engaged in evaluating alternatives and developing possible mitigation strategies for the Ashland / Hanover County area.
- All seven build alternatives evaluated in the Draft EIS (Section 2.5.5.2) provide a reasonable range of alternatives that meet the Purpose and Need of the Project.
- Additional stakeholder input would benefit DRPT's analysis and inform their Recommended Preferred Alternative meeting the DC2RVA Purpose and Need through the Ashland area.
- DRPT's Recommended Preferred Alternative for the Central Virginia and Richmond areas are neither contingent on nor do they limit any one specific alternative for the Ashland area.

DRPT has not identified a Recommended Preferred Alternative for the Ashland area of the DC2RVA corridor in this Draft EIS. DRPT recognizes that each of the proposed Build Alternatives would have adverse consequences on the citizens and resources of the Town of Ashland or Hanover County, and there is no local consensus or preference for a build alternative. DRPT has determined that expanded community involvement would inform decision-making.

Based on these conclusions, DRPT has deferred the selection of a Recommended Preferred Alternative in the Ashland area until the Final EIS for the DC2RVA Project. To provide the community and stakeholders a greater opportunity for input into the recommendation for a Preferred Alternative DRPT has established the Town of Ashland/ Hanover County Community Advisory Committee (CAC). The CAC will take a fresh look at alternatives on the rail corridor through Ashland, including review of all previously considered alternatives and any new alternatives identified by the CAC. To provide transparency, DRPT will make the CAC meetings open to the public and will document the CAC results and all meeting minutes and other decision-documents as part of the public record for the Final EIS. At the conclusion of the CAC process, DRPT will recommend a Preferred Alternative for the Ashland area in the Final EIS.

ALTERNATIVE AREA 6: RICHMOND

CFP 9 – A 011

DRPT recommends **Build Alternative 6F: Full Service, Staples Mill Road/Main Street Stations** as the Recommended Preferred Alternative for the Richmond area.

DISCUSSION

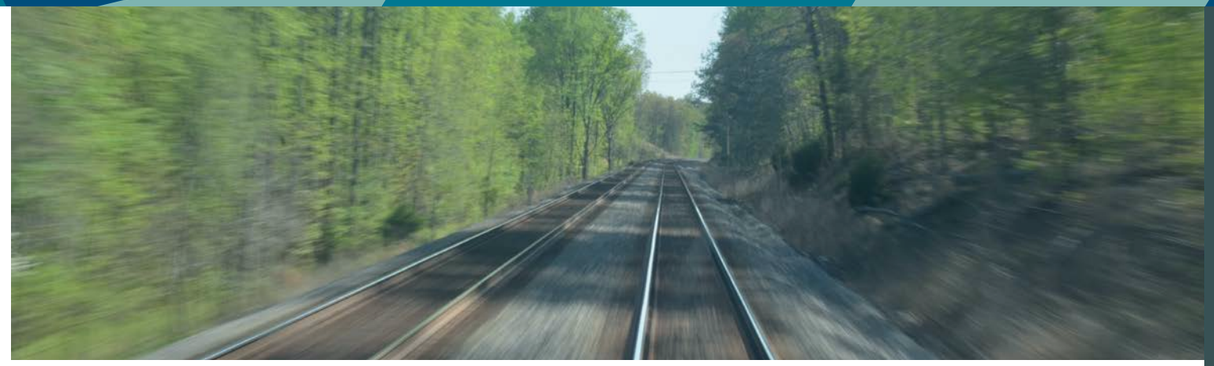
DRPT evaluated two primary route alignment alternatives for the Richmond area, with one passing west of downtown on the CSXT A-Line and another passing through downtown via the CSXT S-Line, to determine which route was best capable of providing the capacity required to support the DC2RVA Purpose and Need. In addition to the routing options, DRPT evaluated four unique station locations with eight different station service alternatives in the Richmond area serving multiple route and station combinations. The track maximum authorized speed is ≤ 79 mph, with top speeds of 40 mph through the Acca Yard area. To develop the most viable alternatives, DRPT engaged in discussions with CSXT, the City of Richmond, Henrico County, and Chesterfield County, as well as the Richmond Transportation Planning Organization. In addition, DRPT held three public meetings in Richmond.

