



I-264/Witchduck Road Interchange & Ramp Extension (C-D Road)

Financial Plan Annual Update

March 31, 2023

State Project Numbers: 0264-134-102, P101, R201,
C501, B601, B602, B603, B621, D601
UPCs: 17630, 108041

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EXECUTIVE SUMMARY

This Design-Bid-Build project is Phase 2 of the I-64/I-264 Interchange Improvements in Hampton Roads, Virginia. The adjacent Phase 1 improvements project was completed in May 2020. Phase 1 increased capacity along with improving safety and traffic operations along westbound I-64 and eastbound I-264 near the I-64/I-264 interchange in the City of Norfolk. Phase 2 continues the proposed improvements along eastbound I-264 through the Newtown Road interchange and the Witchduck Road interchange in Virginia Beach thus improving safety, capacity and operations along the project corridor. Construction of the Phase 2 project is complete with a C-5 Completion Date of November 11, 2022.

The project was advertised on July 25, 2017, and awarded for construction by the Commonwealth Transportation Board (CTB) on December 6, 2017. Notice to Proceed (NTP) was provided to the contractor (Lane Construction) on February 15, 2018. The project original fixed completion date was September 16, 2021. VDOT issued the contractor Change Order No. 75, which provided a non-compensable time extension and revised the fixed completion date to November 11, 2022. Upon execution of this Change Order, the contractor waived, released, and relinquished all rights to file claim.

The project Construction phase funding is comprised of Smart Scale, Hampton Roads Transportation Accountability Commission (HRTAC) Hampton Roads Transportation Fund (HRTF), and local contributions. The project Right of Way phase is funded entirely by HRTF, and the Preliminary Engineering Phase funding is a combination of state, federal, and HRTF funds. Current budget projections for Right of Way and construction indicate that the project estimate of \$194,503,887 will be exceeded. Twenty change orders were executed in 2022 totaling \$846,170. The total amount of executed change orders for the project is seventy-nine at a value of \$6,811,736. The current total project cost estimate is \$205,295,030. Current allocations are \$194,503,887. Based on current projections and allocations, the project is in deficit by \$10,791,143. In accordance with the Standard Project Agreement (SPA) executed on July 19, 2017, VDOT and HRTAC are working together to address the projected cost overruns. VDOT District PIMS group is coordinating with VDOT IID on Smart Scale impacts.

