



**September 2023  
Monthly Project Report  
I-64 HAMPTON ROADS  
BRIDGE-TUNNEL  
EXPANSION**

**Report No. 54**  
Project No. 0064-M06-032



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**Issue Date: October 6, 2023**

Prepared by:

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## 1. Executive Summary

### 1.1 Overview

This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from August 20, 2023 – September 23, 2023. The Design-Builder for the project is Hampton Roads Connector Partners (HRCP), a consortium that includes lead contractors Dragados, Vinci, Flatiron, and Dodin Campenon Bernard, with lead designers HDR and Mott MacDonald.

The current reporting period is aligned with HRCP's fiscal-month structure, on which the project's design-build schedule updates and invoiced construction progress are based. Reporting periods typically close on the Saturday on or preceding the 24<sup>th</sup> of each month.

During this reporting period, project accomplishments included the following:

- South Island Progress:
  - Began installation of ballast delivery system at the headwall in Cell 1.
- Tunnel Progress:
  - Excavated 630 ft this period (1,670 ft total excavation) for High Occupancy Toll (HT) tunnel.
- North Island Progress:
  - Completed waterproofing of Cell 1 base slab.
  - Jet grout approach plug at 62% complete.
  - Installation of concrete for headwall 42% complete.
- Landside Progress:
  - Completed girder erection at Mallory St. Bridge for Phase 1 bridge replacement.
- Marine Progress:
  - North Trestle eastbound piles 87% complete.
  - North Trestle westbound caps 16% complete.
  - South Trestle eastbound caps 65% complete.
  - South Trestle westbound MOT beams 72% complete.

### 1.2 Priorities

VDOT's priorities for the Project are to achieve the following objectives:

- To provide mobility enhancements and travel-time reliability along the Project corridor.
- To minimize Project impacts on adjacent communities.
- To improve transportation operations and safety throughout the Project corridor.
- To develop public infrastructure in a financially responsible manner.

## 1.3 Key Updates

### Project Schedule

The last approved schedule for the project is Update 49 (data date: August 20, 2023), and the schedule information in this report reflects this update. Schedule 49 was returned Approved as Noted on September 12, 2023.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 49 is reporting Substantial Completion on September 24, 2026.
- HRCP's Schedule Update 49 is reporting Final Completion on November 23, 2026.

### Project Budget

The project budget summary below now includes all incurred to date costs through September 23, 2023 and does not include forecasted cost outside of the reporting period.

- Project budget overview:

Current total project budget:	\$ 3,935,451,641
Total costs to date:	\$ 2,008,858,362
<b>Remaining project budget:</b>	<b>\$ 1,926,593,279</b>

- Design-build contract overview:

Design-build contract original amount:	\$ 3,299,997,227
Net change orders:	\$ (10,798,042)
Exercised Options:	\$ 73,454,414
Material Price Adjustments to Date:	\$ 3,082,681
Assessed Liquidated Damages (LD):	\$ (939,000)
Design-build contract sum to date:	\$ 3,364,797,280
Expenditures to date:	\$ 1,911,354,917
<b>Remaining design-build contract amount:</b>	<b>\$ 1,453,442,363</b>

- Design-build progress to date:

Project Management:	68.0%
Design:	91.4%
Physical Construction Progress:	39.3%
<b>Overall:</b>	<b>56.8%</b>

## Environmental

Environmental updates for this reporting period include:

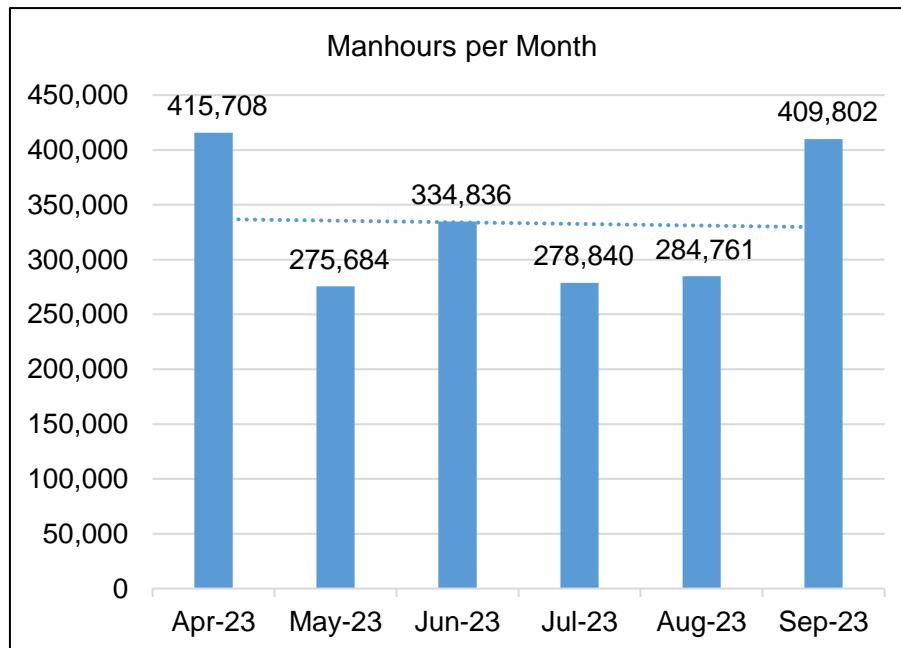
- HRCP resolved the Notice of Violation (NOV) issued by the Virginia Department of Environmental Quality (DEQ) on July 31, 2023.
- HRCP received a Joint Agency letter from the U.S. Army Corps of Engineers (USACE), DEQ, and VDOT dated September 6, 2023, requesting that HRCP address its environmental performance and plan for improvement.
- HRCP responded to the letter on September 18, 2023 and continues to work with the Agencies to address performance concerns.

