



**I-95 Southbound Collector-Distributor (CD)
Lanes - Rappahannock River Crossing
From Exit 130 (Route 3)
To Exit 133 (Route 17)**

Initial Financial Plan
January 31, 2017

State Project Number(s): 0095-111-259, P101, R201, C501,
B604-B606, D601-D603
UPC(s): 101595

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1. PROJECT DESCRIPTION

The I-95 Southbound Collector- Distributor (CD) Lanes - Rappahannock River Crossing project is located along I-95 southbound lanes between mile marker 134 in Stafford County and mile marker 130 in the City of Fredericksburg. Figure 1 shows the general geographic area of the project.

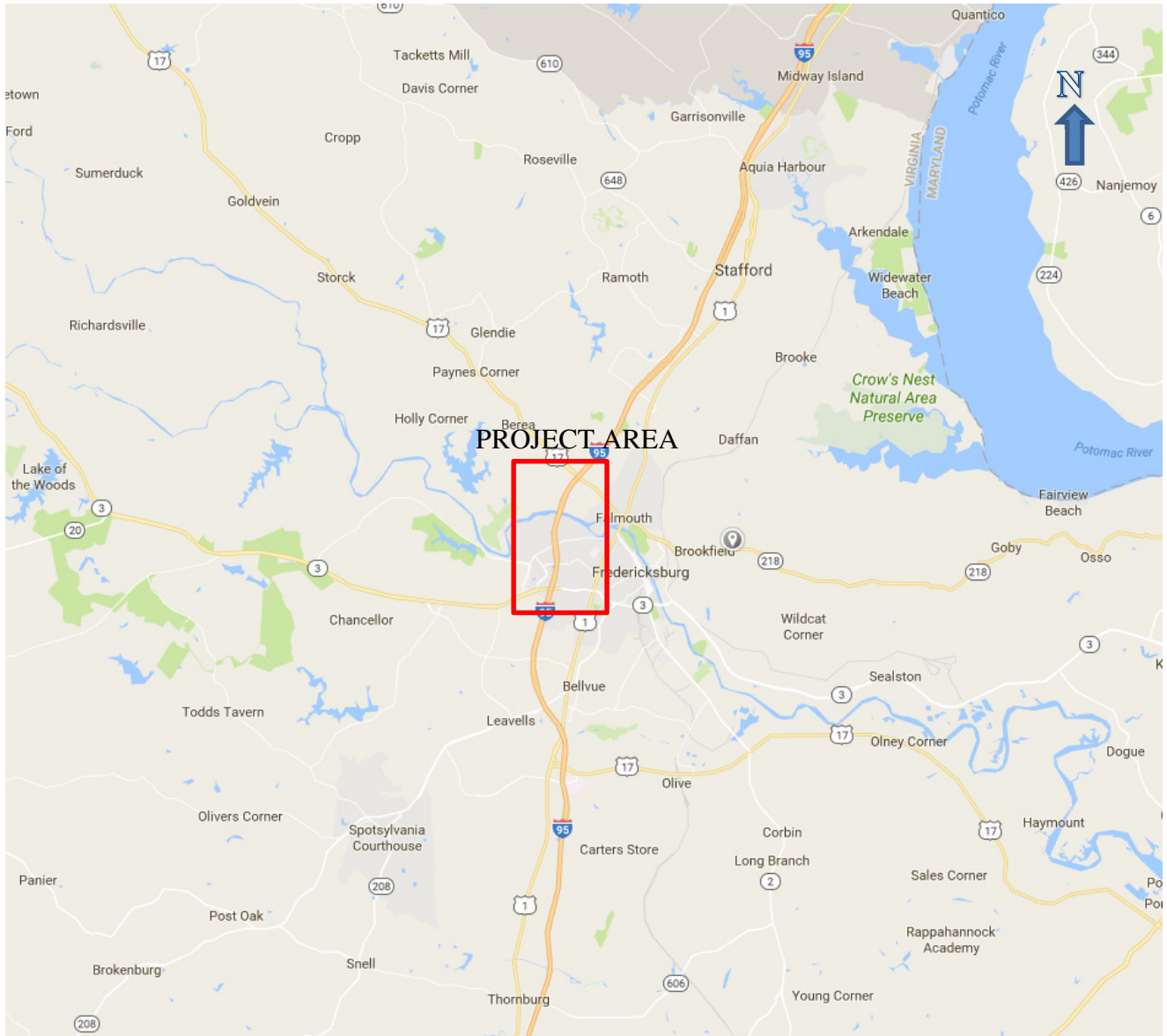


Figure 1: Geographic Area

The project will add two additional lanes parallel to Interstate 95 southbound which will operate as collector-distributor lanes between Exit 133 (Route 17) in Stafford County and Exit 130 (Route 3) in the City of Fredericksburg. A new I-95 southbound bridge will be built over the Rappahannock River to carry the new CD lanes. The project seeks to reduce congestion on I-95

by providing local traffic with an additional route to travel between Route 17 and Route 3 without merging into the interstate's general purpose lanes. The project also improves existing I-95 interchanges at Route 17 and Route 3 and ramps to the Safety Rest Area and Virginia Welcome Center. Figure 2 shows the limits of the project.