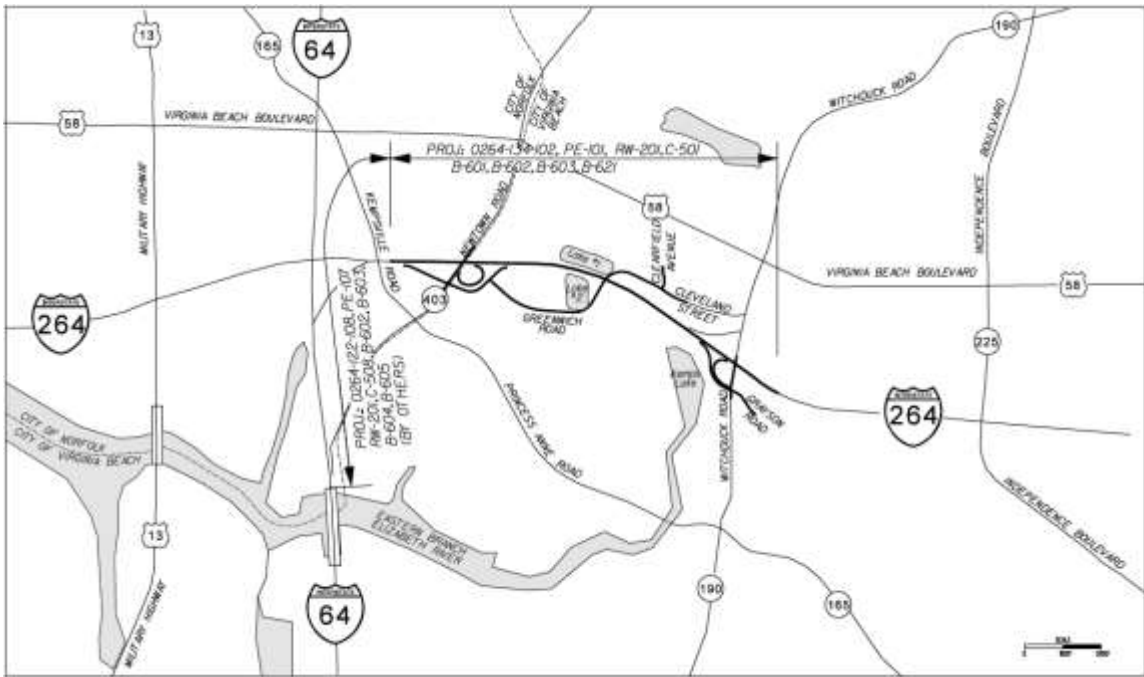
1. PROJECT DESCRIPTION

The I-264/Witchduck Road Interchange & Ramp Extension project is one of two adjacent projects that provides approximately 4-miles of interstate improvements from the Twin Bridges in Norfolk to the Witchduck Road interchange in Virginia Beach. The improvements provide additional capacity, relieve daily congestion, reduce crash rates, and improve safety and traffic operations along the corridor.

The I-264/Witchduck project improvements include extending the new two-lane Collector-Distributor (C-D) roadway along eastbound I-264 from the adjacent I-64/I-264 Improvements Phase 1 project (UPC 57048) through the Newtown Road interchange to

the Witchduck Road interchange, reconfiguring the south side of both interchanges to eliminate the weave movements, and constructing an overpass to connect Greenwich Road on the south side of I-264 and Cleveland Street on the north side. Below figures show the project location map and project improvements.

PROJECT LOCATION MAP



PROJECT IMPROVEMENTS



A Categorical Exclusion (CE) was approved by the Federal Highway Administration (FHWA) on February 19, 2008. The CE was combined to encompass the two adjacent projects. An Interchange Modification Report (IMR) was approved by the FHWA on November 14, 2011. A combined Location and Design Public Hearing was held on July 14, 2011.

An additional CE was prepared on August 20, 2019. This CE was written to remove a portion of Greenwich Road where it ties in with Witchduck Road south of I-264. This allowed the project to relocate Greenwich Road by bridging over I-264 and tying in with Cleveland Street on the north side of the interstate. This action was done to address an expiring permit; the new permit had different requirements that could not be addressed in a permit extension, thus, requiring a new permit action.

A Programmatic Categorical Exclusion (PCE) was prepared on November 30, 2018 to address the disposal/sale of the residue Parcel 013. A PCE was prepared on January 14, 2019 to address the disposal/sale of the residue Parcel 012.

2. SCHEDULE

The Commonwealth Transportation Board (CTB) awarded the construction contract to the lowest bidder, The Lane Construction Corporation, on December 6, 2017. Construction Notice to Proceed (NTP) was February 15, 2018. The original contract fixed completion date was September 16, 2021. VDOT issued the contractor Change Order No. 75 which provided a non-compensable time extension and revised the fixed completion date to November 11, 2022. The contract includes incentives for an interim milestone and early completion. The contractor did not achieve the interim milestone and early completion incentives. Construction of the Phase 2 project is complete with a C-5 Completion Date of November 11, 2022.

The initial financial plan schedule is shown in Table 1A with the current schedule shown in Table 1B.

