



**US Route 460 (Corridor Q) Poplar Creek
Phase B
Financial Plan (Annual Update)**

July 31, 2023

UPC	State Project No.
117808	0460-013-986, P101, R201
117788	0460-013-988, C501, P101, R201
118490	0460-013-979, B639, C501, P101, R201

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1. EXECUTIVE SUMMARY

The Route 121-460 Poplar Creek Phase B (PCPB) project is a 2.07-mile limited access two-lane highway with truck climbing lanes located in Grundy, Virginia. PCPB will be delivered as a Design-Build project. VDOT's current total estimated value for this Project is \$207M. The project will complete Corridor Q in Virginia and connect Route 460 at the Kentucky state line with existing Route 460 in Grundy.

The PCPB project will extend from the east end of U.S. 460/121 Poplar Creek Phase A Section to existing U.S. Route 460 in Grundy. The project consists of both new construction and realignment and includes a single bridge crossing the Levisa Fork River and Norfolk Southern Railroad. The proposed 1,099-foot steel girder bridge consists of three piers and four spans with pier heights ranging from 86 to 150 feet and span lengths ranging from 215 to 338 feet. An at-grade intersection will be constructed to accommodate motorists traveling west along existing Route 460 to Kentucky.

Construction began fall of 2021 with final completion anticipated in mid-2028 and is fully funded.

2. PROJECT DESCRIPTION

The PCPB project, shown in Figure 1, is a 2.07-mile segment of Route 121-460 extending from Route 604 at Poplar Creek Phase A to existing Route 460 in the Town of Grundy. The proposed roadway is a limited access, rural principal arterial on new alignment, and will be constructed as an undivided two-lane roadway with climbing lanes where necessary. The project includes a bridge over the Levisa Fork and Norfolk Southern Railroad. The NEPA document was initiated very early in design and captured only the portions of the project on Right-of-Way (ROW) proposed to be newly acquired with this project showing 1.79 miles. Subsequent design indicated that existing ROW on both ends of the job will be used to facilitate paving of the total project length of 2.07 miles.

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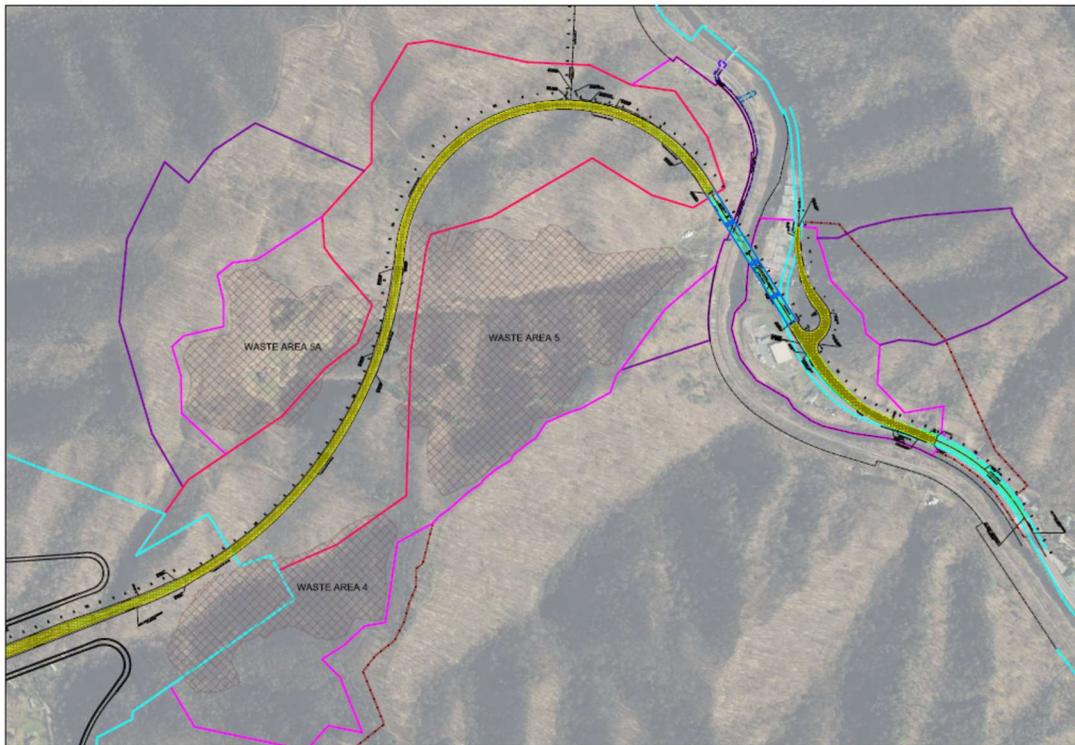