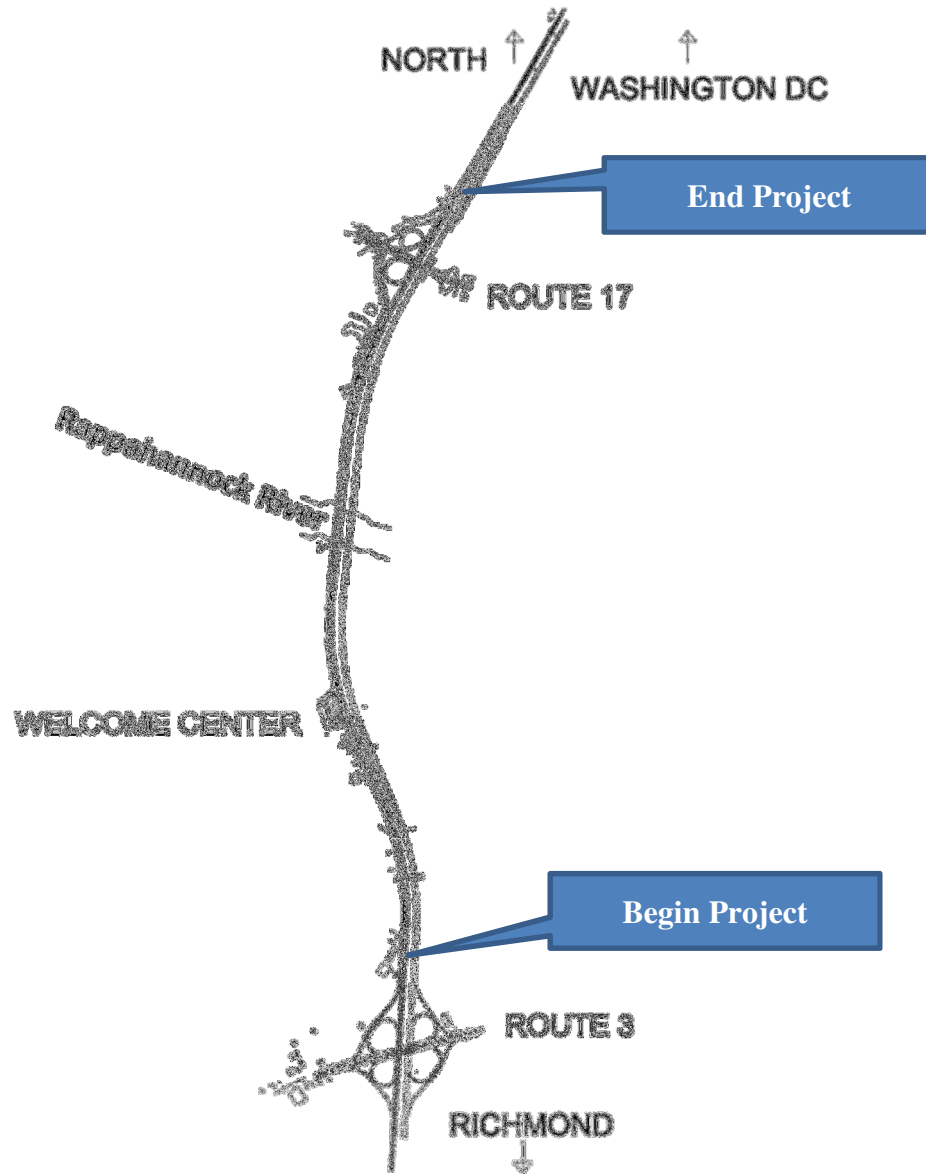


Figure 2: Project Limits

Environmental Summary

The environmental study for the project includes both the southbound and northbound CD lanes. The study began in 2015 and was completed in November 2015 after the FHWA's approval of the Interchange Modification Report (IMR) and screening of alternatives. A study window was

created large enough to encompass all alternatives. The Federal Highway Administration (FHWA) concurred with an Environmental Assessment (EA) level National Environmental Policy Act (NEPA) document on June 8, 2015. The full range of technical studies and coordination with local, state, and Federal entities and agencies was performed except that Air analysis was completed based upon data from other regional projects. According to the Environmental Justice (EJ) the project would not cause disproportionately high and adverse effects on minority or low-income populations in accordance with the provisions of E.O. 12898 and Federal Highway Administration (FHWA) Order 6640.23.

Based on the conceptual design approximately thirty (30) parcels are anticipated to have a Right of Way impact. Land and properties necessary for right of way would be acquired in accordance with the federal *Uniform Relocation Assistance and Real Property Acquisition Policies Act* of 1970. The main stream systems that are within the project are the Rappahannock River, Hazel Run, Falls Run, and Fall Quarry Run. According to the Virginia Department of Environmental Quality (VDEQ) there are a number of stream systems that are listed as impaired. They are as follows: a section of the Rappahannock River located approximately 1.5 miles from the study area, Falls Run within the study area, Claiborne Run 1.3 miles from the study area, and Hazel Run 0.7 miles from the study area. The project would require water quality permits, a storm water management plan, and an erosion and sediment control plan. Adherence to the permit conditions and plans would minimize impacts to water quality. The Build Alternative crosses approximately 12.4 acres of the Rappahannock River 100-year floodplain and 0.99 acres of the Falls Run 100-year floodplain. A detailed hydraulic survey and study would evaluate specific effects on storm water discharges which would ensure that no substantial increases to the floodplain.