## Construction

Summary progress updates for this reporting period include:

- Landside Roadways
  - Completed drainage adjacent to Bayville/13<sup>th</sup> View St. Bridge.
  - Completed retaining wall 301 tie-in to South Trestle abutment.
- Marine Works
  - Drove piles at North eastbound permanent trestle (19 installed this period).
  - Placed caps at North westbound permanent trestle (1.5 installed this period).
  - Placed beams at South eastbound permanent trestle (7 installed this period).
  - Placed beams at South westbound MOT trestle (14 installed this period).
- Tunnels and Islands
  - Excavated 630 ft this period (1,670 ft total excavation) for High Occupancy Toll (HT) tunnel.
  - Completed removal of thrust frame and temporary rings in South Island launching pit.
  - 34% complete for Cell 2 excavation at North Island.
- Landside Bridges
  - Completed concrete placement for backwall for Abutment A at Mason Creek Rd. Bridge for eastbound widening.
  - Completed concrete placement of deck spans 52 through 57 at Willoughby Bay Bridge for eastbound widening.
  - Completed driving piles and cap installation at Bents 21 and 36, beam seats at Abutment A, and installation of Span 22 girders at Bay Avenue Bridge for eastbound widening.
  - Completed concrete placements for backwalls for Abutment A and B at 4<sup>th</sup> View St. Bridge for Phase 1 bridge replacement.
  - Completed driving piles at median pier at Patrol Rd. Bridge for westbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of September 30, 2023:



**Project Manhours to Date:**  
8,934,711

## Operations

The following operations activities took place during this reporting period:

- New short-term lane closure at Mallory eastbound and westbound for bridge girder placement.
- New short-term lane closure at Mallory westbound for overhead sign structure #10 drilled shaft foundations.
- New short-term daily detours at W. Bay Avenue on-ramp eastbound to facilitate bridge widening activities.

## Quality

Quality updates for this reporting period include:

- VDOT continues to monitor HRCP's QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Division for shop inspections as required.
- VDOT continues to engage HRCP in discussions on HRCP's implementation of their Quality Management System Plan (QMSP) and the effectiveness of the plan.



## Safety

The following safety performance indicator information is provided by HRCP and is current as of September 30, 2023:

- Total Recordable Incidence Rate: 1.66 (National Average: 2.5)
- Lost Time Incidence Rate: 0.27 (National Average 1.6)

## Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **344** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$541.7 million** to certified DBE/SWaM firms.

## Public Outreach & Media

Public outreach and project media updates provided by VDOT and HRCP for this reporting period include:

- Project team hosted an exhibit/outreach tent at NAS Oceana STEM Event/Air Show.
- Summer 2023 Project Magazine was released.

## 2. Project Schedule

### 2.1 Schedule Status

The following table depicts key milestone dates for the project and has been updated as of the current approved schedule. The last approved schedule for the project is Update 49 (data date: August 20, 2023), and the schedule information in this report reflects this update. Contractual Substantial and Final Completion dates remain unchanged.

	Contract Requirement	August 2023 Schedule	Actual
<b>NTP</b>		Sep 11, 2020	Sep 11, 2020
<b>Substantial Completion</b>	Sep 1, 2025	Sep 24, 2026	
<b>Final Completion</b>	Nov 1, 2025	Nov 23, 2026	

### 2.2 Longest Path

The longest path/critical path in Project Schedule Update 49 is driven by the following activities:

- TBM drive in High Occupancy Toll Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose Tunnel
- TBM disassembly in south pit
- General Purpose Tunnel Interior Fit Out – Section 8
- General Purpose Egress Corridor – Fire Life Safety System
- Commissioning – General Purpose Tunnel – Functional Testing
- Commissioning – High Occupancy Toll and General Purpose Operational Testing
- Commissioning – Tunnel, Buildings, Roadways, and Trestles Integration Testing
- ITT Reversal
- Substantial Completion

## 2.3 Impact Analysis

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Several elements of work are near-critical and could affect schedule performance if they are not addressed diligently. VDOT and HRCP are closely monitoring these activities. The following work elements have been identified as near critical, meaning there is less than one month of float in Schedule Update 49.

### **South Portal**

- South Portal – Rectilinear Approach Capping Beams – Phase 3
- South Portal – Rectilinear Approach Permanent Structures
- South Portal Cell 1 & 2 Permanent Structures – Exterior Walls, Interior Walls & Slabs, Roof Slabs

### **South Island**

- South Island – Temporary Private Utilities (Verizon & VDOT/Cox)
- Slurry Treatment Plant Disassembly & Demobilization
- South Island Buildings – Ventilation Building, Inspection Booths, Generator Building, and Fuel & Water Tanks

### **Tunneling**

- Tunneling U-Turn – Preparation, Gantry 3 & 4
- General Purpose Tunnel – Interior Structures Construction

### **North Portal**

- North Portal – Temporary Headwall Construction
- North Portal – Cell 2 Excavation & Strut Installation
- North Portal Cell 1 & 2 Permanent Structures – Exterior Walls, Interior Walls & Slabs
- North Portal – Rectilinear Approach Permanent Structures

### **North Island**

- North Island Buildings – Generator, Fuel & Water Tanks, Inspection Booth, Garage Building, Ventilation Building, and Flood Gate House Building
- North Island Restoration – Utilities, Paving, Civil Finishes, Signage and Pavement Markings