TABLE 1A – INITIAL FINANCIAL PLAN PROJECT SCHEDULE OVERVIEW (CALENDAR YEAR)

Task	2015				2016				2017				2018				2019				2020				2021																																																											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
PE - Design	█				█				█																																																																											
RW/Utilities					█				█				█				█				█				█																																																											
Construction																	█				█				█																																																											

TABLE 1B – CURRENT PROJECT SCHEDULE OVERVIEW (CALENDAR YEAR)

Task	2017												2018												2019												2020												2021												2022																							
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
PE/Design	█																																																																																			
RW/Utilities	█												█												█												█												█												█																							
Construction													█												█												█												█												█																							

3. PROJECT COST

Narrative of Project Cost

The current total project estimate is \$205,295,030. The estimates, as well as current expenditures for Preliminary Engineering (PE), Right of Way (RW), and Construction (CN) phase as of December 31, 2022, are summarized in the table below. The project currently has active RW and CN phases. A portion of PE and all of RW is funded by the Hampton Roads Transportation Accountability Commission (HRTAC) Hampton Roads Transportation Fund (HRTF). On July 19, 2017 the Standard Project Agreement was executed between VDOT and HRTAC to fund a portion of the CN phase in the amount of \$73,157,062. The remaining portion of the CN phase is funded by federal funds in the High Priority Program (HPP) through Smart Scale (\$50,000,055) and \$2,871,294 by local contributions.

PE, CN and RW expenditures as of December 31, 2022, are \$203,985,560. HRTAC funds and expenditures are summarized under a “child” UPC 108041 in the table below.

TABLE 2 – PROJECT COST BY PHASE

UPC	Phase	Initial Estimate	Current Estimate	Current Expenditure (12/31/2022)	Balance to Complete
17630	PE	13,882,900	13,884,000	\$13,882,900	\$1,100
	RW	\$0	\$0	\$0	\$0
	CN	\$52,871,349	\$56,683,360	\$55,692,027	\$991,333
	SUBTOTAL	66,754,249	\$70,567,360	\$69,574,927	\$992,433
108041	PE	\$199,910	\$199,926	\$199,910	\$16
	RW	\$54,392,666	\$56,096,076	\$55,997,285	\$98,791
	CN	\$73,157,062	\$78,431,668	\$78,213,438	\$218,230
	SUBTOTAL	\$127,749,638	\$134,727,670	\$134,410,633	\$317,037
17630 + 108041	PE	\$14,082,810	\$14,083,926	\$14,082,810	\$1,116
	RW	\$54,392,666	\$56,096,076	\$55,997,285	\$98,791
	CN	\$126,028,411	\$135,115,028	\$133,905,465	\$1,209,563
	SUBTOTAL	\$194,503,887	\$205,295,030	\$203,985,560	\$1,309,470

Cost Estimating Methodology

The preliminary engineering estimate includes field investigation costs for survey, geotechnical data collection, traffic counts, environmental support, and professional engineering design services to develop design plans and construction documents. Preliminary engineering estimate also includes right of way and utility charges prior to right of way notice to proceed.

The right of way phase estimate includes the actual cost of right of way and easements acquisition, 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 phase also includes utility design and private utility relocation fees.

The project construction cost estimate was developed through VDOT's TrnsPort construction cost estimating program and includes all roadway, bridge, drainage, maintenance of traffic, lighting, traffic control devices, traffic management systems, landscape, and other items.

The final construction estimate used unit price cost adjustments to reflect the most current trends specific to the Hampton Roads District. A bid analysis was completed on the adjacent Phase 1 project bids to identify any trends considering this was a similar size and type of project. The estimate includes state forces, 10% for Construction Engineering and Inspection (CEI), and 10% contingency.

Three bids were received on November 15, 2017. The bids were approximately 5 to 15% over the engineer's estimate with the lowest bid of \$105,399,865 and the highest bid of \$115,180,000.