Figure 1 – Project Alignment and Design Features

The project is part of the Appalachian Development Highway System's (ADHS) Corridor Q. A portion of the project alignment overlaps the proposed Route 121/Coalfields Expressway. PCPB will be developed and delivered by Bizzack Construction under the design-build concept and procured using the Amended and Restated Comprehensive Agreement (ARCA) for Route 121/Coalfields Expressway. Individual 401 and 404 permits will be obtained by the design-builder. Construction will proceed under a subsequent contract pending design approval.

The PCPB project was evaluated as part of the Alternative F1 alignment in the 2001 Final Environmental Impact Statement / Record Of Decision for the entire Coalfields Expressway (CFX/Route 121) alignment. There are eight (8) construction segments along the US Route 121 alignment within the five (5) NEPA Sections. Figure 2 below depicts the NEPA Sections that were determined in coordination with FHWA. The PCPB project falls within environmental study section IIIB (Route 614 to Route 643). In 2014, VDOT prepared an environmental studies document for modifications to the corridor location. FHWA approved the location of Alternative F1 Modified within 4.1-mile Section IIIB/Corridor Q Overlap in 2015.

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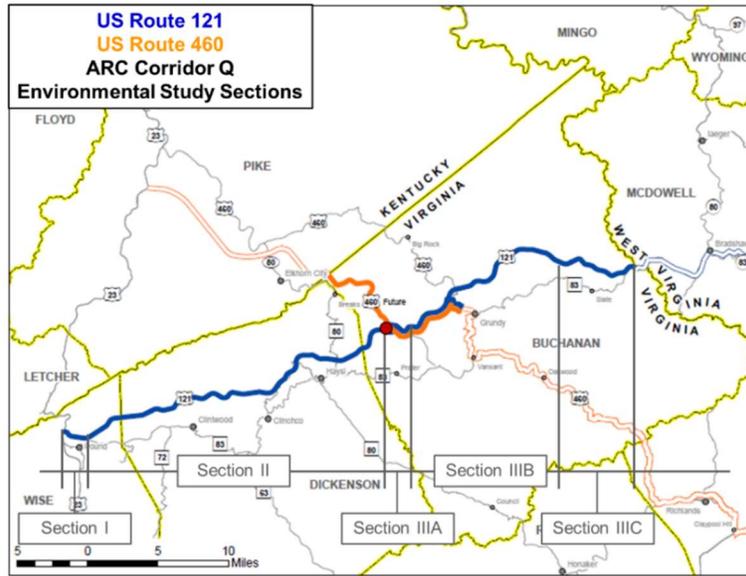


Figure 2 – Environmental Study Sections

Table 1 provides the UPCs, State Project Numbers, and the NEPA Section and Status for Poplar Creek Phases A and B. The NEPA was combined because the two sections were initiated as one project. Due to funding constraints, the project was divided into two separate construction projects. A NEPA Reevaluation for design was made available to the public for review and comment prior to and during the Design Public Hearing in May 2021. Following the Design Public Hearing, the Environmental Assessment for US Route 121/US Route 460 (Corridor Q) Section IIIB Poplar Creek Phase B was prepared. The FHWA issued the FONSI on October 25, 2021.

Table 1 – US Route 460

Project Section	UPC	State Project No.	Length (miles)	NEPA Section	NEPA Status
Poplar Creek Phase A	90282	0121-013-793,C501,P101,P102,R201	2.9	NEPA Section IIIB Corridor Q Overlap	<ul style="list-style-type: none"> Includes Route 121 Elkins and Poplar Creek Sections September 23, 2014 – Public Hearing for Environmental Studies Document Feb. 18, 2015 – CTB approved location of the Modified F1 Alignment for the 4.1-mile Section IIIB/Corridor Q Overlap Poplar Creek Section (A and B) July 20, 2015 – FHWA concurred that an SEIS was not necessary for the Modified F1 Alignment for the 4.1-mile Section IIIB/ Corridor Q Overlap Poplar Creek Section (A and B) Feb. 7, 2017 – Citizens Information Meeting to present information on NEPA reevaluation for Poplar Creek Phase A April 19, 2017 - FHWA concurs that SEIS is not warranted for the Poplar Creek Phase A section June 27, 2017 – Design Public Hearing (Poplar Creek Section Phase A) May 18 and May 24, 2021 Design Public Hearing (Poplar Creek Phase B) October 25, 2021 – FHWA issued a FONSI for the Environmental Assessment of US Route 121/US Route 460 (Corridor Q) Section IIIB Poplar Creek Phase B
	104094	0121-013-902,C501,P101,R201			
Poplar Creek Phase B	117808	0460-013-986, P101, R201	2.07		
	118490	0460-013-979, P101, R201, C501			
	117788	0460-013-988, P101, R201, C501			