### **Roadway and Land Bridges**

- Segment 1 Phase 1 – I-64 North Shore Roadway, Waterline Relocation, Drainage, and RW108
- Segment 1 – Shore Feeder Medium Voltage Cable Relocation
- Segment 1, 3, 3b, 3d, & 4 – ITS – Lane Use Signals, Overhead Sign Structure, Dynamic Messaging Sign, and Overheight Detector
- Segment 3b Phase 1, 2, 2A, 3A, 4 – I-64 Willoughby Spit PV Drains/Ground Improvement, Retaining Walls, Drainage, Roadway, and Temporary Lighting
- Segment 3b – Rockfish Substation
- Segment 3b Phase 4 – 13<sup>th</sup> Avenue Ramp C & F Construction

- Segment 3d Phase 1, 2, 2A, 3 & 4 – Willoughby Bridge to Mason Creek – Median Widening, Retaining Walls, Storm Drainage and Roadway
- Segment 3d 4<sup>th</sup> View Ramp H & I – Surcharge and Ramp Construction
- Segment 4 Phase 2, 2A, 3, 4, 4A – Norfolk to Navy – Median Widening, Retaining Walls, Storm Drainage, and Roadway
- Mallory Bridge – Phase 1 & 2
- 13<sup>th</sup> Avenue Bridge – Eastbound Abutment A
- Willoughby Bay Bridge – Eastbound/Westbound Superstructure Construction, Westbound Rehabilitation

### **Trestles**

- North Trestle Utilities – Eastbound Temporary MV/ITS Utility and Permanent ITS/SCADA/Fire Alarm, Westbound Conduits & Hangers and Permanent Wet Utilities
- North Trestle Eastbound – Zone 1 – Abutment A, Superstructure Construction
- North Trestle Westbound – Zone 7, 8, 9, and 10 – Substructure/Superstructure Construction
- North Trestle – Eastbound and Westbound Demolition
- South Island Expansion – Marine Works, Land Works, and Island Expansion
- South Trestle Utilities – Eastbound Private Utility Relocation and Westbound Private Utilities and ITS/SCADA/Fire Alarm System
- South Trestle – Eastbound Zone 1, 2, and 5 Superstructure Construction
- South Trestle – Westbound Zone 7, 8, and 9 – Abutment D, Substructure and Superstructure Construction
- South Trestle – Existing Trestle Demolition

### **Commissioning and Integration**

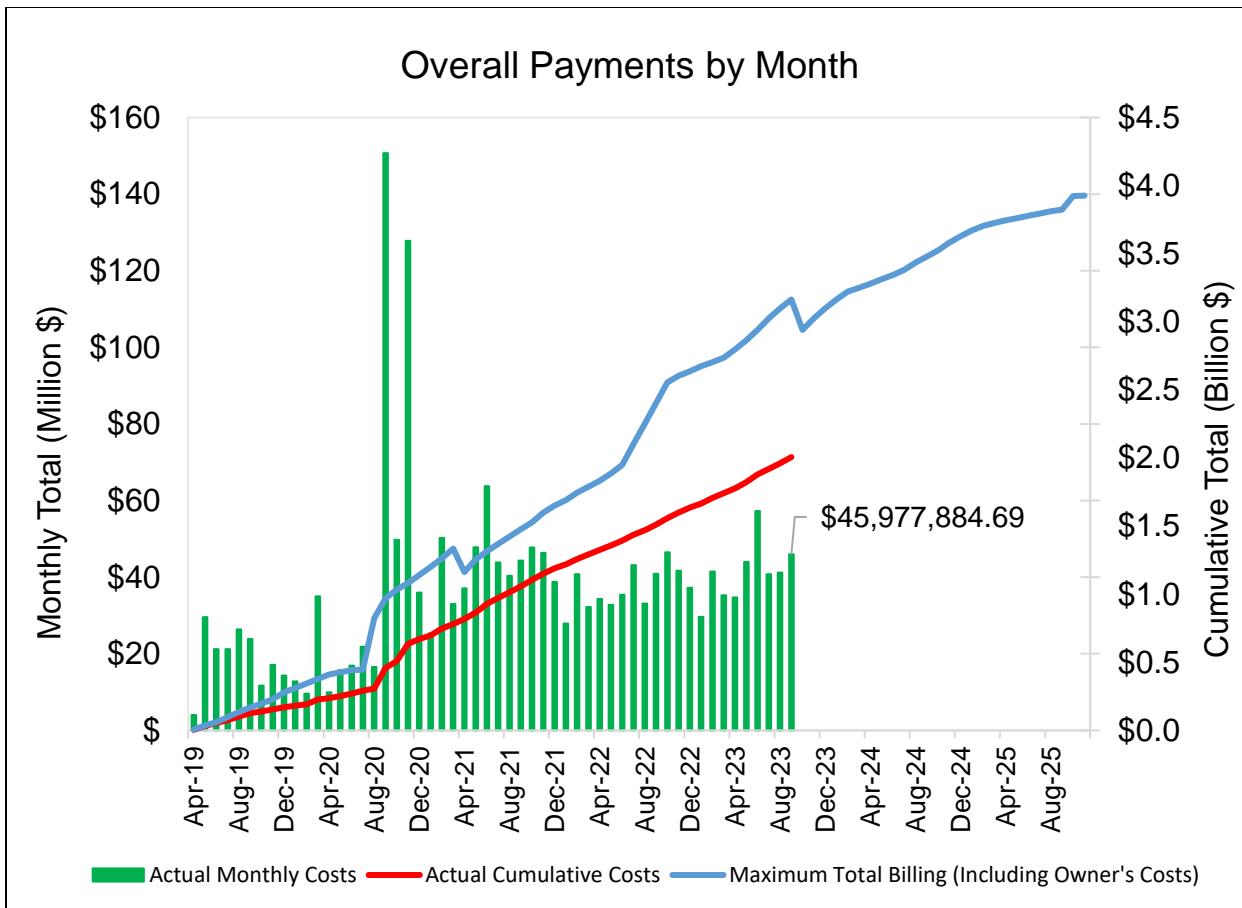
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning – Operational Testing – General Purpose Fire System, General Purpose Medium Voltage/Low Voltage, General Purpose Drainage System