A review of agency databases identified the Dwarf Wedgemussel, Harperella, Small Whorled Pogonia, Northern long-eared Bat, Green Floater, and one bald eagle nest within two miles of the Build Alternative footprint. Habitat for the Dwarf Wedgemussel was located within the Build Alternative footprint in the Rappahannock River, however no live mussels were found during the survey. If the Dwarf Wedgemussel or Northern Long-eared bat exist in the area, then planning instream work and clearing of forested areas around the determined Time of Year Restrictions for the Dwarf Wedgemussel and the Northern Long-eared bat would help ensure avoidance of an impact to these species.

In adhering with Section 106 of the National Historic Preservation Act, a *Phase I/II Archaeological Survey* and *Architectural Management Summary* were conducted for the project, assessing the archaeological and architectural sites within the corridor. Those two sites were the Subsurface remains of Canal Lock #1/Minor's Lock and above-ground and subsurface remains of Rappahannock Canal which make up the Rappahannock Navigation System. The air quality analysis indicated that the project would result in no violations of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide and fine particulate matter for the Build Alternative.

Two noise barriers, both protecting two CNEs, were determined to be feasible and reasonable. An Environmental Data Resources (EDR) Radius Map Report was obtained and several

databases were searched to determine the hazardous materials and only three sites were found in the project study area. Those sites are Star Enterprise, a Texaco storage tank location, and a Wawa store/gas station. We are currently coordinating a Not Likely to Adversely Effect determination with the United States Fish and Wildlife Service (USFWS).