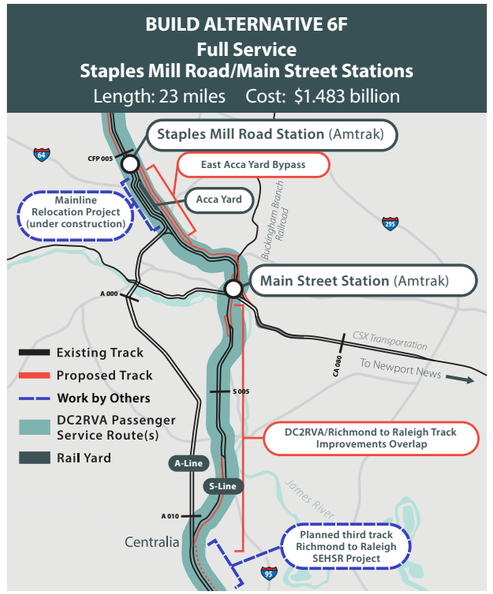
DRPT recognizes that a major advantage of passenger rail is the capability to provide the traveling public with a connection to Richmond's downtown. Both the FRA and Amtrak also recognize the importance of a connection to the urban core. The FRA's Corridor Planning Guidance Manual states that "(each) city should have a station located in or near the central business district". DRPT is committed to maximizing the value of intercity passenger rail by connecting the DC2RVA corridor to the governmental, commercial, and residential population in downtown Richmond. However, DRPT also recognizes that the Richmond area's Staples Mill Road Station in suburban Henrico County currently has the highest ridership volumes of any passenger rail station in Virginia, in part due to the higher level of train service at the station.

Based on the cost estimates, levels of impact and ridership projections, DRPT determined that having both a downtown station and a suburban station will provide the Commonwealth and the Richmond region with the most flexible service. The Staples Mill Road Station could continue to serve as the Amtrak crew change location with baggage handling and parking, eliminating the need for these services at Main Street Station. Therefore, extended station stop dwell times would not be required at Main Street Station and shorter platforms could be utilized, reducing passenger train congestion at the station and minimizing physical impacts to the station area. In addition, Main Street Station could provide for convenient connection to Richmond's transit system, including multiple bus routes and the new Bus Rapid Transit (BRT) system under construction along Broad Street.

Therefore, DRPT has determined that Build Alternative 6F is the Recommended Preferred Alternative for the Richmond area. This alternative includes improvements between Greendale and Centralia along the S-Line, station and service improvements at Main Street Station, an additional bridge crossing of the James River, an east bypass of Acca Yard, and station and service improvements at Staples Mill Road Station. Interstate Corridor (SEHSR) and Northeast Regional (SEHSR and Virginia) to Norfolk passenger trains moving north-south through Richmond would be routed from Staples Mill Road Station to the west side of Main Street Station and then to Centralia using the S-Line. Interstate Corridor (Carolinian) and Long Distance passenger trains would be routed through Staples Mill Road Station to Centralia using the A-Line, bypassing Main Street Station. One Northeast Regional (SEHSR round trip would terminate at Main Street Station. Northeast Regional (SEHSR and Virginia) service to Newport News would be routed from Staples Mill Road Station to the east side of Main Street Station on the S-Line, then continue on the Peninsula Subdivision.