### 3. Project Budget

#### 3.1 Overall Budget

The overall budget outlined in this report is based on the terms and conditions of Article 3 (Project Funding) in the Project Agreement for Funding and Administration (PAFA). The cost curve is based on Exhibit 6 of the Comprehensive Agreement (monthly maximum cumulative compensation amount).

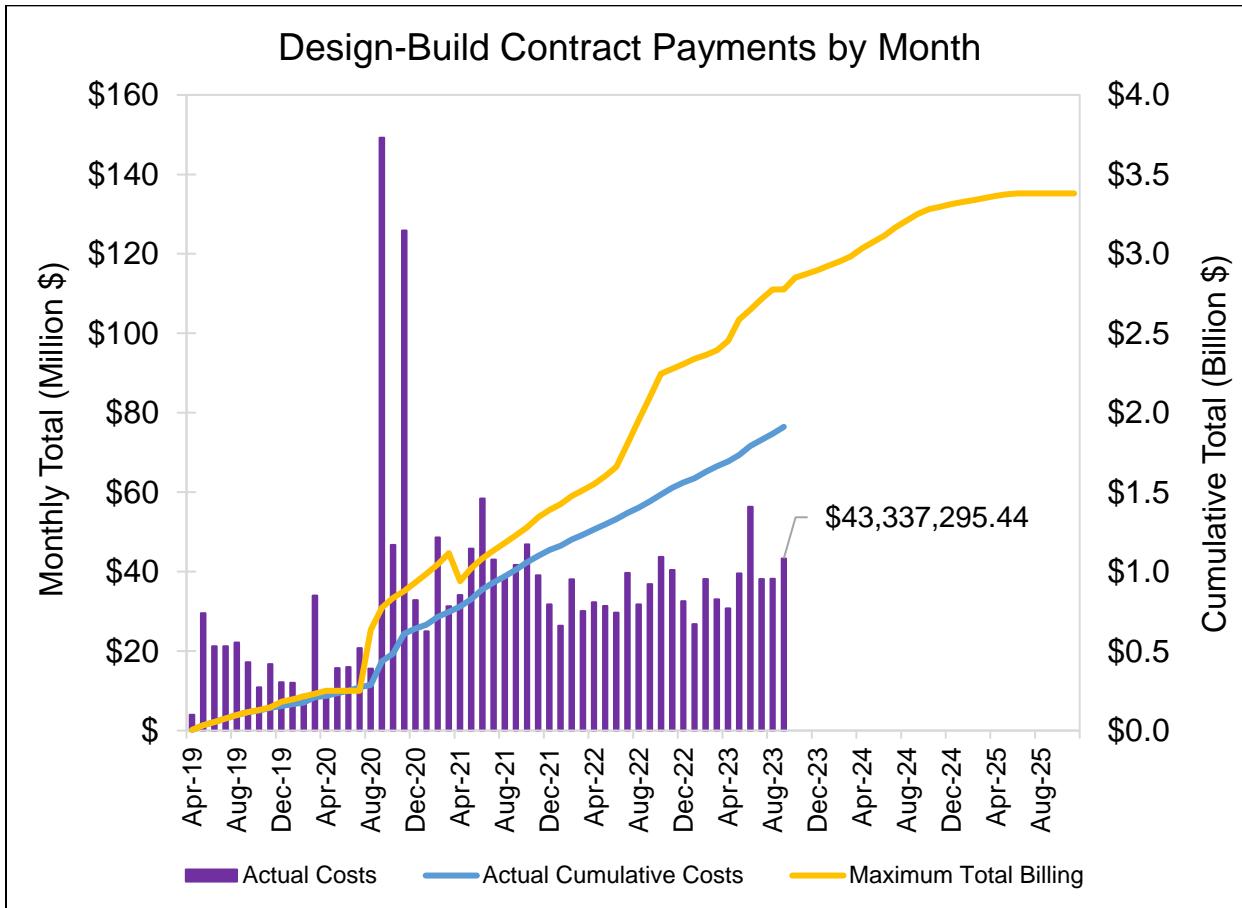
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<b><u>Comprehensive Agreement</u></b>					
<i>Construction</i>	\$43,337,295.44	\$1,883,128,982.76	\$3,299,997,227.00	\$1,416,868,244.24	57.06%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$2,364,160.96	\$84,644,132.00	\$122,000,000.00	\$37,355,868.00	69.38%
<i>Right of Way</i>	\$21,568.23	\$8,859,313.24	\$15,000,000.00	\$6,140,686.76	59.06%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$65,283.78	\$27,334,764.81	\$335,000,000.00	\$307,665,235.19	8.16%
<i>Bridge Repair Work Option</i>	\$189,576.28	\$4,891,169.38	\$73,454,413.96	\$68,563,244.58	6.66%
<b><u>Total</u></b>	<b>\$45,977,884.69</b>	<b>\$2,008,858,362.19</b>	<b>\$3,935,451,640.96</b>	<b>\$1,926,593,278.77</b>	<b>51.05%</b>



\*The Maximum Total Billing showed an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve

### 3.2 Design-Build Contract Cost Status

The budget and planned cost have been established based on the maximum cumulative compensation amount. For this period, the invoiced expenditures cover the activities noted in this report.