Project Website

Additional information for UPC 101595 – Route I-95 Southbound CD Lanes can be found on the following Project website, which may be accessed on VDOT’s external website.

http://www.virginiadot.org/projects/fredericksburg/i-95_southbound_collector-distributor_lanes_8722_rappahannock_river_crossing.asp

2. SCHEDULE/HISTORY

Project History

2000 – 2002

- Studies identify potential improvements to relieve congestion in the I-95 corridor in the greater Fredericksburg area. *Reference: Draft I-95 Interchange Justification Report (VDOT, March 2000); Outer Connector Northwest Quadrant Environmental Impact Statement (VDOT, 2001; I-95 Collector/Distributor Access Feasibility Study (VDOT, 2002) and the I-95 HOV Feasibility Study (VDOT, 2002).*

January 2009

- The Fredericksburg Area Metropolitan Planning Organization (FAMPO) adopts the 2035 Constrained Long Range Plan (CLRP), which includes funding for study, design, right-of-way, and partial construction of new I-95 access near the Fredericksburg Safety Rest Area/Welcome Center in the City of Fredericksburg, along with construction of a new tolled parkway to serve commuters and commercial center customers.

April 2009

- The Virginia General Assembly creates the George Washington Toll Road Authority (GWTRA) for the purpose of supplementing public finances to fund construction of new I-95 access and a tolled parkway.

October 2010

- The GWTRA and VDOT complete the I-95 Access Study and Interchange Justification Report, which identified a preferred alternative that includes: the construction of a new four to six-lane limited access connector road that would extend approximately four miles
- a new interchange (three access points) and improvements on I-95 between and within the VA 3 and US 17 Interchanges to counterbalance the negative effects of the new access points.

April 2011

- Federal Highway Administration (FHWA) concurred that a proposed new access point on I-95 between VA 3 and the Rappahannock River as identified in the October 2010 I-95 Access Study is acceptable as conditioned in the April 28, 2011, FHWA approval letter.

May 2011

- This Rappahannock River Crossing (RRC) Project was requested by the City of Fredericksburg and is included in the FAMPO Fiscal Year 2012-2015 Transportation Improvement Program.

January 2012

- The Spotsylvania County Board of Supervisors passed a resolution indicating withdrawal of support for the proposed four- to six-lane limited access connector road because of the environmental, historical, conservation-related, cultural and quality-of-life concerns.
- The resolution further stated that the board will continue to support VDOT in seeking alternative solutions to alleviating traffic congestion on I-95 and the VA 3 corridor, including the funding of other elements within the project to include I-95 bridge additions over the Rappahannock River and improvements to the VA 3 interchange.

April 2013

- The RRC project is included in the FAMPO 2040 Long Range Transportation Plan, adopted April 15, 2013.

June 2013

- The RRC project is programmed in the Fiscal Year 2014-2019 VDOT Six-Year Improvement Program (SYIP).
- The I-95 Interchange Modification Report (IMR), Improvements to I-95 between Exit 133 and Exit 130, is initiated by VDOT.

November 2013

- FAMPO Resolution 13-33, signed November 18, 2013, transferred additional funds to the RRC project to complete the IMR and environmental studies. Preliminary Engineering and Right of Way are also funded for the project.

June 2014

- The RRC project funding is modified in the Fiscal Year 2015-2020 VDOT SYIP. The project and project funding is divided into two projects, one for southbound and a separate for northbound.

November 2014

- The Revised Final Fiscal Year 2015-2020 VDOT SYIP is published which reduces the funding programmed for the two (southbound and northbound) RRC projects.

March 2015

- The I-95 IMR, Improvements to I-95 between Exit 133 and Exit 130, is completed by VDOT and pending approval.

April 2015

- The draft Fiscal Year 2016-2021 VDOT SYIP is published, which shows preliminary engineering funded for the southbound direction.

July 2016

- The Interchange Modification Report is approved by the FHWA on July 6, 2016

November 2016

- The FHWA issues it's Finding of No Significant Impact (FONSI) on November 17, 2016, finalizing the approval of the NEPA Environmental Assessment.

A Location Public Hearing for the project was held on June 24, 2015. VDOT is advancing the project as a two-phase best value design-build. The Request for Qualifications (RFQ) was released on November 01, 2016. The Request for Proposals (RFP) is scheduled to be released in March 2017.