Additional information on the US Route 460 projects can be found on VDOT’s public website at:
https://www.virginiadot.org/projects/bristol/corridor_q_route_460-121_poplar_creek_phase_b_buchanan_county.asp
[Corridor Q Route 460 Poplar Creek Phase B](https://www.virginiadot.org/projects/bristol/corridor_q_route_460-121_poplar_creek_phase_b_buchanan_county.asp)

3. SCHEDULE

The Preliminary Design and Engineering Services Agreement (PDESA) was executed on December 1, 2020 with a term of 22 months. The PDESA advances the project through ROW plans and ROW acquisition. The Public Hearing was held on May 18, 2021. On October 25, 2021, FHWA issued a FONSI for the Environmental Assessment of US Route 121/US Route 460 (Corridor Q) Section IIIB Poplar Creek Phase B. This has been completed and is in the process of being closed out.

The final design and construction contract for the paved road was executed on October 30, 2021. ROW acquisition began in 2021, with residential and commercial relocations, demolition, and utility relocation to follow as properties are acquired. Project construction will be completed in work packages, beginning in 2021 and ending in 2028. Construction began with excavation of the large cuts west of the Levisa Fork. Bridge construction is scheduled for mid-2022 through mid-2025. Two-way traffic will be maintained along existing Route 460 for the duration of the project. Final completion is anticipated in mid-2028

Table 2 below is an approximate anticipated schedules for the project. The schedules will be adjusted accordingly after the construction contract is executed and the Design-Builder’s baseline schedules are accepted.

Table 2 - Project Schedule Overview

		Calendar Year											
UPC	Phase	Begin	End	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
117788	NTP	12/20											
	Oversight												
	PE - Design	8/1/20	7/1/24										
	RW/Utilities	3/1/21	11/2/26										
	CN	7/1/21	6/20/28										
117808	PE and RW												
	NTP	12/20											
	PE - Design	6/23/20	11/2/22										
	RW/Utilities	11/2/21	10/7/22										
118490	NTP	8/21											
	PE - Design	7/19/21	7/26/21										
	RW/Utilities	7/26/21	1/1/21										
	CN	10/30/21	4/20/28										

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4. PROJECT COST

The current total cost estimate for PCPB is \$208,118,550 dollars. This is an increase of \$1,046,050 from the last financial plan. We anticipate the amount needed to be reduced after UPC 117808 is closed out and the estimates on the overspent phases are revised.

This project cost covers preliminary engineering design activities, right of way acquisition, utility relocation, environmental and design permits/approval, survey and geotechnical investigations and construction. Table 3.1 includes the current estimate of the project and the remaining cost to complete in year-of-expenditure dollars. The table below depicts the project expenditures as of April 30, 2023. ROW Total Take plans were submitted in May 2021 and subsequently approved. ROW charges began in May 2021. We issued the first ROW Limited Notice to Proceed(LNTP) in December of 2021.

Table 3.1-- Project Cost Estimate (Finance Plan – Annual Update) by UPC

UPC	Phase	Initial Estimate	2022 Estimate	Current Estimate	Current Expenditures as of April 30, 2023	Balance to Complete
117788	PE	\$2,075,221	\$2,075,221	\$2,075,221	\$3,066,509.94	\$-991,288.94
	RW	\$16,286,730	\$16,286,730	\$16,286,730	\$4,851,401.69	\$11,435,328.31
	CN	\$6,737,744	\$6,737,744	\$7,091,744	\$125,673.49	\$6,966,324.06
	TOTAL	\$25,099,695	\$25,099,695	\$25,453,695	\$8,043,585.12	\$17,410,109.88
117808	PE	\$9,013,263	\$9,013,263	\$8,618,263	\$8,543,263.00	\$75,000
	RW	\$1,660,000	\$1,660,000	\$2,055,000	\$1,437,950.00	\$617,050
	TOTAL	\$10,673,263	\$10,673,263	\$10,673,263	\$9,981,213.00	\$692,050
118490	PE	\$2,118,088	\$1,242,088	\$1,317,088	\$2,926,911.00	\$-1,609,823.00
	RW	\$2,435,047	\$1,557,799	\$2,174,849	\$0	\$2,174,849
	CN	\$164,673,907	\$168,499,655	\$168,499,655	\$11,219,157.73	\$165,572,744
	TOTAL	\$169,227,042	\$171,229,542	\$171,991,592	\$14,146,068.73	\$157,845,523.27
GRAND TOTAL		\$205,000,000	\$207,072,500	\$208,118,550	\$32,170,867	\$175,947,683.15