\*The Maximum Total Billing showed an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve

### 3.3 Budget by Funding Source

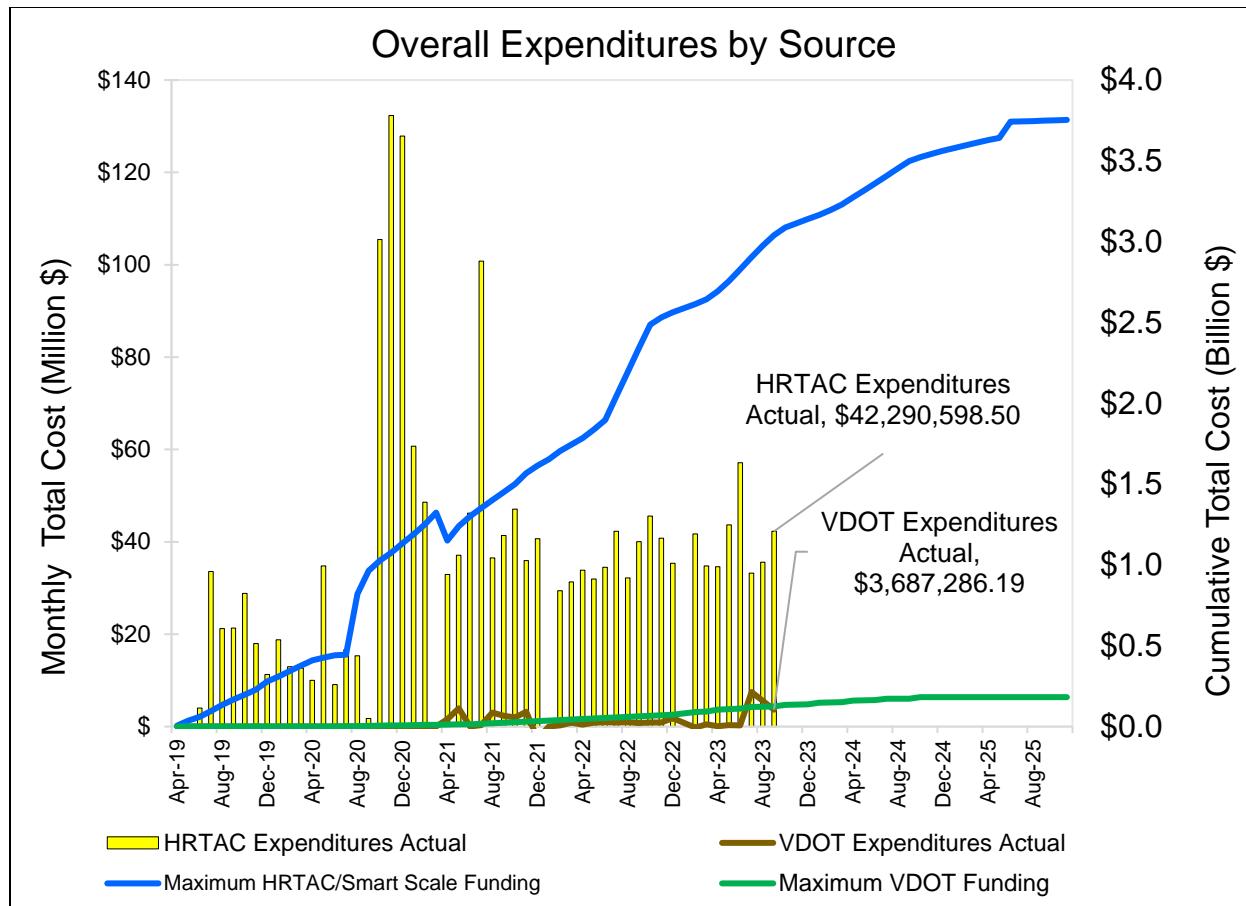
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as HRCP refines its design, construction means-and-methods, activity sequences, and project resourcing.

#### 3.3.1 HRTAC and Smart Scale

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<b>Comprehensive Agreement</b>					
Construction	\$39,849,257.53	\$1,850,967,030.00	\$3,204,569,251.00	\$1,353,602,221.00	57.76%
<b>Owner Costs</b>					
Administration	\$2,354,488.96	\$82,119,387.00	\$118,472,054.00	\$36,352,667.00	69.32%
Right of Way	\$21,568.23	\$8,859,313.24	\$15,000,000.00	\$6,140,686.76	59.06%
No-Excuses Incentive	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
Contingency	\$65,283.78	\$26,081,966.03	\$325,428,276.00	\$299,346,309.97	8.01%
<b>Total</b>	<b>\$42,290,598.50</b>	<b>\$1,968,027,696.27</b>	<b>\$3,753,469,581.00</b>	<b>\$1,785,441,884.73</b>	<b>52.43%</b>