Project Schedule

Milestone dates for the design-build contract are as follows:

- Advertise RFQ: November 01, 2016
- Anticipated RFP Release: March 16, 2017
- Anticipated Award: November 14, 2017
- Final Completion: April 28, 2022

Figure 3 shows the project schedule overview.

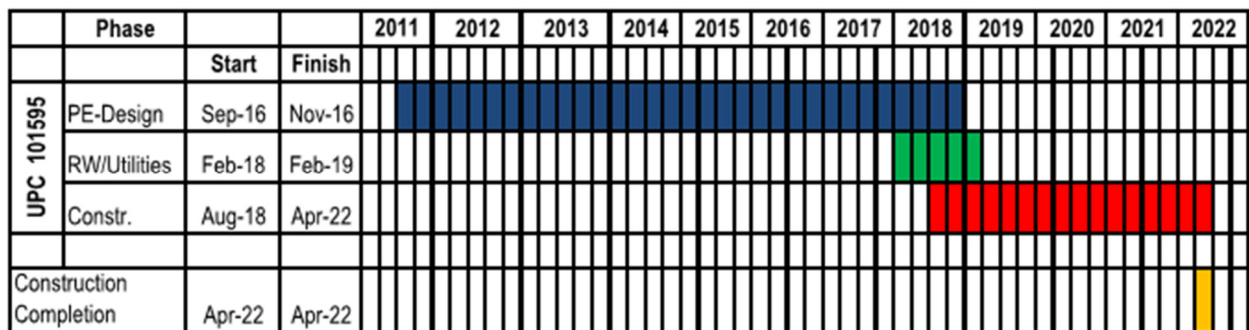


Figure 3: Project Schedule Overview

3. PROJECT COST

The current total project cost estimate is \$125,000,000. This project cost covers preliminary design activities, right of way acquisition, utility relocation, environmental and design permits/approvals, survey and geotechnical investigations, and construction.

Table 1 includes the current estimate of the project and the remaining cost-to-complete in year-of-expenditure dollars. The table below depicts the estimated project expenditures as of October 31, 2016.

Table 1: Project Cost Estimate

		A	B	A-B
UPC	Phase	Estimate / Funding per phase	Current Expenditures as of (10/31/2016)	Balance to Complete
101595	PE	\$9,678,000	\$2,541,842	\$7,136,158
	Right of Way	\$6,500,000	\$0	\$6,500,000
	Construction	\$108,822,000	\$0	\$108,822,000
	Total	\$125,000,000	\$2,541,842	\$122,458,158

Cost Estimate Methodology

Preliminary Engineering

As of October 31, 2016, \$2,541,842 has been expended for preliminary engineering efforts for the project. VDOT has executed agreements with various professional services firms to provide engineering and technical support in the development of the design of the project. Professional services provided included traffic data collection and analysis, survey, geotechnical investigations, environmental services, and traffic engineering services. The data collected and documents developed during this time are being used in the procurement of the design-build contract. The preliminary engineering estimate for the project was developed based on hours to complete specific tasks and rates for appropriate design professionals. The tasks and rates were compared to similar projects. These costs include an update of required documents, overall project management, design reviews, contract administration and construction oversight.

Right of Way

Right of way approvals and acquisitions are yet to be done and will be dependent on the Design Builder's schedule. In accordance with the design-build Request for Proposals, Part 2, Section 1.6, VDOT remains responsible for the actual cost of the purchase of right of way, all easements and miscellaneous fees associated with real estate closings as part of the Project and oversight of the right of way acquisition, payment, and condemnation process. The right of way estimate was developed based on the RFQ plan set and actual costs to date. Tax assessment and appraisal information was used to estimate real estate values. Cost increments for condemnations, relocations, and administrative costs were based on regional information.

Construction

An estimated cost for the design-build contract was developed using the RFQ plans developed for the project. Unit costs for similar projects were utilized. Lump sum costs were used for major items of work. The fixed amount of the design-build contract will be lump sum, with payments based upon the Project physical percent of completion. Utility relocation and final design costs are included under construction and will be part of the design build contract lump sum amount.

