

Rail Enhancement Fund FY10-FY15 Project Applications

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Chief of Rail Transportation**

**Rail Advisory Board
Workshop - March 3, 2009**

Agenda

- Applications Received
- Recommended Program
- Next Steps

FY10-FY15 Applications

- ❑ **CSX Transportation**
 - National Gateway (I-95 Corridor)
- ❑ **NCDOT**
 - Southeast High Speed Rail
- ❑ **Norfolk Southern**
 - I-81/Route 29 Passenger Rail
 - Coal Corridor
 - Route 460 / Heartland Corridor
 - I-81 Crescent Corridor
- ❑ **Port of Richmond**
 - Railroad Rehabilitation Project
 - Deepwater Terminal Railroad
- ❑ **Virginia Port Authority / Virginia Int. Terminals**
 - NIT Central Rail Yard Expansion
 - Craney Island Connector
- ❑ **Virginia Railway Express**
 - Cherry Hill Station and Third Track

Application No. 1

National Gateway (I-95 Corridor) - CSX Kilby Rail Yard Improvements

Description: This project will integrate Virginia into the National Gateway corridor to provide dual access to the Ports of Hampton Roads with an enhanced double-stack rail connection on the CSX system. The project is located near Suffolk and will extend the existing CSX siding at Kilby to achieve a new 10,000 foot passing siding as well as create two new support tracks of 6,000 feet each. The project will improve rail service for the new APM Terminal, VPA's Portsmouth Marine Terminal, and the proposed Craney Island Marine Terminal. The project is for environmental studies and 30% design for the proposed Kilby Yard improvements. This project is connected to the Virginia Avenue and Double Stack Clearances projects.

Project type: Design

Project cost: \$808,000

State REF share: \$565,600 (70%)

REF expenditures by FY: FY10 only

Key Factors and Benefits* (Steady State):

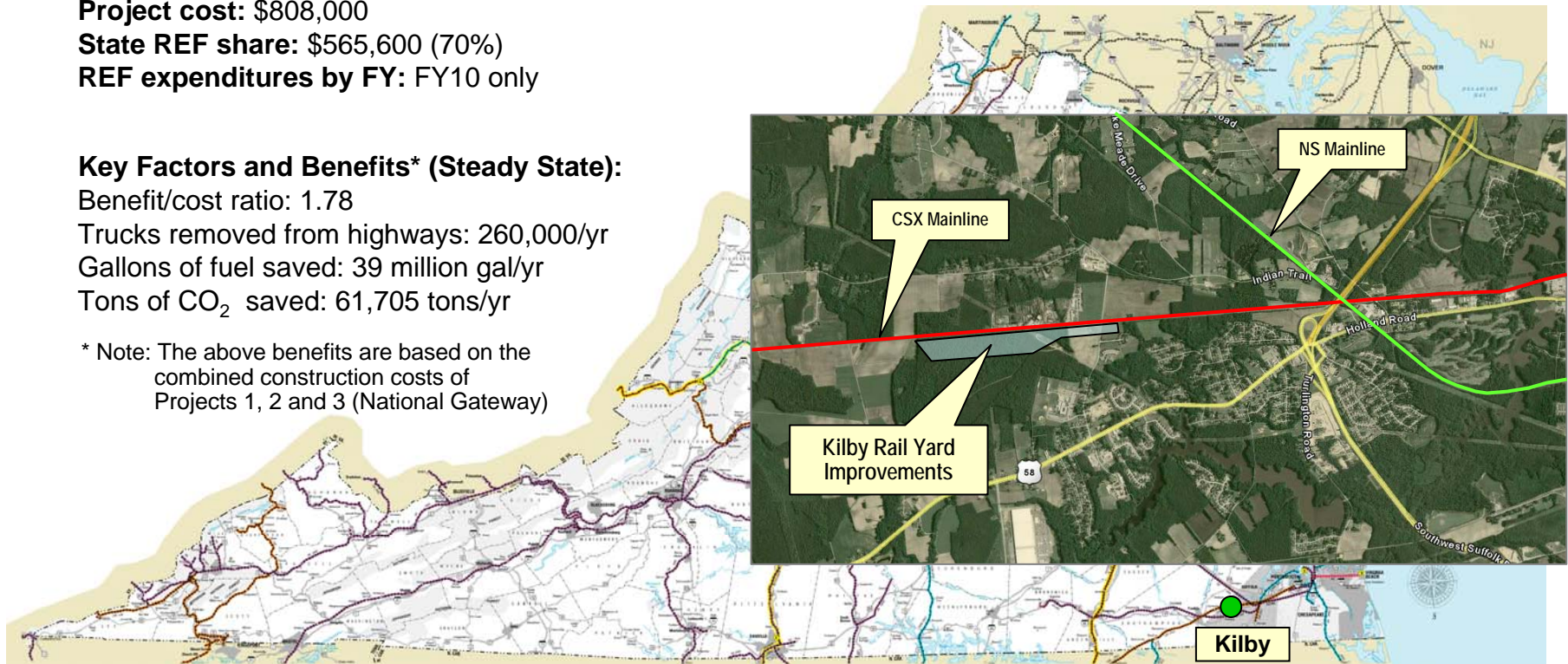
Benefit/cost ratio: 1.78

Trucks removed from highways: 260,000/yr

Gallons of fuel saved: 39 million gal/yr

Tons of CO₂ saved: 61,705 tons/yr

* Note: The above benefits are based on the combined construction costs of Projects 1, 2 and 3 (National Gateway)



Application No. 2

National Gateway (I-95 Corridor) - CSX Double-Stack Clearances

Description: This project will integrate Virginia into the National Gateway corridor to provide dual access to the Ports of Hampton Roads with an enhanced double-stack rail connection on the CSX system. This project consists of the removal or modification of four existing bridges that obstruct the vertical clearance needed for double-stack rail operations on the I-95 Corridor between Weldon, NC and Washington DC. This project is connected to the Kilby Rail Yard and Virginia Avenue projects.

Project type: Construction

Project cost: \$2,899,000

State REF share: \$2,029,300 (70%)

REF expenditures by FY: FY10-FY11

Key Factors and Benefits* (Steady State):

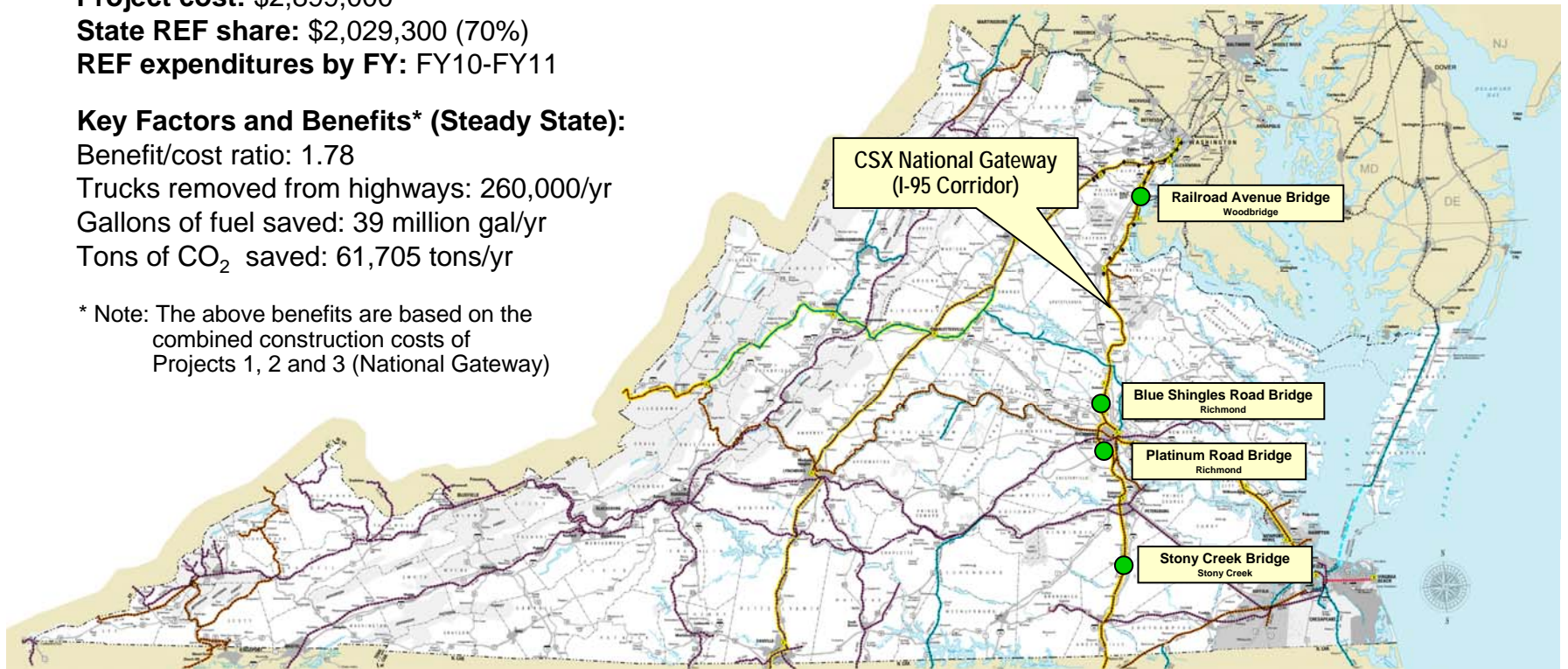
Benefit/cost ratio: 1.78

Trucks removed from highways: 260,000/yr

Gallons of fuel saved: 39 million gal/yr

Tons of CO₂ saved: 61,705 tons/yr

* Note: The above benefits are based on the combined construction costs of Projects 1, 2 and 3 (National Gateway)



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Application No. 3

National Gateway (I-95 Corridor) - CSX Virginia Ave. Tunnel

Description: This project will integrate Virginia into the National Gateway corridor to provide dual access to the Ports of Hampton Roads with an enhanced double-stack rail connection on the CSX system. This project involves adding a second main track through the Virginia Avenue tunnel and increasing the clearance for both tunnel tracks for 20'-2" double stack containers. Funding will support 30% engineering, environmental, and permitting work in FY10 and construction from FY11-FY14. This project is connected to the Kilby Rail Yard and Double-Stack Clearances projects.