#### 3.3.2 VDOT

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<b>Comprehensive Agreement</b>					
Construction	\$3,488,037.91	\$32,161,952.76	\$95,427,976.00	\$63,266,023.24	33.70%
<b>Owner Costs</b>					
Administration	\$9,672.00	\$2,524,745.00	\$3,527,946.00	\$1,003,201.00	71.56%
Right of Way	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
No-Excuses Incentive	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
Contingency	\$0.00	\$1,252,798.78	\$9,571,724.00	\$8,318,925.22	13.09%
Bridge Repair Work Option	\$189,576.28	\$4,891,169.38	\$73,454,413.96	\$68,563,244.58	6.66%
<b>Total</b>	<b>\$3,687,286.19</b>	<b>\$40,830,665.92</b>	<b>\$181,982,059.96</b>	<b>\$141,151,394.04</b>	<b>22.44%</b>



### 3.4 Contingency

#### 3.4.1 Contract Changes

	Description	Date	Value	Time
CO-1	VDOT's Acquisition of Willoughby Staging Area	2/11/2020	\$ (3,000,000.00)	0 days
CO-2	Minor Revisions to Technical Requirements	3/18/2020	\$ -	0 days
CO-3	Tunnel Approach Structure Support of Excavation Requirements Refinement	4/28/2020	\$ -	0 days
CO-4	Dispute Resolution Board (DRB) Allowance	5/12/2020	\$ 200,000.00	0 days
CO-5	North Island Armor Stone Value Engineering Change Proposal (VECP)	4/28/2020	\$ (2,011,117.50)	0 days
CO-6	Exit Ramp at Bayville Avenue	5/29/2020	\$ 46,906.29	0 days
CO-7	Minor revisions to the Technical Requirements	7/16/2020	\$ -	0 days
CO-8	Zero Spread Drainage	9/16/2020	\$ 3,239,212.24	0 days
CO-9	Roadway and Bridge Scope Validation Issues	9/4/2020	\$ 15,516,248.00	0 days
CO-10	Slurry Walls as Permanent Structures	8/28/2020	\$ -	0 days
CO-12	Road and Bridge Lighting Requirements	8/27/2020	\$ 2,495,000.00	0 days
CO-13	Bridge Repair Work-Exercise Option	10/9/2020	\$ 73,454,413.96	0 days
CO-14	Trestle Barrier Form Liner Elimination	7/29/2020	\$ (99,571.80)	0 days
CO-15	South Island Ground Improvement Value Engineering Change Proposal (VECP)	9/17/2020	\$ (5,338,000.00)	0 days

CO-16	Navy Security Fencing Design	7/15/2021	\$ 150,000.00	0 days
CO-17	Westbound ITT Reduced Instrumentation	10/30/2020	\$ (184,277.50)	0 days
CO-18	Willoughby Bay Bridge Barriers	9/10/2020	\$ -	0 days
CO-19	GeoPak Version Software Updates	8/3/2020	\$ -	0 days
CO-21	Material Price Adjustment for Asphalt Materials	2/26/2021	\$ -	0 days
CO-22	South Island Asbestos Conduits	9/16/2020	\$ 81,973.93	0 days
CO-23	Island & Tunnel Baseline Monitoring Requirements	7/22/2020	\$ -	0 days
CO-24	Construction Water Supply	9/10/2020	\$ (609,157.27)	0 days
CO-25	Solids Handling Pumps Requirements	11/12/2020	\$ -	0 days
CO-26	Mass Notification Independent System Requirements	11/12/2020	\$ -	0 days
CO-27	Fixed Fire Fighting System Requirements	11/16/2020	\$ -	0 days
CO-28	HOT Lane Shoulder Width	3/29/2021	\$ 2,950,000.00	0 days
CO-30	Willoughby Bay Bridges Fender & Lighting Replacement	2/12/2021	\$ 1,495,000.00	0 days
CO-31	Builder's Risk Insurance	10/21/2021	\$ 1,500,000.00	0 days
CO-32	VCU Fisheries and SAV Mitigation Plan	4/16/2021	\$ (1,042,144.00)	0 days
CO-33	Tunnel Finishes Height	12/18/2020	\$ -	0 days
CO-38	H-Piles in Aggressive Soils	12/18/2020	\$ (47,541.00)	0 days
CO-39	Re-use of Existing Drainage Pipes	4/20/2021	\$ (100,984.25)	0 days
CO-40	Update Maximum Cumulative Cost Curve	7/15/2021	\$ -	0 days
CO-41	Wetland Mitigation Costs	4/26/2021	\$ 3,503,400.00	0 days
CO-42	Navy Gate 22 Drainage Design and Construction	8/19/2022	\$ 1,524,940.16	0 days
CO-43	Hybrid Trestle Beam Design	7/2/2021	\$ -	0 days
CO-44	SCADA Control of Deluge Valves	7/27/2021	\$ -	0 days
CO-45	HRCP Project Executive/Representative Change	5/24/2021	\$ -	0 days
CO-46	Tunnel Sprinkler Heads Material Change	7/28/2021	\$ -	0 days
CO-47	Evans Street Approach Slab Settlement Repair	6/22/2022	\$ 34,082.83	0 days
CO-48	Scope Reduction – City of Hampton	8/24/2022	\$ (6,072,941.31)	0 days
CO-49	HRCP Senior Representative Change	7/2/2021	\$ -	0 days
CO-50	Change in Precast Form Tolerance & Curing Methods	1/10/2022	\$ -	0 days
CO-53	Sound Wall Quantity Reconciliation	12/6/2021	\$ (16,561,217.63)	0 days
CO-54	4th View Interchange Design and Construction Drainage	8/17/2022	\$ 984,598.45	0 days
CO-55	HREL Overlap Scope Change in Norfolk - Proposal Costs	8/12/2022	\$ 157,237.34	0 days
CO-56	Building Code Changes - Design	10/21/2022	\$ 2,186,150.00	0 days
CO-57	Design-Builder's Senior and Representative Changes	1/11/2022	\$ -	0 days
CO-58	Scope Reduction – City of Norfolk	5/16/2023	\$ (18,739,670.82)	0 days
CO-59	Fisheries and SAV Mitigation Plan - VCU	6/16/2022	\$ (70,238.22)	0 days
CO-60	Navy Fence (remaining design costs)	8/17/2022	\$ 180,142.36	0 days
CO-61	HRELN Tie-In Zero Drainage Spread	11/29/2022	\$ 2,965,469.69	0 days
CO-62	SIP Forms for Marine Bridges	6/28/2022	\$ -	0 days
CO-63	Bridge Repair Item – Insert Plates-New Unit Prices	8/30/2023	\$ -	0 days
CO-64	Tolling Infrastructure Proposal Costs	10/21/2022	\$ 645,242.40	0 days
CO-65	Snowplowable Raised Pavement Markers (SRPMs)	3/3/2023	\$ 256,174.09	0 days
CO-68	Buoyancy Calculations	3/3/2023	\$ -	0 days