Cost Estimate Methodology

The cost-to-complete estimates developed for the 121/460 program uses the most recent and detailed information available to develop costs for the design, construction, management, and administration of each route segment of the program. These reports provide the best available data for the coal synergy aspects of the proposed projects. They also include important cost factors for major items such as excavation. Other important sources of information are: The Route 460 Phase II Public Private Partnership (P3) contract that was negotiated and executed as

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a design-build contract for the design and construction to rough grade on July 30, 2013; the Poplar Creek Phase A contract was negotiated and executed as a design build contract for the design and construction on June 6, 2016; and, the 460 Connector Intersection contract was negotiated and executed as a design and construction to rough grade on November 1, 2017. All of these are in very similar terrain and should be a good indication of the costs for 460 alignments.

Further, a bottom-up independent engineering and independent construction estimate was conducted for the project to support contract negotiations. A breakdown of each engineering and construction item was agreed upon and later a price developed by both VDOT and the Design Builder. VDOT used third-party contractors and consultants to evaluate PE, roadway and bridge construction, QA/QC and IA/IV services. VDOT also developed estimates for leveled project items including right-of-way, environmental permitting, environmental mitigation, public outreach and costs of external third-party work such as utility relocations and railroad coordination.

The cost data has been normalized to reflect 2023 costs as the basis for the estimate in accordance with VDOT's policy. Escalation factors have been applied to reflect the impacts of inflation for advertisement of projects for any year between 2021 and 2026.

5. PROJECT FUNDS

The project is funded with federal funds and Route 58 Corridor bond proceeds. A Summary of Project Funding by Source for FY23-29 is included in Table 4.1

Table 4.1 – Funding Sources

Funding Source		Previous	FY24	FY25	FY26	TOTAL
117788	Federal					
	STP Statewide	\$4,023,059				\$4,023,059
	STP Special	\$177,428				\$177,428
	Appalachian	\$9,326,737				\$9,326,737
	State					
	Bond Match	\$44,357				\$44,357
	Other					
CPR Bonds	\$354,000				\$354,000	
58 Bonds	\$10,850,741	\$1,152,373			\$12,003,114	
	SUBTOTAL	\$24,422,322	\$1,152,373			\$25,574,695
117808	Federal Appalachian	\$9,981,213				\$9,981,213
118490	Other					
	58 Bond	\$64,779,305		\$64,177,321	\$5,115,635	\$134,072,261
	Federal					
Appalachian	\$37,798,331			0	\$37,798,331	
	SUBTOTAL	102,577,656		\$64,177,321	\$5,115,635	\$171,870,592
GRAND TOTAL		\$136,981,171	\$1,152,373	\$64,177,321	\$5,115,635	\$207,426,500

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Project funding for the following UPCs is demonstrated in the Commonwealth's Statewide Transportation Improvement Program (STIP):

- Poplar Creek Phase B Design-PE & RW (UPC 117808); STP-013-1(086)
- Poplar Creek Phase B VDOT Oversight (UPC 117788); STP-013-1(088)
- Poplar Creek Phase B Design-Build CN (UPC 118490); NHPP-013-1(089)

UPC 117788 and UPC 117808 were authorized by the Federal Highway Administration (FHWA) on November 2, 2020. The Effective date for fund verification and federal authorization on UPC 118490 occurred November 24, 2021. These project authorizations are summarized in Table 4.2 below

Table 4.2 Summary of Project Authorizations

Project Authorization Summary as of (April 30, 2023)					
Federal Project	UPC(s)	Phase Classification	Cos	Federal Funds	Advance Construction
STP-013-1(088)	117788	PE, RW, CN	\$25,099,684	\$13,349,796	\$11,749,888
STP-013-1(086)	117808	PE, RW	\$10,673,263	\$10,673,263	\$0
NHPP-013-1(089)	118490	PE, RW, CN	\$171,299,543	\$0	\$140,468,458
Total			\$207,072,490	\$24,023,059	\$152,218,346

6. FINANCING ISSUES

The key project elements are fully funded. There are no financing issues on the project.