Project type: Design and construction

Project cost: \$134,309,000

State REF share: \$24,001,100 (17.9%)

REF expenditures by FY: FY10 design, FY11-FY14 construction

Assumes federal funding through CSX for construction

Key Factors and Benefits* (Steady State):

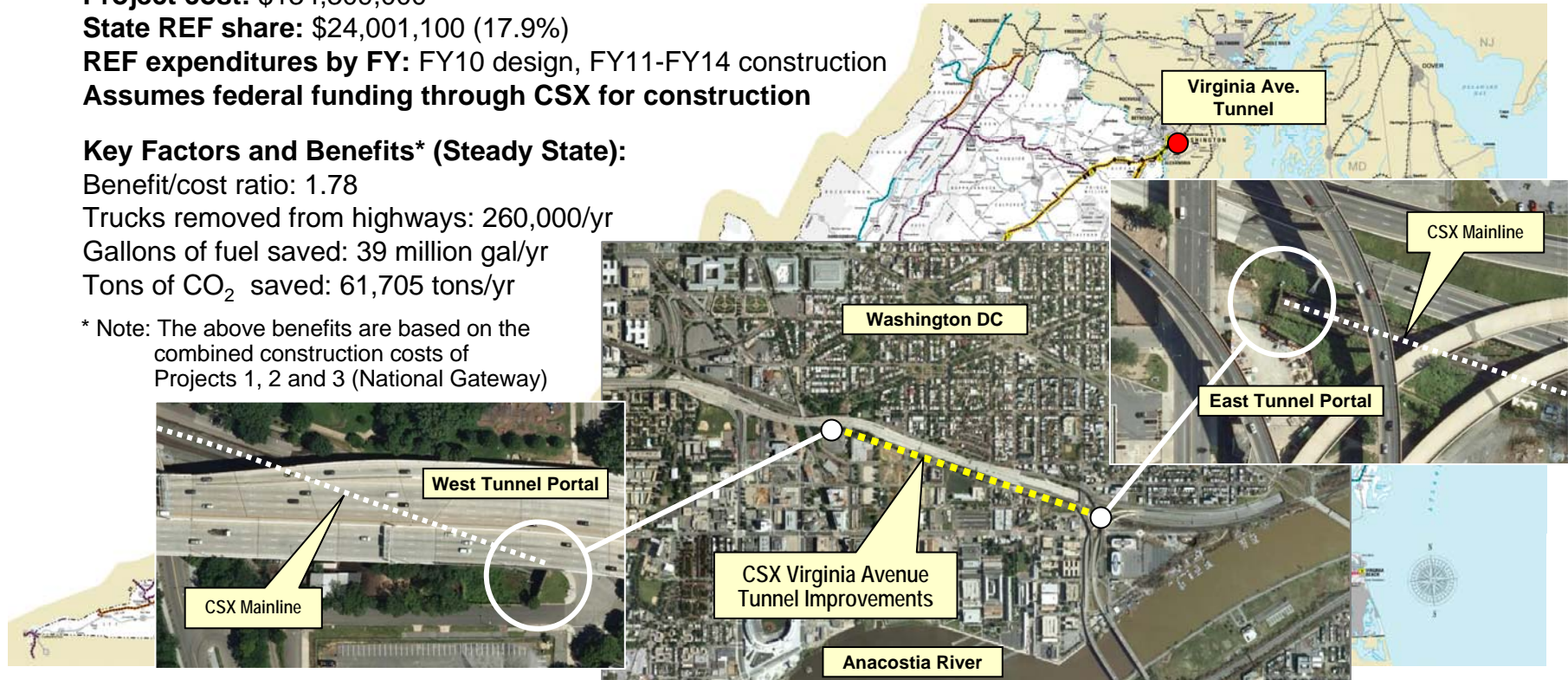
Benefit/cost ratio: 1.78

Trucks removed from highways: 260,000/yr

Gallons of fuel saved: 39 million gal/yr

Tons of CO₂ saved: 61,705 tons/yr

* Note: The above benefits are based on the combined construction costs of Projects 1, 2 and 3 (National Gateway)



Application No. 4

Commuter Rail Improvements

Cherry Hill Station and Third Track- Phase 3- VRE

Description: This project will improve both passenger and freight rail service in the 11.4 mile corridor between Powells Creek and Arkendale. The project includes final design of a third track in the CSX right-of-way, including a VRE station, slope stabilization, parking facility and highway grade separated bridge over CSX tracks in FY10 and the beginning of construction in FY11. Local match will be provided by a private developer.

Project type: Design and construction

Project cost: \$17,600,000

State REF share: \$12,320,000 (70%)

REF expenditures by FY: FY10 design, FY11 construction

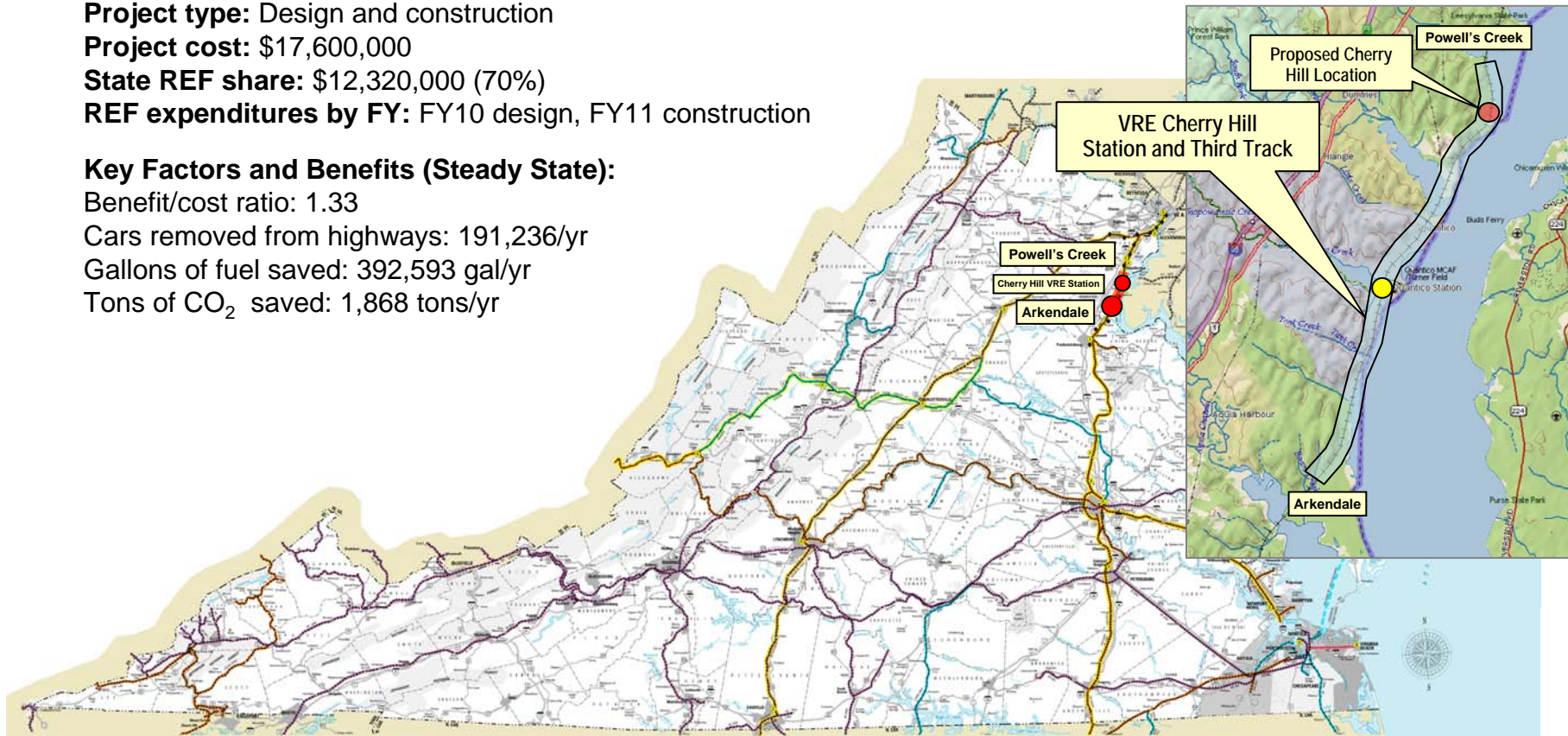
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 1.33

Cars removed from highways: 191,236/yr

Gallons of fuel saved: 392,593 gal/yr

Tons of CO₂ saved: 1,868 tons/yr



Application No. 5

I-81 Crescent Corridor- NS Northwestern Virginia Passing Tracks

Description: This project includes four initiatives to improve capacity and operations, and minimize delays on the I-81 Rail Corridor: A) Berryville Passing Track Extension; B) Elkton Passing Track Construction; C) Bentonville Passing Track Extension; and D) Stanley Passing Track Extension.

Project type: Design and construction

Project cost: \$33,890,000

State REF share: \$23,723,000 (70%)