CO-69	Change of Department's Senior Representative	4/6/2023	\$ -	0 days
CO-70	Reuse of Existing Pipe 29-26 to 29-31	7/26/2023	\$ (117,734.20)	0 days
CO-71	Addendum to WO-24 Water Supply Line	4/25/2023	\$ -	0 days
CO-72	Bay Avenue Approach Ramp	6/29/2023	\$ 120,053.43	0 days
CO-74	South Island – Asbestos Pipes	7/7/2023	\$ 128,883.51	0 days
CO-78	Steel Escalation Price Adjustments	9/19/2023	\$ 2,835,839.00	0 days
		<b>TOTAL</b>	<b>\$ 62,656,372.18</b>	<b>0 days</b>

### 3.4.2 Material Price Adjustments

This progress period included the following material price adjustments:

Material	Current Amount	Total to Date	Material Price Adjustment Through
Asphalt	\$ 3,873.77	\$ 83,607.48	July 2023
Fuel	\$ 8,255.63	\$ 347,416.57	July 2023
Steel	\$ 53,154.38	\$ 2,651,656.53	March 2023
<b>Total</b>	<b>\$ 65,283.78</b>	<b>\$ 3,082,680.58</b>	

## 4. Environmental

The following environmental management activities occurred during this reporting period:

### Permits:

- HRCP resolved the Notice of Violation (NOV) issued by the Virginia Department of Environmental Quality (DEQ) on July 31, 2023, paid the required charge, and is awaiting final closeout letter from DEQ.
- HRCP received a Joint Agency compliance letter from the U.S. Army Corps of Engineers (USACE), DEQ, and VDOT dated September 6, 2023, requesting HRCP submit a detailed and measurable plan to improve permit compliance on the project.
- HRCP held a meeting with USACE on September 15, 2023, to discuss and clarify their planned response. HRCP submitted their response to USACE on September 18, 2023 that included an Environmental Permit Compliance Improvement Plan (EPCIP) for USACE review.
- HRCP completed its update on the Wastewater Treatment Plant Operations & Maintenance Manual and forwarded it to DEQ on August 21, 2023 for review.
- HRCP continued to conduct additional in-house environmental compliance training with work crews from landside, islands, and trestle construction areas.

### Marine Mammal Protection:

- No new activities.

### Bird Mitigation:

- On September 1, 2023, HRCP completed their 2023 efforts towards addressing nesting birds in accordance with the Nesting Bird Management and Control Plan.

### Programmatic Agreement:

- No new activities.

### Archeological Discoveries:

- HRCP recovered a buried ship anchor near the 4<sup>th</sup> View ramp while excavating a foundation for a new overhead sign. HRCP is arranging for an archaeologist to evaluate the anchor and provide a written summary to the Department.

### Protected Species:

- No new activities.

## 5. Construction

The figure below illustrates a map of the project corridor. The project is further categorized into four construction areas.

- Construction Area 1 is composed of landside road work.
- Construction Area 2 is composed of marine work, including the North Trestle, South Trestle, and island expansions.
- Construction Area 3 is composed of tunnel and island site work.
- Construction Area 4 is composed of landside road and bridge work.



## 5.1 Construction Area 1: Landside Roadways

### I-64 (Segment 1):

- Continued drainage work in I-64 median in Hampton.

### I-64 (Segment 3):

- Completed drainage adjacent to Bayville/13<sup>th</sup> View St Bridge for eastbound widening.
- Installed sound wall 3-3 along I-64 eastbound between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.
- Completed retaining wall 301 tie-in to South Trestle abutment for eastbound widening.
- Installed permanent ditches and drainage pipe/structure between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.

### I-64 (Segment 4):

- Continued panel installation for retaining wall 407 between Bayview Blvd. Abutment B and Oastes Creek Abutment A for eastbound widening.
- Began drainage work within retaining wall 407 area between Bayview Blvd. Abutment B and Oastes Creek Abutment A.
- Began grading for embankment between Mason Creek and 1<sup>st</sup> View bridges for eastbound widening.