The project includes a \$3,000,000 interim milestone incentive if specific work features were completed on or before April 23, 2019. This milestone was not met. The Department would have had to pay a no excuses early completion incentive in the amount of \$2,000,000 if the project was finished on or before May 27, 2021 (Thursday before Memorial Day weekend). This milestone was not met. The contract also includes liquidated damages and a \$50,000 per day disincentive for every day that the project is not finished after the FCD. The project finished by the revised completion date and liquidated damages/disincentives were not applicable.

4. PROJECT FUNDS

The project is funded by multiple funding sources, including Hampton Roads Transportation Funds (HRTF). Federal funds include Interstate Maintenance (IM), National Highway System (NHS), National Highway Performance Program (NHPP), Regional Surface Transportation Program (RSTP), Statewide Surface Transportation Program (STP) and Equity Bonus (EB) funds. State funds include the match for the federal funds, FRAN Bond Proceeds, High Priority Program (HPP) Capital Projects Revenue (CPR) Bond Proceeds, HPP State, and Priority Transportation Funds (PTF). Local funds include urban contributions by the City of Virginia Beach.

On April 16, 2015, HRTAC executed an Interim Project Agreement for Funding and Administration with VDOT, which authorized \$54,592,576 of funding in support of this project for PE and RW. On July 19, 2017, the Standard Project Agreement was executed between VDOT and HRTAC to fund a portion of the CN phase in the amount of

\$73,157,062. HRTAC will fund costs out of the HRTF on a “pay as you go” basis. That approach is consistent with the initial funding plan approved by HRTAC.

This project was selected by the Commonwealth Transportation Board (CTB) to receive \$50,000,055 in statewide high priority funds for the construction phase through the Smart Scale prioritization process. The remaining construction funding includes \$2,871,294 in local contributions. Table 3 summarizes the current funding allocated to this project by fund source and year.

TABLE 3 – SUMMARY OF PROJECT FUNDING BY SOURCE

	Funding Source	Previous	2023	2024	2025	2026	2027	Total
STUPC 17630/108041*	Interstate Maintenance	5,880,479	0	0	0	0	0	5,880,479
	National Highway System	610,394	0	0	0	0	0	610,394
	NHPP	10,239,071	0	0	0	0	0	10,239,071
	Equity Bonus	346,699	0	0	0	0	0	346,699
	Surface Tran. Program	\$16,708,313	0	0	0	0	0	\$16,708,313
	RSTP	1,892,000	0	0	0	0	0	1,892,000
	Federal Subtotal	35,676,956	0	0	0	0	0	35,676,956
	State Match	1,241,702	0	0	0	0	0	1,241,702
	High Priority State	12,470,449	0	0	0	0	0	12,470,449
	Priority Transportation Funds	815,000	0	0	0	0	0	815,000
	CRPR Bonds	12,428,848	0	0	0	0	0	12,428,848
	FRANs ***	1,250,000	0	0	0	0	0	1,250,000
	State Subtotal	28,205,999	0	0	0	0	0	28,205,999
	Local Accounts Receivable	2,871,294	0	0	0	0	0	2,871,294
	HRTAC *	127,749,638	0	0	0	0	0	127,749,638
	Other Subtotal	130,620,932	0	0	0	0	0	130,620,932
	TOTAL	194,503,887	0	0	0	0	0	194,503,887

* HRTAC funding is under UPC 108041.

*** Federal Highway Reimbursement Anticipation Notes.

Federal Fund Sources and Special Funding Techniques

The HRTPO has included all phases of this project in its Long Range Transportation Plan. The PE, RW, and CN phases of this project are included in HRTPO’s Transportation Improvement Program (TIP) as well as the Commonwealth’s FFY21-24 Statewide Transportation Improvement Program (STIP.)

Preliminary engineering associated with this project was authorized by the FHWA on December 1, 2000, under federal project number STP-5403(650). Construction was authorized on July 24, 2017, under federal project number NHPP-264-6(106). The current authorization includes federal funds totaling \$33,663,266. No federal authorization was obtained for the RW phase.