REF expenditures by FY: FY10 design, FY11-FY12 construction

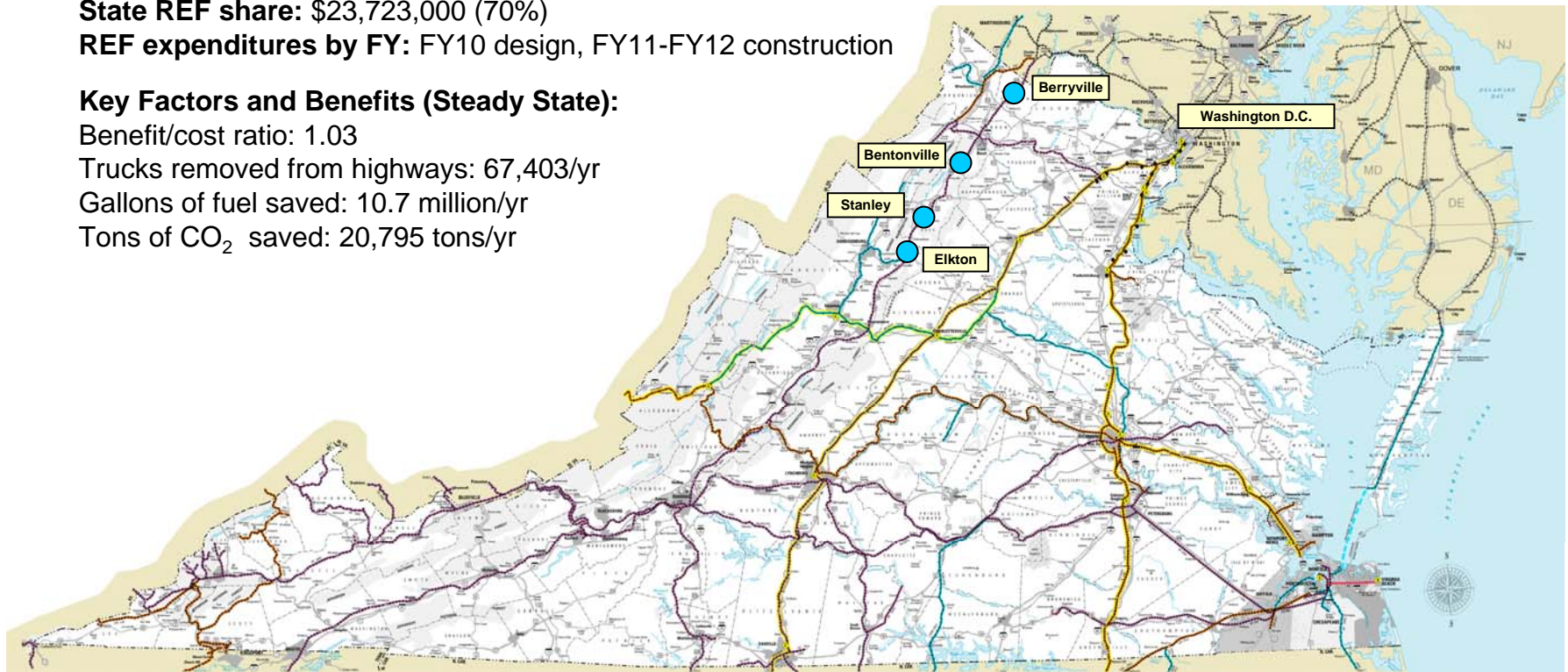
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 1.03

Trucks removed from highways: 67,403/yr

Gallons of fuel saved: 10.7 million/yr

Tons of CO₂ saved: 20,795 tons/yr



Application No. 6

I-81/Route 29 Passenger Rail- NS Nokesville to Calverton Double Tracks

Description: This project will restore the second mainline between Nokesville and Calverton on the existing roadbed, thereby removing a chokepoint. This project will increase capacity and train speed on the Manassas-Danville mainline.

Project type: Construction

Project cost: \$31,640,000

State REF share: \$22,148,000 (70%)

REF expenditures by FY: FY10-FY11

Key Factors and Benefits* (Steady State):

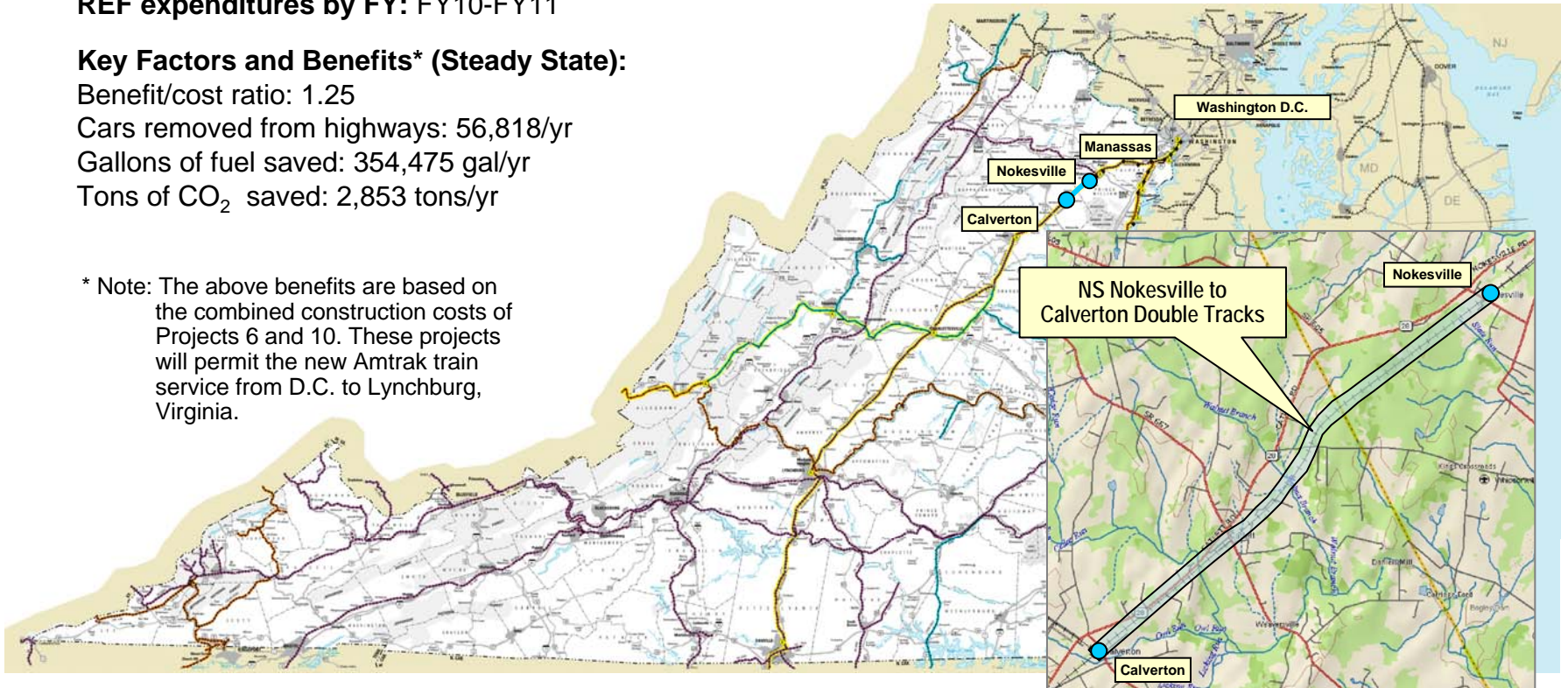
Benefit/cost ratio: 1.25

Cars removed from highways: 56,818/yr

Gallons of fuel saved: 354,475 gal/yr

Tons of CO₂ saved: 2,853 tons/yr

* Note: The above benefits are based on the combined construction costs of Projects 6 and 10. These projects will permit the new Amtrak train service from D.C. to Lynchburg, Virginia.



Application No. 7

I-81 Crescent Corridor- NS West and Southwestern Virginia Passing Tracks

Description: This project includes eight initiatives to improve capacity and operations, and minimize delays on the I-81 Rail Corridor: A) Sampson Passing Track Extension; B) Glasgow Passing Track; C) Troutville Passing Track Extension; D) Walton – Plum Creek Double Track; E) Gunton Park Passing Track Extension; F) Wytheville Passing Track Extension; G) Glade Spring Passing Track Extension; and H) Wyndale Passing Track.

Project type: Design and construction

Project cost: \$74,720,000

State REF share: \$50,706,000 (67.9%)

REF expenditures by FY: not recommended at this time

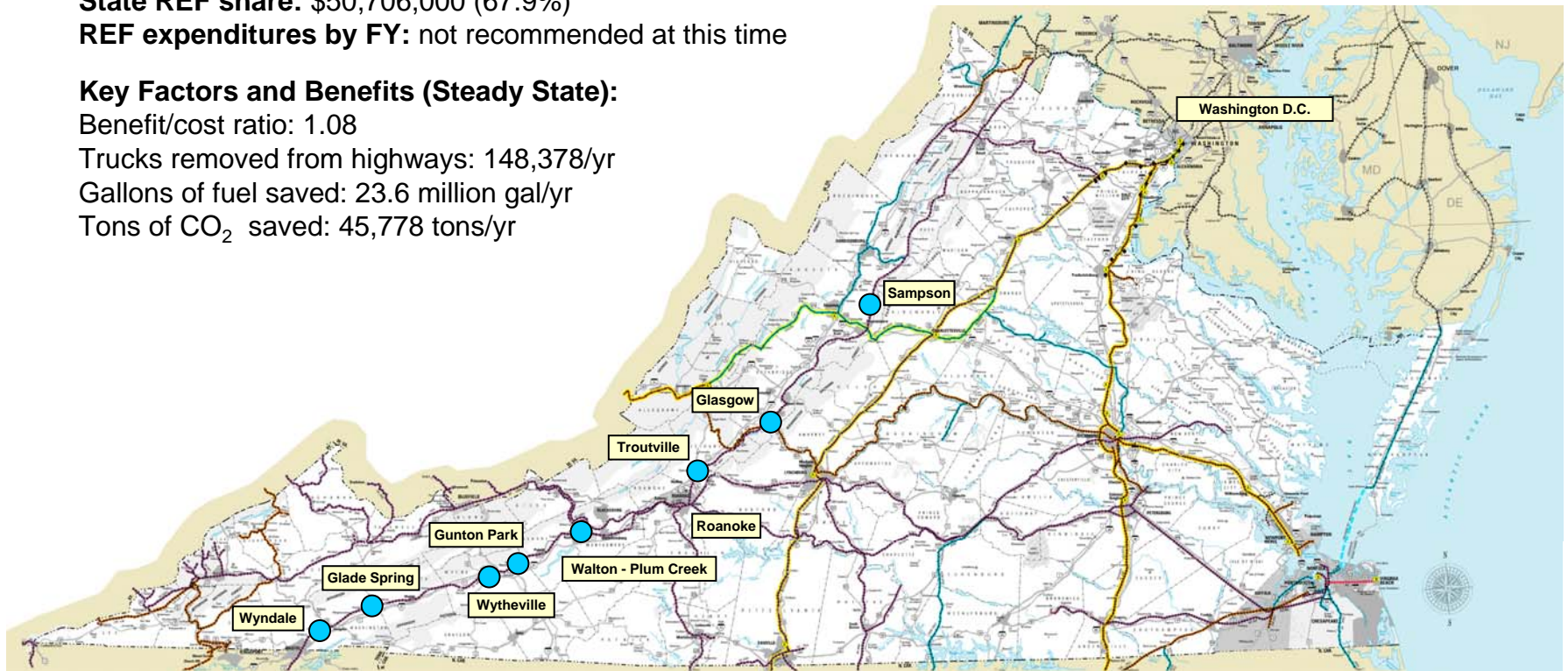
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 1.08

Trucks removed from highways: 148,378/yr

Gallons of fuel saved: 23.6 million gal/yr

Tons of CO₂ saved: 45,778 tons/yr



Application No. 8

● Coal Corridor- NS Andover

Description: This project will improve coal train movements in the Appalachian coalfields through creation of sidings within the Andover Rail Yard by rearranging, rehabilitating, and connecting several auxiliary tracks.