The estimates for project cost are reflected in VDOT's Integrated Project Management (iPM) system for the project costs. This includes all associated costs for preliminary engineering (PE), right of way (RW) and construction (CN).

4. PROJECT FUNDS

The project is fully funded by multiple funding sources. Table 2 outlines the specific funding sources.

Table 2: Summary of Project Funding by Source

Source	Total
Federal Funds	
MAP21 NHPP: NHPP Statewide 80/20 (CF1100)	\$2,261,007
MAP21 NHPP: NHPP Statewide 80/20 Soft Match (CF1101)	\$565,252
MAP21 NHPP: NHPP Bridge (CF1200)	\$617,476
MAP21 NHPP: NHPP Bridge Soft Match (CF1201)	\$154,369
MAP21 NHPP: NHPP Exempt 80/20 (CF1400)	\$1,987,762
MAP21 NHPP: NHPP Exempt 80/20 Soft Match (CF1401)	\$496,941
MAP21 STP: STP Bridge (CF2200)	\$346,433
MAP21 STP: STP Bridge Soft Match (CF2201)	\$86,608
.RSTP (STP Regional): RSTP - Interstate : Fredericksburg MPO (CNF273)	\$647
.Interstate: Interstate Maintenance (IM) - Interstate (CNF329)	\$448,656
.Interstate: Federal NHS - Interstate (CNF331)	\$1,392,352
Soft Match: Interstate NHS Soft Match (CNF831)	\$160,000
HB1887 - HPP: HPP: Nat. Freight Pgm - Federal (HF1150)	\$3,252,336
HB1887 - HPP: HPP: Nat. Freight Pgm - Soft Match (HF1151)	\$813,084
RSTP (STP Regional): Interstate Federal RSTP (CNF273)	\$487,918
RSTP (STP Regional): Fredericksburg (CNF303)	\$107,600

Source	Total
State Funds	
.Interstate: NHS State Match (CNB044)	\$188,088
.RSTP (STP Regional): RSTP Match - Access : Fredericksburg MPO (CNS273)	\$5,000
.RSTP (STP Regional): RSTP Match - Interstate : Fredericksburg MPO (CNS273)	\$7,062
HB1887 - HPP: HPP - State (HS0100)	\$111,434,580
State Match Non-Formula: Interstate State Match Off The Top (CNS273)	\$136,978
.Interstate: IM State Match (CNS333)	\$49,851
TOTAL	\$125,000,000

Federal Fund Sources and Special Funding Techniques

Project funding is demonstrated in the Fredericksburg Area Metropolitan Planning Organization's (FAMPO) Long Range Transportation Plan and Transportation Improvement Program (TIP), as well as the Commonwealth's Statewide Transportation Program (STIP). FAMPO adopted the TIP on June 16, 2014 which included the I-95 Southbound CD Lanes, UPC 101595.

There is one federal authorization associated with this project as summarized in Table 3 below.

Preliminary engineering was authorized by FHWA on August 19, 2011 under federal project number 5111235. The project authorization includes NHPP/NHS and RSTP federal fund sources and also includes the use of the Advance Construction (AC) provision. The federal agreement is under review for submittal of a modification based on the current cost estimate for preliminary engineering, which will result in the release of federal funds and AC.

Table 3: Project Authorization Summary as of October 31, 2016
(Information shown is for illustrative purposes only)

Federal Project	UPC(s)	Phase Classification	Cost	Federal Funds	Advance Construction
5111235 ¹	101595	PE	\$14,500,000	\$12,475,960	\$1,875,000

¹ Federal agreement under review for submittal of a modification based on the current cost estimate.

5. FINANCING ISSUES

There are no financing issues envisioned at this time.

6. CASH FLOW

I-95 Southbound CD Lanes project annual cash flow analysis is reflected in Table 4. It shows the comparison of previously expended and projected expenditures by fiscal year by phase against the total annual allocations. The initial estimated computations relay deficits in fiscal

years 2018, 2019 and 2020. The deficit in the cash flow will be addressed in the upcoming SYIP where funding may be able to be adjusted in the outer years.