TABLE 4 – PROJECT AUTHORIZATION DETAILS AS OF DECEMBER 31, 2022

UPC 17630			
Federal Project Number 5403650			
PE			
Program Code	Total Cost	Federal Funds Obligated	Advance Construction
H050	\$142,754	\$114,203	-
L010	\$6,533,866	\$5,880,479	-
LZ1E	\$83,073	\$66,458	-
LZ20	\$77,894	\$62,315	-
M001	\$776,191	\$776,191	-
Q230	\$2,365,000	\$1,892,000	-
Q240	\$2,431,716	\$2,000,000	-
Q770	\$272,407	\$217,926	-
Z001	\$1,200,000	\$960,000	-
Total	\$13,882,901	\$11,969,572	-
*Based on federal agreement modification dated 10/18/19.			

UPC 17630 and 108041			
Federal Project Number 2646106			
CN			
Program Code	Total Cost	Federal Funds Obligated	Advance Construction
H050	\$496,191	\$496,191	-
H240	\$73,157,115	-	\$73,157,115
L240	\$28,844,992	-	\$21,720,497
L24E	\$318,973	-	\$318,973
Y001	\$1,663,690	\$1,663,690	-
Z001	\$1,743,809	\$1,743,809	-
Z01E	\$5,095,381	\$5,095,381	-
Z240	\$12,194,748	\$12,194,748	-
Z24E	\$2,513,565	\$2,513,565	-
Total	\$126,028,464	\$23,707,384	\$95,196,585
*Based on federal agreement modification dated 8/30/21			

5. FINANCING ISSUES

The project estimate of \$194,503,887 will be exceeded due to Right of Way and Construction overruns. The current overall budget projection is \$205,295,030. In accordance with the Standard Project Agreement (SPA) executed on July 19, 2017, VDOT and HRTAC will work together to address the projected cost overruns. These costs will be tracked closely until project closeout. Additional funding sources are being explored to cover the overruns.

6. CASH FLOW

I-264/Witchduck Road Interchange & Ramp Extension project annual cash expenditures are based on the project schedule developed by VDOT and the design team. Table 5 summarizes the cash flow analysis for the project and it will be updated annually as expenditures are incurred. It shows the comparison of previously expended and projected expenditures by fiscal year by phase against the total annual allocations.

TABLE 5 – CASH FLOW ANALYSIS

Expenditures		Previous	FY2023	FY2024	FY2025	FY2026	Total
UPC	Phase						
17630	PE	\$ 13,882,900	\$ 1,100	\$ -	\$ -	\$ -	\$ 13,884,000
	Construction	\$ 56,169,673	\$ 513,687	\$ -	\$ -	\$ -	\$ 56,683,360
	Total	\$ 70,052,573	\$ 514,787	\$ -	\$ -	\$ -	\$ 70,567,360
108041	PE	\$ 199,910	\$ 16	\$ -	\$ -	\$ -	\$ 199,926
	Right of Way	\$ 55,973,773	\$ 122,303				\$ 56,096,076
	Construction	\$ 77,725,355	\$ 706,313	\$ -	\$ -	\$ -	\$ 78,431,668
	Total	\$ 133,899,038	\$ 828,632	\$ -	\$ -	\$ -	\$ 134,727,670
Cumulative Expenditures		\$ 203,951,611	\$ 205,295,030	\$ -	\$ -	\$ -	\$ 205,295,030
Total Annual Allocations		\$ 194,503,887	\$ -	\$ -	\$ -	\$ -	\$ 194,503,887
Cumulative Allocations		\$ 194,503,887	\$ 194,503,887	\$ 194,503,887	\$ 194,503,887	\$ 194,503,887	\$ 194,503,887
Cash Flow Per Year		\$ (9,447,724)	\$ (10,791,143)	\$ 194,503,887	\$ 194,503,887	\$ 194,503,887	\$ (10,791,143)

7. P3 ASSESSMENT

The Alternative Project Delivery Division reviewed the project and determined it was not a good candidate for a Design-Build procurement or a P3 delivery.