Project type: Design and construction

REF project cost: \$2,938,000

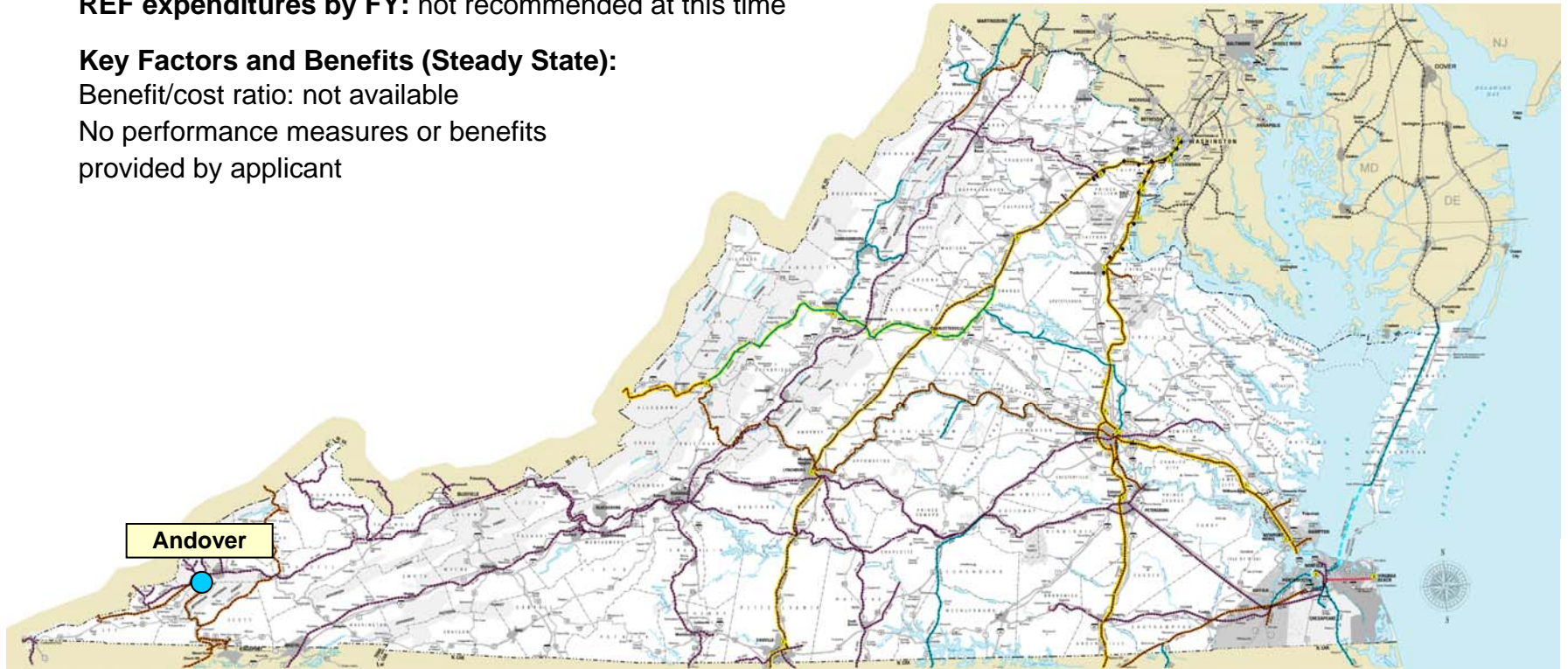
State REF share: \$2,056,600 (70%)

REF expenditures by FY: not recommended at this time

Key Factors and Benefits (Steady State):

Benefit/cost ratio: not available

No performance measures or benefits provided by applicant



Application No. 9

● Coal Corridor- NS Clarkton

Description: This project will improve coal train movements from the Appalachian coalfields by extending the Clarkton siding to 11,000 feet to serve the Clover Power Plant.

Project type: Design and construction

Project cost: \$5,300,000

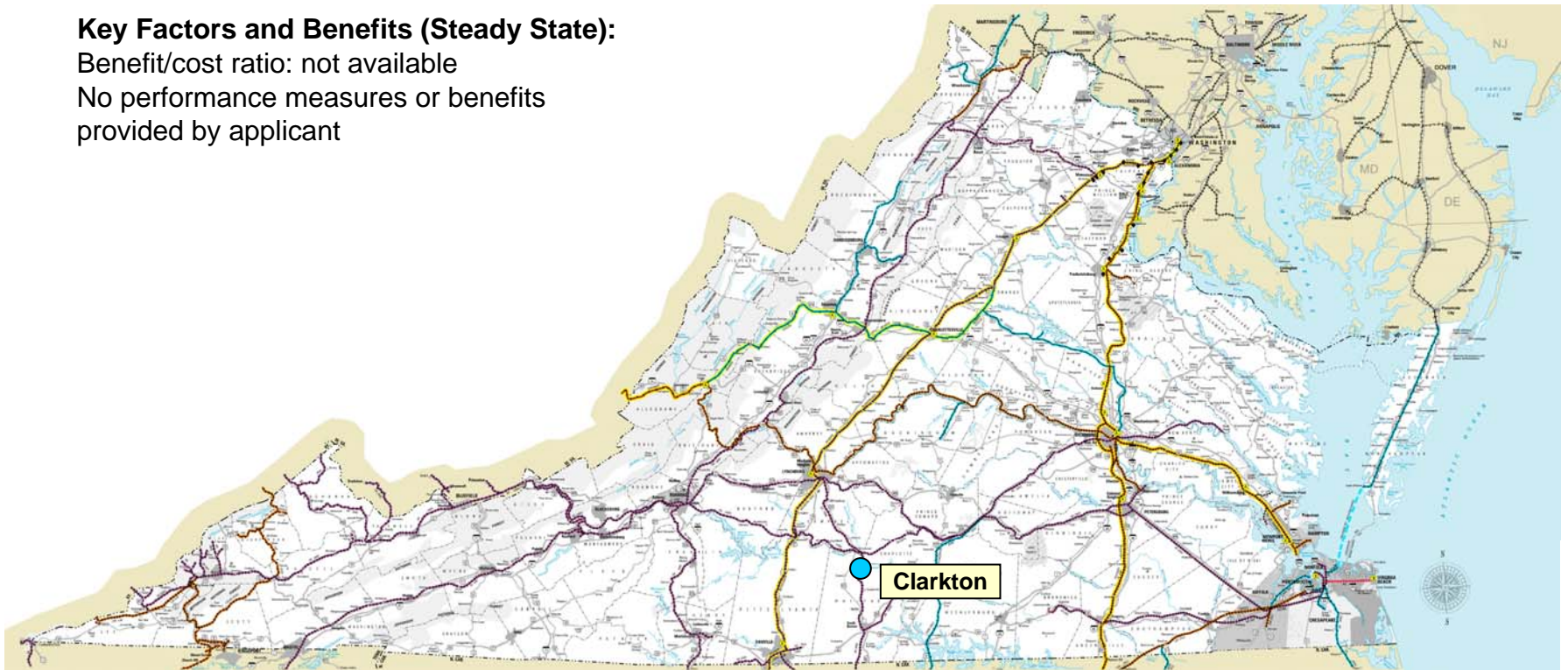
State REF share: \$3,710,000 (70%)

REF expenditures by FY: not recommended at this time

Key Factors and Benefits (Steady State):

Benefit/cost ratio: not available

No performance measures or benefits provided by applicant



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Application No. 10

I-81/Route 29 Passenger Rail- NS Alexandria to Manassas

Description: Passenger rail is the primary user on the two NS mainline tracks between Alexandria and Manassas. This project will provide capital improvements needed to support Class 4 rail track standards for continued passenger train use of the system. The project benefits both existing and future commuter/intercity rail.

Project type: Construction

Project cost: \$7,324,719

State REF share: \$5,127,302 (70%)

REF expenditures by FY: FY10-FY14

Key Factors and Benefits* (Steady State):

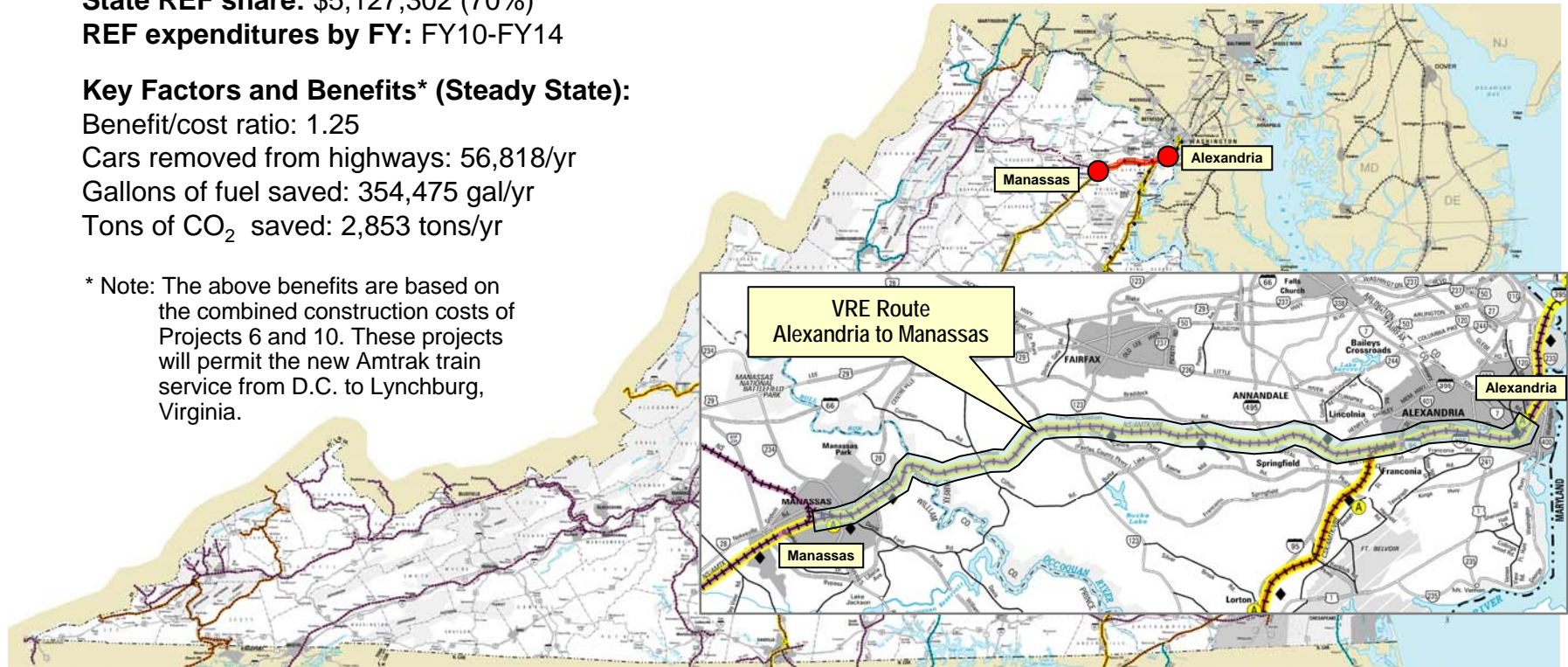
Benefit/cost ratio: 1.25

Cars removed from highways: 56,818/yr

Gallons of fuel saved: 354,475 gal/yr

Tons of CO₂ saved: 2,853 tons/yr

* Note: The above benefits are based on the combined construction costs of Projects 6 and 10. These projects will permit the new Amtrak train service from D.C. to Lynchburg, Virginia.