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7. CASH FLOW

The Cash Flow Analysis for Poplar Creek Phase B is included in Table 6 and reflects the final submission estimate of \$207,426,500 million.

Table 6 – Cash Flow Analysis
(Amounts in \$000's)

Expenditures		Thru April 23	FY 24	FY 25	FY 26	FY 27	FY 28	Total
117788	PE	\$3,067	\$0	\$0	\$0	\$0	\$0	\$3,067
	RW	\$4,851	\$4,000	\$3,000	\$3,270	\$175	\$1,0	\$15,296
	CN	\$126	\$1,500	\$2,000	\$2,000	\$800	\$665	\$7,091
117808	PE	\$8,543	\$0	\$0	\$0	\$0	\$0	\$8,543
	RW	\$1,438	\$0	\$0	\$0	\$0	\$0	\$1,438
118490	PE	\$2,927	\$538	\$104	\$0	\$0	\$0	\$3,569
	RW	\$0	\$350	\$450	\$250	\$135	\$73	\$1,258
	CN	\$11,219	\$16,219	\$69,000	\$26,000	\$26,345	\$18,382	\$167,165
Cumulative Expenditures*		\$32,171	\$22,607	\$74,554	\$31,520	\$27,455	\$19,120	\$207,427
Total Annual Allocations		\$136,981	\$1,152	\$64,177	\$5,116	\$0	\$0	\$207,427
Cumulative Allocations		\$136,981	\$138,134	\$202,311	\$207,427	\$207,427	\$207,427	\$207,427
Cash Flow per Year		\$104,810	\$115,526	\$127,757	\$175,907	\$179,972	\$188,307	\$0

*Cumulative Expenditures is based on updated estimates after UPC 117808 is closed out and the estimates on the overspent phases are revised.

8. P3 ASSESSMENT

The original Comprehensive Agreement (CA) was executed on January 11, 2002, between KBR and the Department for the design, construction and maintenance of US Route 121. Negotiations to amend and restate the CA to incorporate the Coal Synergy approach were ongoing with Bizzack and Alpha until Alpha filed Chapter 11 Bankruptcy. However, on August 3, 2015, the Bankruptcy Court approved a purchase agreement for Contura Energy to purchase Alpha on June 7, 2016, which included Contura assuming the roles and responsibilities of Alpha under the CA. VDOT has been in close coordination with Contura (Currently named Alpha Metallurgical Resources LLC (Alpha)) regarding the Assumption by Contura of the CA. The Amended and Restated Comprehensive Agreement (ARCA) was executed on May 1, 2017. All remaining US Route 121 projects (three are dually designated US Route 460 Projects) will be developed under the ARCA using Coal Synergy to reduce the construction costs.

The ARCA executed on May 1,2017 will provide for the following benefits:

1. **Assures no Liability for the Department**– Provides no obligatory requirements to enter into any contract.
 - a. Provides VDOT right to develop a Project Section with own personnel/separate contractor.
 - b. Provides Department the right to terminate for convenience at no cost to Department.
2. **Provides Contract Templates**- Provides models for phased development to facilitate future funding of Project Sections:
 - a. Preliminary Design and Engineering Services Agreement (“PDESA”)
 - b. Design Build Agreement (Rough Grade Roadbed)
 - c. Design Build Agreement (Paved Road)
3. **Facilitates Completion of US Route 460 (Corridor Q)** – Provides procurement and contract template.
 - a. 121/460 Intersection and Paving Hawks Nest – Funded
4. **Separates Alpha and Bizzack** – Provides rights to develop and negotiate without involvement from other entity.
 - a. Provides transfer of rights for project sections between Alpha and Bizzack

As part of the Route 121 Coalfields Expressway project, the PCPB construction segment was procured using the P3 Amended and Restated Comprehensive Agreement (ARCA) between VDOT, Bizzack and Alpha. Preliminary design and construction contracts will use the previously negotiated Design – Build contract template established in the ARCA. Bizzack construction is assigned the right and obligation to design and build the PCPB segment per the ARCA.

9. RISKS AND RESPONSE STRATEGIES

A detailed risk assessment was prepared by the project team on 06/01/2021 with input from the P3 office and technical divisions.