Table 4: Cash Flow Analysis (Amounts in 000's)

Expenditures	Thru FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
PE	\$2,542	\$1,500	\$750	\$1,000	\$1,700	\$1,700	\$486	\$9,678
Right of Way	\$0	\$0	\$1,000	\$4,500	\$1,000			\$6,500
Construction	\$0	\$0	\$15,000	\$27,000	\$30,000	\$30,000	\$6,822	\$108,822
Total Annual Expenditures	\$2,542	\$1,500	\$16,750	\$32,500	\$32,700	\$31,700	\$7,308	\$125,000
Cumulative Expenditures	\$2,542	\$4,042	\$20,792	\$53,292	\$85,992	\$117,692	\$125,000	
Total Annual Allocations*	\$9,500	\$4,065	\$692	\$13,243	\$45,884	\$51,616	\$0	\$125,000
Cumulative Allocations*	\$9,500	\$13,565	\$14,257	\$27,500	\$73,384	\$125,000	\$125,000	
Cumulative Allocation Surplus (Deficit)	\$6,958	\$9,523	(\$6,535)	(\$25,792)	(\$12,608)	\$7,308	\$0	

7. P3 ASSESSMENT

This project is not a good candidate for delivery via the Public Private Transportation Act (PPTA). The project is being procured through a design-build process and is funded with a combination of state and federal funds.

8. RISK AND RESPONSE STRATEGIES

A Risk Management meeting was held on September 19, 2016 and the Final Risk Management Report was published. The report was a record of the outcome of discussions on the various risk components and the mitigation strategies associated with this project. Below in Table 5 – Project Risk Assessment are the four (4) identified Critical Risk Factors and their mitigation strategy. The other remaining thirty seven (37) risk factors are outlined in the Risk Management Report. The full Risk Management Report can be found within the project files.

Table 5: Project Risk Assessment

Risk	Risk Description	Mitigation Strategy
Geotechnical/ Roadway Side Slopes	Conceptual roadway design is based on some geotechnical assumptions with respect to roadway side slopes. Final Geotechnical recommendations may require flatter slopes than what were assumed in developing the current project estimate. The changes could result in additional earthwork and right of way impacts.	VDOT is actively working towards completing the required geotechnical investigations, and as additional information becomes available, the design details and the project estimate will be revised if needed. VDOT will develop and provide a preliminary Geotechnical Data report as a part of the RFP which would significantly reduce this risk which would place the risk on the contractor.
Adjacent Projects- I-95 Express Lanes, Fredericksburg Extension	The proposed I-95 Express Lanes extension (Fred Ex) from the Garrisonville interchange to Route 17 will influence the scope and schedule of the subject project; specifically geometrics, signing, and Interchange Modification Report.	VDOT will facilitate periodic coordination among teams involved in both projects to define technical criteria and evaluate impacts. The project RFPs will consider appropriate criteria and requirements for regular coordination and communication between the two projects even after Project Award.
Additional Scope	Additional scope (I-95 SB Bridge replacement over Route 17) has been included in this project after Smartscale budget approval. Furthermore, the ATC process could result in a change to scope and budget, which may have an effect on the Smartscale calculations that support the funding for the project. These items can collectively or independently impact the project budget and schedule.	VDOT will monitor project budget and if necessary, develop bid options that would allow some scope items to be deferred while maintaining the original intent and budget. RFP will provide criteria limiting ATC options that could trigger a Smartscale re-evaluation.
Wetlands/US Army Corps of Engineers (USACE) Permit	VDOT has performed the preliminary analysis necessary to ascertain wetland and stream impacts for both southbound and northbound I-95 C-D lanes projects. Since this project has been split up into two separate projects, VDOT is anticipating acquiring separate permits for southbound and northbound projects.	VDOT has been coordinating with state and federal regulatory agencies, including the USACE, Virginia Marine Resources Commission (VMRC) and Department of Environmental Quality (DEQ) to determine the jurisdictional extent of wetlands and streams.

9. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan is January 31, 2017. The first annual update will be based on a "data as of" date of October 31. Future annual updates will be submitted by January 31 of that year, with a "data as of" date of October 31 of that year.