Application No. 11

Route 460 / Heartland Corridor- NS Montgomery Tunnel

Description: This project will increase the Montgomery tunnel clearance for a second mainline track that passes through the tunnel (the vertical clearance on one of the mainline tracks is sufficient for double-stack container traffic).

Project type: Design and construction

Project cost: \$10,000,000

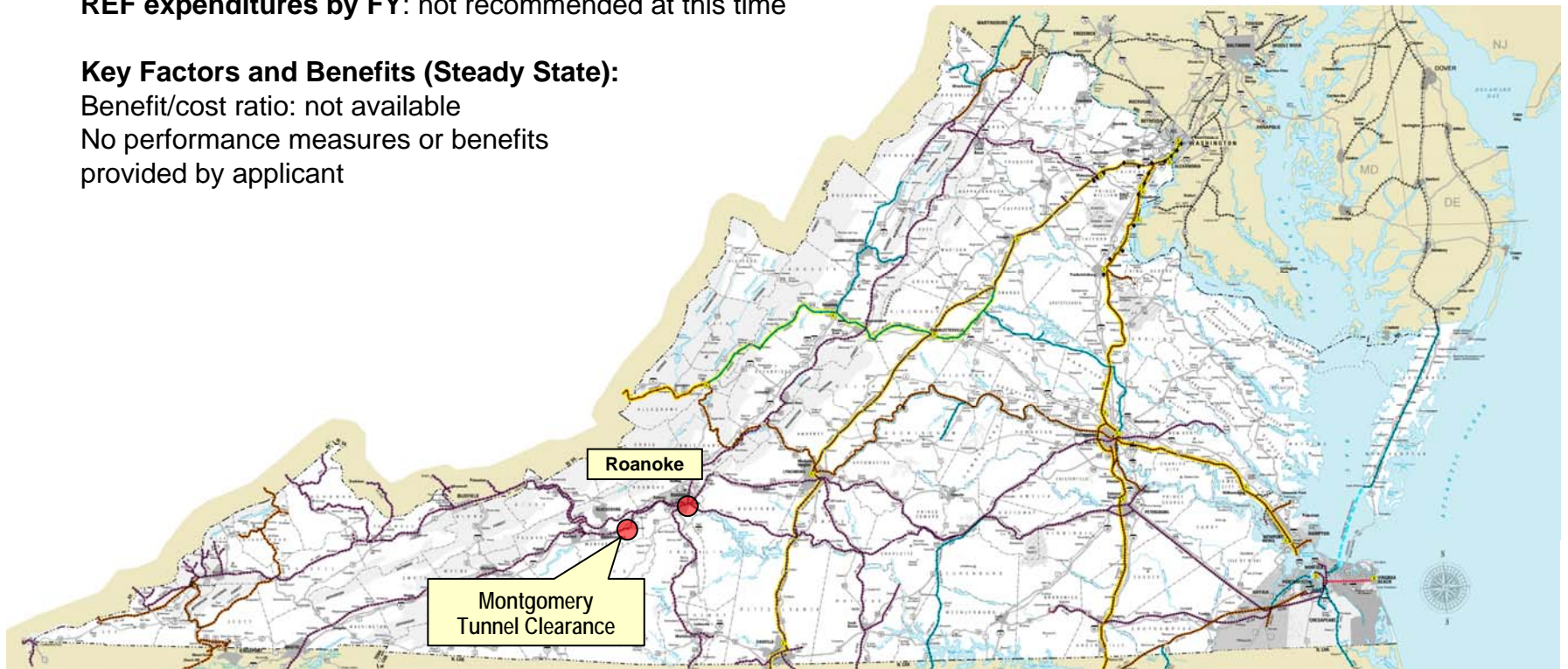
State REF share: \$7,000,000 (70%)

REF expenditures by FY: not recommended at this time

Key Factors and Benefits (Steady State):

Benefit/cost ratio: not available

No performance measures or benefits provided by applicant



Application No. 12

Route 460 / Heartland Corridor- NS Altavista Line

Description: This project includes the modification of 5 tunnels, 5 bridges, and 3 rock slide fences for double-stack clearances. Current Heartland Corridor trains use the northern route between Burkeville and Roanoke. Clearing tunnels and obstructions on the southern Altavista Line would provide two parallel routes and enable routing optimization.

Project type: Design and construction

Project cost: \$24,000,000

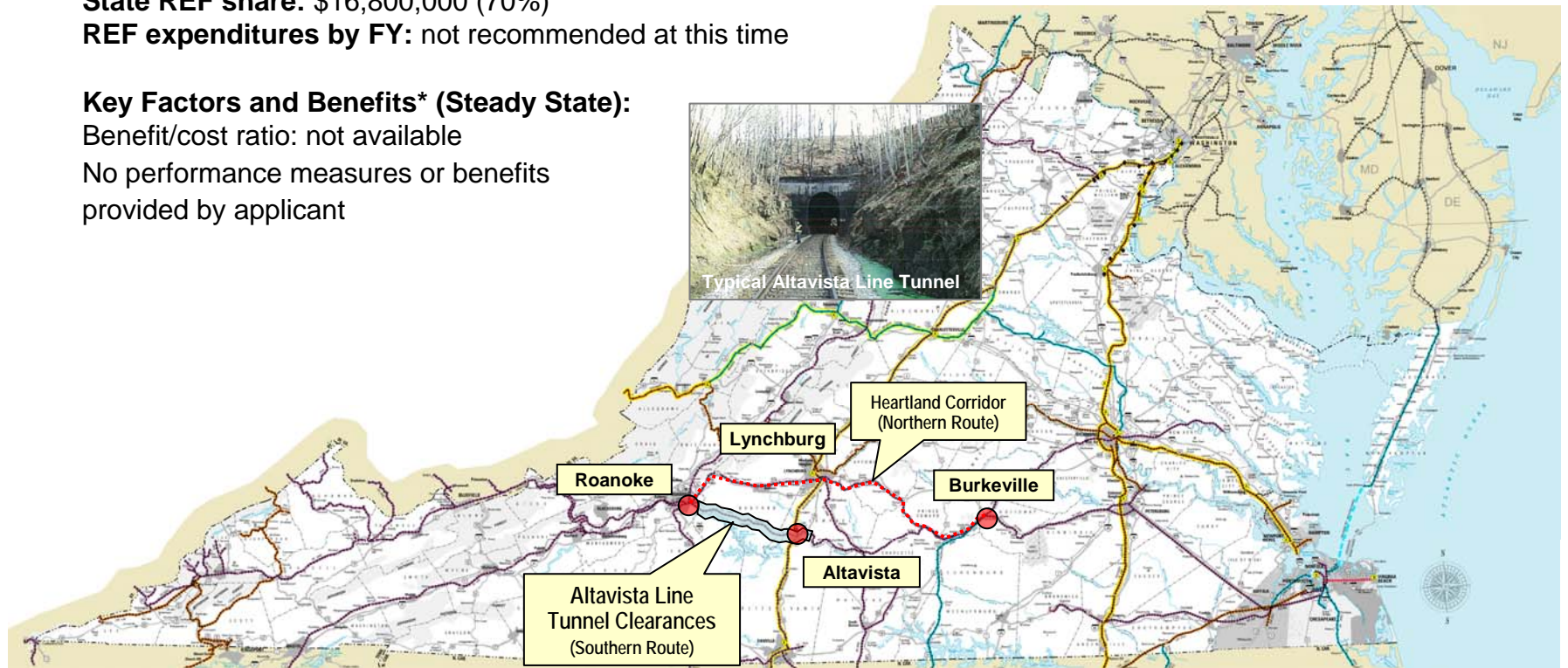
State REF share: \$16,800,000 (70%)

REF expenditures by FY: not recommended at this time

Key Factors and Benefits* (Steady State):

Benefit/cost ratio: not available

No performance measures or benefits provided by applicant



Application No. 13

Port of Hampton Roads- Virginia Port Authority / Virginia International Terminals NIT Central Rail Yard Expansion

Description: This project will expand the terminal's on-dock rail yard to a total capacity of 37,000 track feet through construction of an additional 24,000 feet of track, ties and ballast, several switches, heavy-duty pavement in the rail yard area, container handling areas, and associated civil/site/utility and electrical infrastructure.