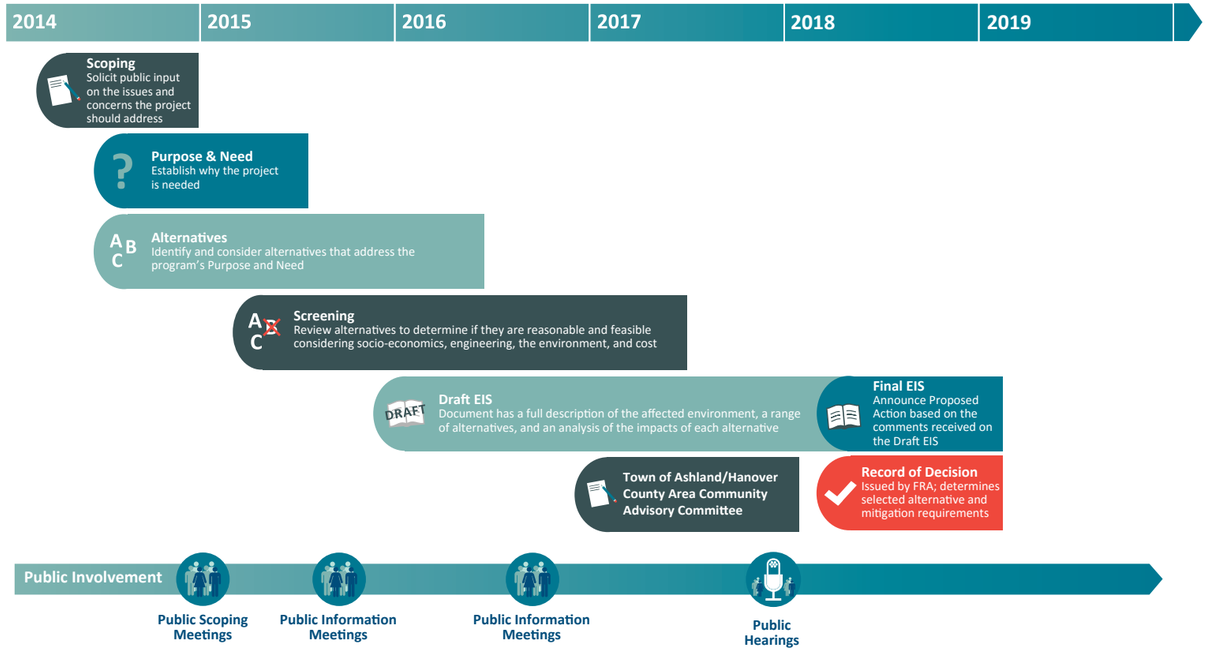
This two-station Richmond alternative will allow for concentration of baggage, crew change, and layover activities at the Staples Mill Road location, reducing the track and platform dwell time for trains serving Main Street Station. By nature of the respective environments of each location, Main Street Station would provide expanded multimodal connectivity, while Staples Mills Road Station could continue to accommodate the parking needs of regional rail passengers who are not located in the downtown Richmond area.





CAN THE RECOMMENDED PREFERRED ALTERNATIVE BE CHANGED?

Yes. The Recommended Preferred Alternative is not final until the FRA issues a Record of Decision. DRPT invites the public, elected officials, and agencies to provide comments on the Draft EIS and DRPT's Recommended Preferred Alternative during the established comment period.



5 NEXT STEPS & OTHER CONSIDERATIONS

WHAT ARE THE NEXT STEPS IN THE NEPA PROCESS?

FINAL EIS

Based on agency and public comments on the Draft EIS and DRPT's Recommended Preferred Alternative, DRPT and FRA will prepare a Final EIS, which will report the Preferred Alternative and list environmental commitments to mitigate unavoidable impacts. The Final EIS is distributed to federal, state, and local entities including the CTB. Copies of the Final EIS will be available online and also filed with regional libraries for public viewing. DRPT will present the recommendations in the Final EIS to the CTB for Commonwealth approval.

RECORD OF DECISION

The ROD, which is issued by the FRA, is the final step in the EIS process, signifying approval of the Proposed Action. The FRA will issue the ROD, which identifies the preferred alternative, presents the basis for the decision, includes all the alternatives considered, and commits to the measures to mitigate unavoidable environmental impacts. Issuance of the ROD allows the DC2RVA Project to proceed to the next step, which is Final Engineering and Design.

WHAT PERMITS AND REGULATORY APPROVALS ARE REQUIRED?

Throughout project development, final design, and construction, DRPT will coordinate with the appropriate regulatory agencies to obtain the necessary permits. The following is a list of permits that may be required for this DC2RVA Project. Final determination of permit applicability lies with the regulatory agencies.

Permit	Authorizing Regulation	Regulatory Agency
Section 401 Water Quality Permit	Clean Water Act	Virginia Department of Environmental Quality
Section 402 Discharge Permit	Clean Water Act	Virginia Department of Environmental Quality
Section 404 Dredge and Fill Permit	Clean Water Act	U.S. Army Corps of Engineers
Virginia Water Protection Permit	Clean Water Act	Virginia Department of Environmental Quality
Subaqueous Bed Permit	Code of Virginia Chapter 2, Title 62.1	Virginia Marine Resources Commission
Municipal Separate Storm Sewer Systems (MS4) Permit	Virginia Stormwater Management Act	Virginia Department of Environmental Quality
Section 9 Bridge Permit	River and Harbors Act	U.S. Coast Guard
Section 10 Work in Navigable Waters Permit	River and Harbors Act	U.S. Army Corps of Engineers

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Email: DC2RVARail@gmail.com
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HOW CAN I LEARN MORE?

For additional information, please visit the project website www.DC2RVARail.com or contact us.

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U.S. Department of Transportation
Federal Railroad Administration

DRPT
Virginia Department of Rail and Public Transportation