8. RISK AND RESPONSE STRATEGIES

VDOT and the contractor executed the Value Engineering (VE) proposal presented in the 2018 update to construct a fill roadway rather than the designed pier supported bridge to span Lake “2” located just west from Top Golf and North from Greenwich Road. Work commenced in October 2019 at cost saving of \$183,000 to VDOT. The VE reduced risk by

eliminating a structure exposed to high water levels and lessens future CoVB maintenance costs.

To help mitigate schedule impacts, VDOT approved MOT and traffic variances in collaboration with CoVB along I-264 mainline and Witchduck Road, to include lane shifts and extended allowable work hours.

Four particular work activities that include high levels of risk are the completion of the B-601 (Newtown) bridge, surcharge and settlement of fill sections, the prosecution of work in Waters of the United State (WOUS), and completion of the B-602 (RR) Bridge.

First, the completion of the B-601 Bridge was critical to making available several stages of work around the Newtown Road interchange. Major drainage and roadway construction along ramp D-7 and the re-aligned Newtown Road EB entrance and exit ramps and completion of Pond 3 were all dependent upon the bridge's completion. The final pour for this structure took place October 27, 2021.

Second, there are numerous fill sections that require surcharge and continuous monitoring of settlement. Based on geotechnical reports, settlement periods are generally expected to last 120 days. Continuous collection of data from the settlement plates and close coordination with the EOR has reduced some of the durations associated with the settlement periods. A number of areas have been released in advance of the 120-day period. The final surcharge was released on September 22, 2021 with removal beginning September 27, 2021.

Third, work within Waters of the United States (WOUS) posed environmental risks in the way of higher potential for unauthorized discharges. An example of this includes work over Lake "1". Piers for the north approach to the Greenwich Cleveland Street flyover (B-603) are located in the Lake "1" north of I-264 and adjacent to Cleveland Street. In this instance, the CEI on-site Environmental Monitor ensured that the contractor strictly adhered to agreed spill precautions. Both Hampton Roads Water Quality and NPDES inspections augmented strict conformance to environmental Best Management Practices (BMP).

Fourth, the completion of the B-602 Bridge widening was on the critical path and was one the last pieces of work to open up the I-264 corridor in its final configuration. The bridge work was completed in November 2022.

9. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan was March 31, 2017. This annual update is based on a "data as of" date of December 31, 2022. Construction is complete and this will be the last annual update.

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

The project estimate of \$194,503,887 will be exceeded due to Right of Way and Construction overruns. Twenty change orders were executed in 2022 totaling \$846,170. The total amount of executed change orders for the project is seventy-nine at a value of \$6,811,736. The current total project cost estimate is \$205,295,030.

11. COST AND FUNDING TRENDS SINCE INITIAL FINANCIAL PLAN

Due to change orders, increased inspection needs to cover the contractor's schedule, and Right of Way costs exceeding estimates, final costs will exceed allocations for the project. The current overall budget projection is \$205,295,030. Current allocations are \$194,503,887. Based on current projections and allocations, the project is in deficit by \$10,791,143. In accordance with the Standard Project Agreement (SPA) executed on July 19, 2017, VDOT and HRTAC are working together to address the projected cost overruns. VDOT District PIMS group is coordinating with VDOT IID on smart scale impacts.

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

The original fixed completion date was September 16, 2021. VDOT issued the contractor Change Order No. 75 which provided a non-compensable time extension and revised the fixed completion date to November 11, 2022. Construction of the Phase 2 project is complete with a C-5 Completion Date of November 11, 2022.

13. SCHEDULE TRENDS SINCE INITIAL FINANCIAL PLAN

Right of Way is complete with the exception of resolving one parcel conveyance and two residue parcels, which could not be done until after completion of construction.

Construction was completed on November 11, 2022.