Project type: Construction

Project cost: \$43,621,000

State REF share: \$17,475,000 (40%)

REF expenditures by FY: FY10 only

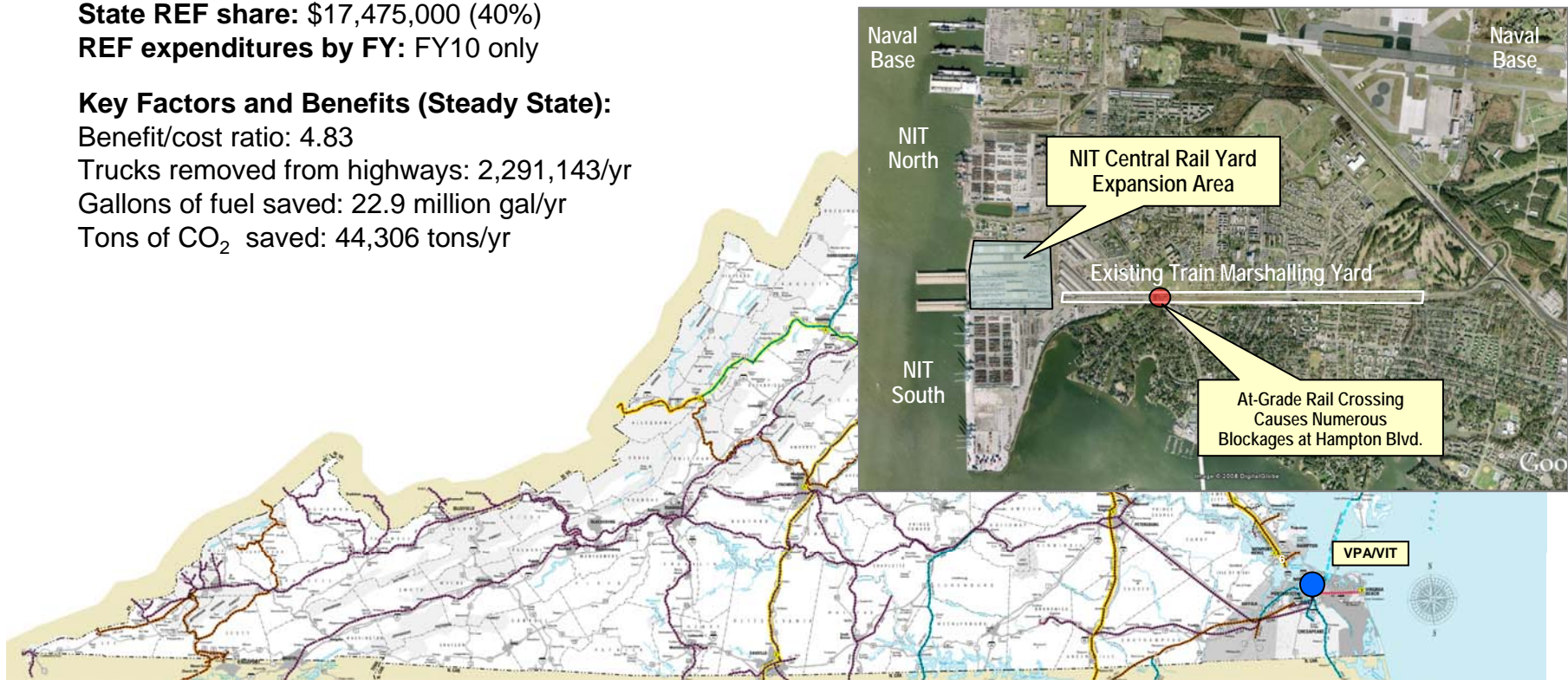
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 4.83

Trucks removed from highways: 2,291,143/yr

Gallons of fuel saved: 22.9 million gal/yr

Tons of CO₂ saved: 44,306 tons/yr



Application No. 14

Port of Hampton Roads- Virginia Port Authority / Virginia International Terminals Craney Island Connector

Description: Phase 1 includes construction of a second track in the median of Route 164 from the Route 17 highway bridge to the APM Terminal track interface in FY10, and Phase 2 includes planning, design and construction of a new track connection between the APM Terminal to the proposed Craney Island Marine Terminal on-dock intermodal yard facility between FY12 and FY15.

Project type: Design and construction

Project cost: \$26,200,000

Commonwealth's REF share: \$18,340,000 (70%)

REF expenditures by FY: FY10 and FY12-FY14

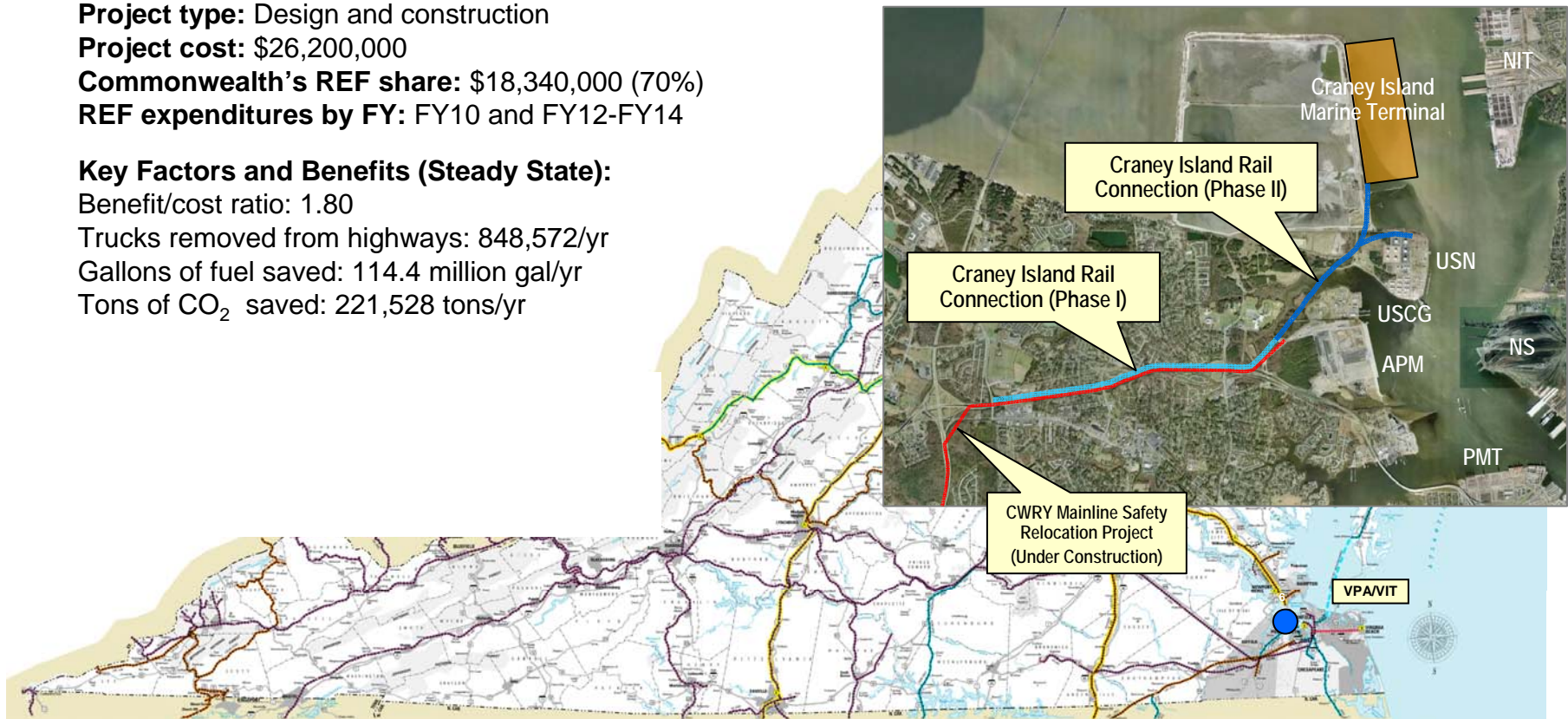
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 1.80

Trucks removed from highways: 848,572/yr

Gallons of fuel saved: 114.4 million gal/yr

Tons of CO₂ saved: 221,528 tons/yr



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Application No. 15

● Port of Richmond Railroad Rehabilitation Project

Description: This project will bring the entire rail track at the Port of Richmond Terminal to Class 2 standards by replacing 2,221 crossties, 211 switch ties, 260 tons of ballast and all defective timber, machine tamping and dressing all tracks, disposing of all scrap ties off site and removing dirt.

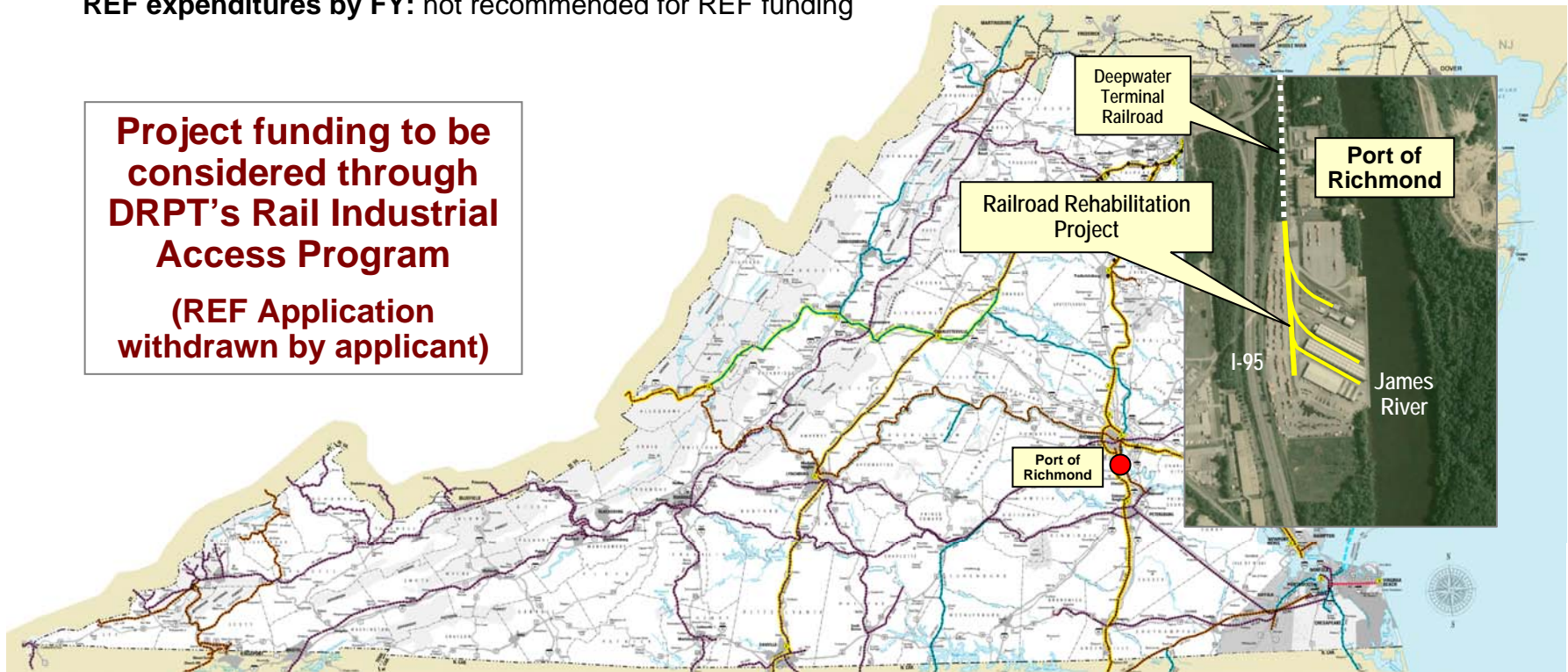
Project type: Design and construction

Project cost: \$403,435

State REF share: \$282,405 (70%)

REF expenditures by FY: not recommended for REF funding

**Project funding to be considered through DRPT's Rail Industrial Access Program
(REF Application withdrawn by applicant)**



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Port of Richmond Deepwater Terminal Railroad Freight Improvements – Phase I

Description: This project will extend the rail line at Goode St. in South Richmond to Rocketts Spur at Brander Street. The improvements will provide a direct connection for the Port and other freight customers to a second Class I RR (NS), including double-stack rail service and a 1,400 foot track extension in the terminal. Phase I funding in FY10 is for the project study, engineering and design, and FY12-FY14 funding is for construction.