Table 8.1 is a summary of the top ten risk items identified and discussed during the risk management exercise along with the associated mitigation strategies. These risks are considered the Highest Risk Items for the project; however, as previously stated, the highest scores remained within the “medium” severity category. A complete risk management worksheet for the project is provided in the attached matrix. The risk register, in particular the Highest Risk Items, will be updated on a regular basis throughout procurement to ensure the project team are prioritizing their efforts to gain value for the project.

Table 8.1: Summary of Highest Risk Items

1	Budget Constraints
Risk Register Item	MGT-01
Overall Risk Rating	15
Category	Contract/Management
Risk Description	Budget constraints and the contracts availability for Change Orders, especially compensatory mitigation, and ROW, could lead to an overrun of funds.
Responsible Party	VDOT
Mitigation Strategy	Mitigation Costs should be known prior to contract execution. RW estimate more detailed than previous projects and relies on known costs from adjacent projects within Corridor. These costs should be worked into the budget. Additional monies in DB UPC should be available to cover additional change orders.
Notes:	The Project team completed several estimating exercises including seeking input from mineral experts, district, and central office estimators to best estimate ROW costs for the project

2	Blasting
Risk Register Item	STG-09
Overall Risk Rating	15
Category	Structures Geotechnical
Risk Description	The potential for blasting to cause rocks falling onto the railroad tracks during blasting operations.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require a hold point in the schedule prior to blasting near railroad facilities to discuss safety and proximity concerns. Additionally, VDOT/DBT will proactively develop an action plan with NSRR to better react if an incident does occur.

3	QA/QC
Risk Register Item	MGT-03
Overall Risk Rating	12
Category	Contract/Management
Risk Description	QA/QC insufficient and not audited
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require a robust QA/QC Plan, in compliance with July 2018 update, which tracks, reviews, and changes. VDOT will have sufficient IA/IV staff to monitor operations as well as QA/QC staff performance.

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4	Drilled Shaft Testing
Risk Register Item	STG-17
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Drilled shaft CSL testing shows irregularity (voids, segregation) in the concrete.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will discuss with Design-Builder and request that a mitigation strategy be incorporated into the QA/QC plan as a proactive approach to address any irregularities that may be discovered during testing.

5	Drilled Shaft Vertical Alignment
Risk Register Item	STG-18
Overall Risk Item	12
Category	Structures/Geotechnical
Risk Description	The risk that the drilled shaft vertical alignment is out of tolerance.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will discuss with Design-Builder and request that a mitigation strategy be incorporated into the QA/QC plan as a proactive approach to address any tolerance issues that may be discovered.

6	Pier Height
Risk Item	STG-26
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Variable risks associated with the proposed Pier height (variation as well as total height).
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design.

7	Column Shape
Risk Register Item	STG-27
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Risks associated with column shape transitioning from wider to narrower.
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design.

8	Seismic Response
Risk Register Item	STG-28
Overall Risk Rating	12
Category	Structures/Geotechnical
Risk Description	Risks associated with seismic response for unequal layout
Responsible Party	VDOT/Design-Builder
Mitigation Strategy	VDOT will require Constructability Review and Peer Review to be performed and incorporated into design

10. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan is July 31, 2021. Future annual updates will be submitted by July 31 of that year, with a "data as of" date of April 30 of that year.

11. SUMMARY OF COST CHANGES SINCE LAST YEAR'S FINANCIAL PLAN

The cost estimates have increased since the development of the previous financial plan. The overall increase in the project estimate from \$207,072,500 to \$208,118,550 is the result of the following known-unknowns: Environmental Costs (Biological Assessment/Biological Opinion), Wind Study Change Order, Peer Review Change Order and Scope Transfer from 117808 to 118490.

12. COST AND FUNDING TRENDS SINCE INITIAL FINANCIAL PLAN

Construction started in 2022. Since the Initial Financial Plan, costs for this project have increased based on final contract negotiations as well as change orders and increased costs outlined in Section 11. As phases of work are completed, we will revise estimates and move funding as needed to cover project costs and limit any additional funds required. UPC 117808 is in the process of being closed out and the estimate will be revised to \$9,981,213, which will change the estimate to \$207,426,500.

13. SUMMARY OF SCHEDULE CHANGES SINCE LAST YEAR'S FINANCIAL PLAN

No schedule changes since last years plan.

14. SCHEDULE TRENDS SINCE INITIAL FINANCIAL PLAN

Although field construction was originally anticipated to begin in Fall 2021, it began 2022. The completion date is set for October 2028. The completion date for the project has been moved from March 2027 to October 2028 during the final negotiations of the construction contract.