Project type: Design and construction

REF project cost: \$4,652,536

Commonwealth's REF share: \$3,256,775 (70%)

REF expenditures by FY: FY10 design, FY12-FY14 construction

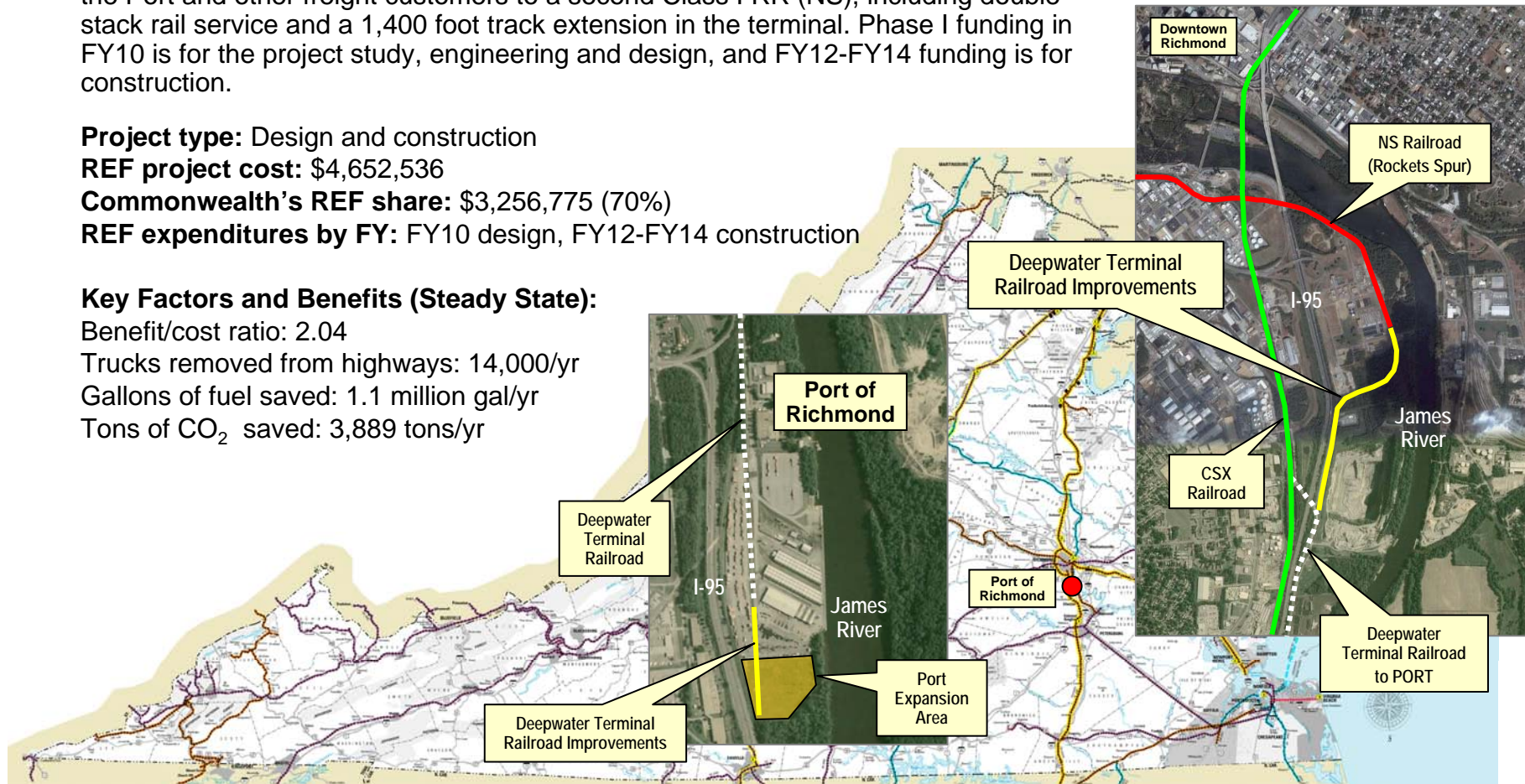
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 2.04

Trucks removed from highways: 14,000/yr

Gallons of fuel saved: 1.1 million gal/yr

Tons of CO₂ saved: 3,889 tons/yr



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Application No. 17

Southeast High Speed Rail- NCDOT Southeast High Speed Rail Tier II EIS Phase 2

Description: This project is for the completion of the Tier II Environmental Impact Statement for the proposed 168-mile Southeast High Speed Rail Corridor between Richmond and Raleigh, NC (98 miles of the project is located in Virginia).

Project type: Environmental and preliminary engineering

Project cost: \$3,975,000

Commonwealth's REF share: \$1,563,500 (39.3%)

REF expenditures by FY: FY10 only

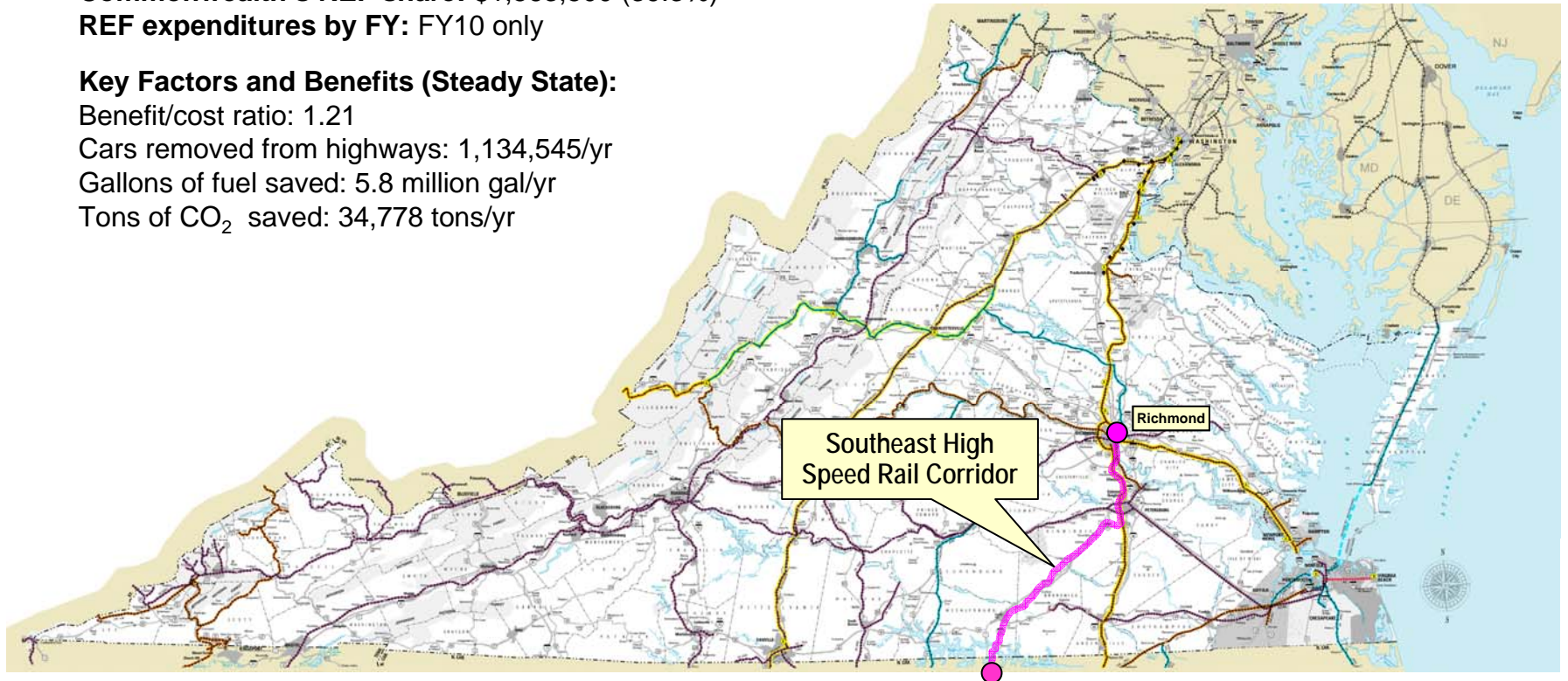
Key Factors and Benefits (Steady State):

Benefit/cost ratio: 1.21

Cars removed from highways: 1,134,545/yr

Gallons of fuel saved: 5.8 million gal/yr

Tons of CO₂ saved: 34,778 tons/yr



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DRPT Proposal No. 1

I-81/Route 29 Passenger Rail Service Bristol/Roanoke/Lynchburg/Richmond Capacity Modeling and Analysis

Description: This project will provide capacity and infrastructure analysis of the I-81/Route 29 intercity passenger rail service route section from Bristol to Roanoke, Lynchburg and Richmond. This analysis will help to define the improvements needed to implement new intercity passenger rail service in this section.

Project type: Environmental and preliminary engineering

Proposed project partner: Norfolk Southern

Project cost: \$1,000,000

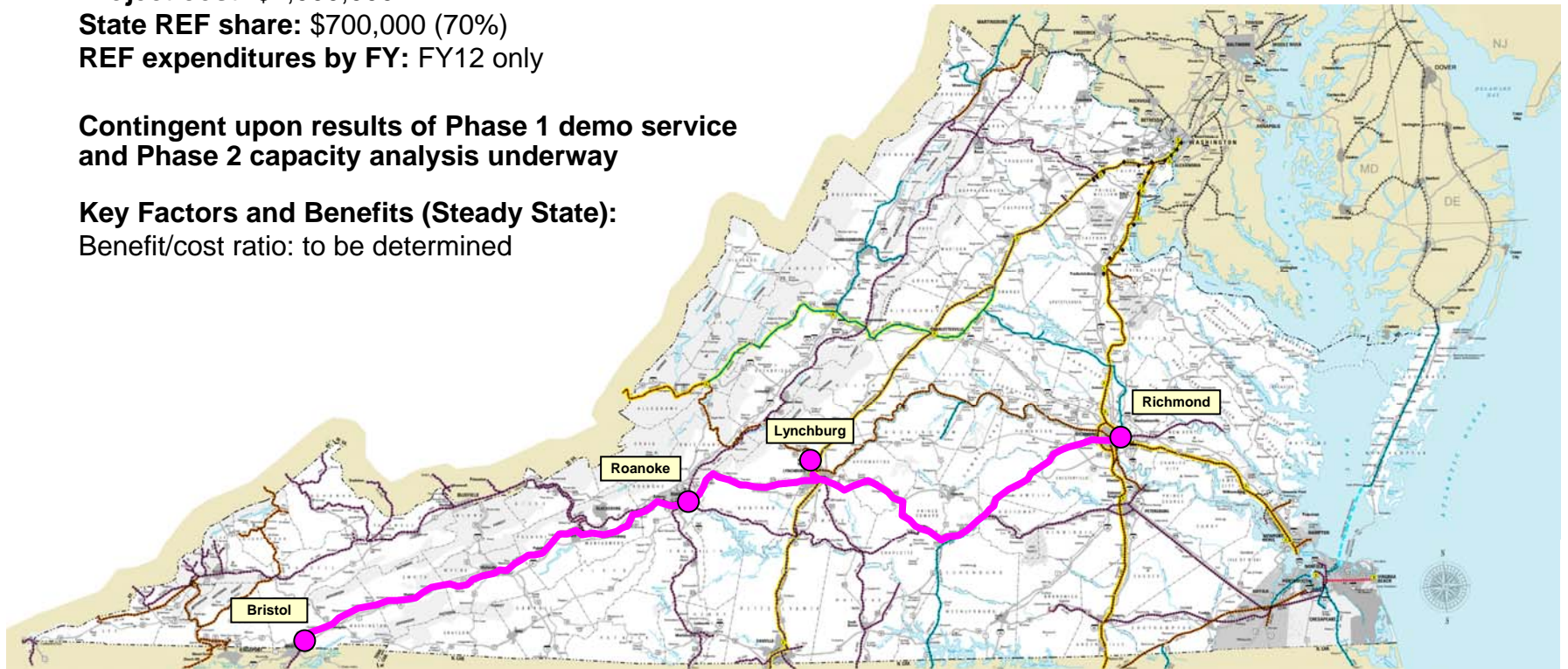
State REF share: \$700,000 (70%)

REF expenditures by FY: FY12 only

Contingent upon results of Phase 1 demo service and Phase 2 capacity analysis underway

Key Factors and Benefits (Steady State):

Benefit/cost ratio: to be determined



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DRPT Proposal No. 2

I-95/I-64 Passenger Rail Service

Phase 2- Crossroads/Hamilton Third Track and Richmond Improvements

Description: This project includes the construction of projects that were previously funded for engineering and design work in the I-95/I-64 corridor. This project will improve the capacity and reliability of passenger and freight trains in the corridor.

Project type: Construction

Proposed project partner: CSX

Project cost: \$138,571,429

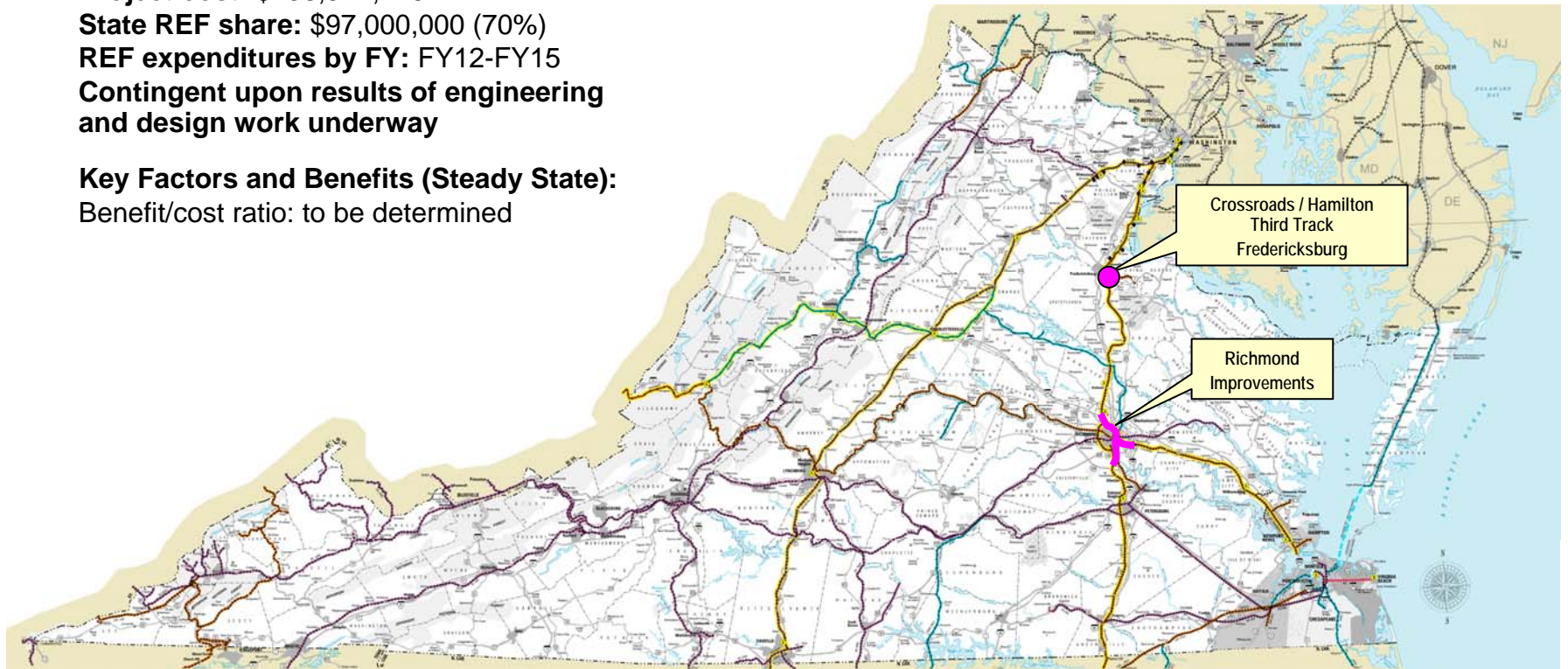
State REF share: \$97,000,000 (70%)

REF expenditures by FY: FY12-FY15

Contingent upon results of engineering and design work underway

Key Factors and Benefits (Steady State):

Benefit/cost ratio: to be determined



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Recommended REF Projects FY10-FY15

#	PROJECT NAME	Applicant	Previous Allocations	State Funding Requested in FY2010 REF Applications						Total State REF Funding Requests
				2010	2011	2012	2013	2014	2015	
1	National Gateway (I-95 Corridor): Kilby Rail Yard Improvements	CSX		\$565,600						\$565,600
2	National Gateway (I-95 Corridor): Double Stack Clearances	CSX		308,000	\$1,721,300					2,029,300
3	National Gateway (I-95 Corridor): Virginia Ave. Tunnel	CSX		2,323,100	5,361,000	\$5,361,000	\$5,361,000	\$5,595,000		24,001,100
4	Cherry Hill Third Track and Station, Phase 3	VRE	\$4,905,000	665,000	11,655,000					12,320,000
5	I-81 Corridor Initiatives Northern Virginia	NS	42,875,000	3,558,450	10,082,275	10,082,275				23,723,000
6	I-81 Corridor Initiatives Nokesville to Calverton Dbl Tracks	NS		11,074,000	11,074,000					22,148,000
10	Passenger Corridor Initiatives: Alexandria to Manassas (VRE)	NS	649,797	591,837	108,627	2,172,787	1,670,327	583,724		5,127,302
13	NIT Central Rail Yard Expansion	VPA	700,000	17,745,000						17,745,000
14	Craney Island Connector	VPA		8,540,000		1,400,000	4,200,000	4,200,000		18,340,000
16	Deepwater Terminal Railroad Freight Imp. Project, Phase 1	PORT		315,000		1,205,050	1,205,050	531,675		3,256,775
17	Southeast High Speed Rail (SEHSR) Tier II EIS, Phase 2	NCDOT	2,281,750	1,563,500						1,563,500
DR PT 1	Bristol/Lynchburg/Richmond Capacity - Modeling & Analysis	NS (Proposed)				700,000				700,000
DR PT 2	Phase 2 – Crossroads/Hamilton 3 rd Track, Richmond Improvements	CSX (Proposed)	9,751,000			14,000,000	20,000,000	26,000,000	\$37,000,000	97,000,000
	PROJECT TOTALS		\$61,162,547	\$47,249,487	\$40,002,202	\$34,921,112	\$32,436,377	\$36,910,399	\$37,000,000	\$228,519,577

REF FY10-FY15 Proposed Program Summary

	FY10	FY11	FY12	FY13	FY14	FY15
REF programmed	\$47,249,487	\$40,002,202	\$34,921,112	\$32,436,377	\$36,910,399	\$37,000,000
Matching funds	49,943,495	39,485,230	37,307,619	36,242,733	39,134,885	15,857,143
Total cost	97,192,981	79,487,432	72,228,731	68,679,110	76,045,284	52,857,143
REF available (incl. interest and bonds)	57,096,877	40,003,919	35,256,845	32,690,718	37,178,850	37,768,451
Unobligated balance	\$9,847,390	\$1,717	\$335,733	\$254,341	\$268,451	\$768,451

Next Steps

- ❑ RAB will make recommendations to Director on draft REF program of projects at its April 2009 meeting
- ❑ CTB will hold pre-allocation public hearings statewide in Spring 2009
- ❑ CTB adoption of Six-Year Improvement Plan: June 2009
- ❑ Funding availability: July 1, 2009



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