◀ **Retaining Wall 407 Eastbound**  
Placement of roadway fill for new eastbound lanes between Bayview Blvd. Bridge and Oastes Creek Bridge

## 5.2 Construction Area 2: Marine Trestle Work

### North Trestle:

- **Eastbound Trestle**
  - 19 piles driven during this period (223 out of 256 total piles driven).
  - 2.5 caps placed during this period (30 out of 36 total caps placed).
  - 28 beams placed during this period (224 out of 296 total beams placed).
- **Westbound Trestle**
  - 1.5 caps placed during this period (7.5 out of 46 total caps placed).
  - 1 deck placed during this period (3.5 out of 45 total decks placed).

### South Trestle:

- **Eastbound Trestle**
  - 7 beams placed during this period (402 out of 698 total beams placed).
  - 4 decks placed during this period (9.5 out of 53 total decks placed).
  - 3 piles driven during this period (321 out of 465 total piles driven).
  - Partial cap placed during this period (35 out of 54 total caps placed).
- **Westbound Trestle MOT**
  - 1 cap placed during this period (21 out of 24 total caps placed).
  - 14 beams placed during this period (58 out of 81 total beams placed).



◀ **South Trestle Eastbound**  
Placement of girders at Span 20

## 5.3 Construction Area 3: Tunnels and Islands

### South Island:

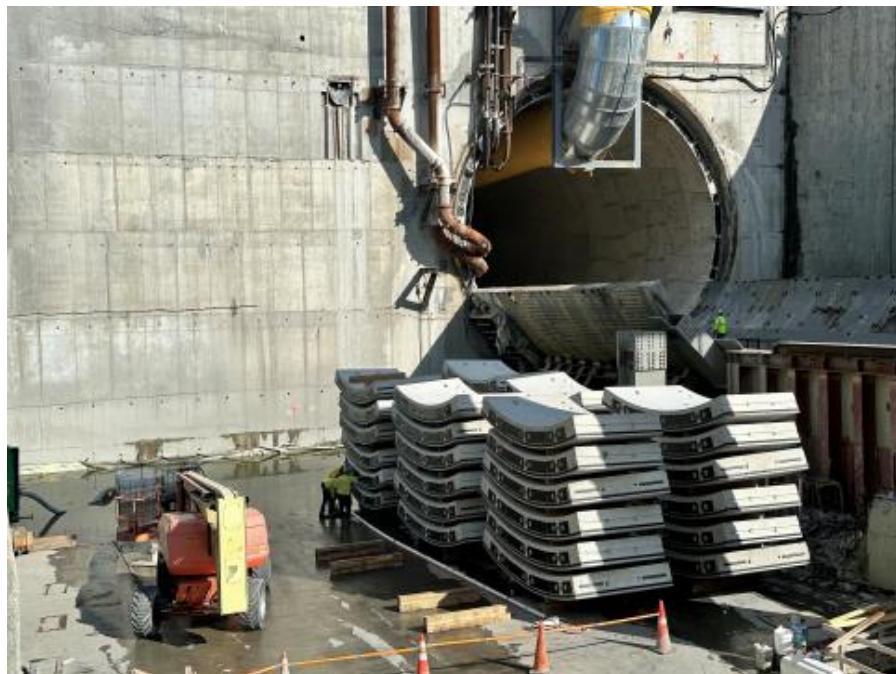
- Began installation of ballast delivery system at headwall in Cell 1 for upcoming placement of roadway ballast material within tunnel.
- Began installation of struts at rectilinear approach section leading into Cell 3.

### North Island:

- 62% complete for jet grout plug at approach section (771 of 1240 total columns).
- Completed waterproofing at Cell 1 base slab of receiving shaft.
- 42% complete for headwall concrete placement at Cell 1 of receiving shaft.
- 34% complete for Cell 2 excavation.
- Began installation of level 2 struts in Cell 2.
- Began installation of rebar for Cell 1 base slab of receiving shaft.

### Tunnel:

- Completed removal of thrust frame and partial temporary rings in South Island shaft as part of scheduled pause in tunneling for shaft reconfiguration. Resumed tunneling on August 28, 2023.
- 21% complete for High Occupancy Toll (HT) tunnel excavation (1,670 ft out of 7940 total ft excavated).
- 94 concrete tunnel rings installed this period (244 out of 1194 total rings installed).
- 85% complete for precast tunnel segment liner production.



◀ HT Tunnel  
Segment storage in Cell 1

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	18,268	85%

## 5.4 Construction Area 4: Landside Bridges

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### **Mallory Street Bridge:**

- Completed concrete placements for Abutment B pedestals for Phase 1 bridge replacement.
- Completed girder erection for Phase 1 bridge replacement.

### **Bayville/13<sup>th</sup> View Bridge:**

- Began lead abatement containment system for repair/rehabilitation of existing eastbound and westbound bridges.

### **Willoughby Bay Bridge:**

- Continued installation of deck forms and overhangs for eastbound widening.
- Continued installation of diaphragm rebar and formwork for eastbound widening.
- Completed placement of deck spans 52 through 57 for eastbound widening.
- Began parapet slip forming on deck spans 65 through 76 for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.
- Began pile driving at Bents 17 through 20 for westbound widening.
- Continued installation of temporary trestle at south end for westbound widening.

### **4<sup>th</sup> View Street Bridge:**

- Completed concrete placements for backwalls for Abutment A and B for eastbound widening.

### **Mason Creek Bridge:**

- Continued repair/rehabilitation of existing eastbound and westbound bridges.
- Completed installation of forms for backwall of Abutment A for eastbound widening.

### **1<sup>st</sup> View Street Bridge:**

- Completed slope protection at Abutment B for eastbound widening.
- Began slope protection at Abutment A for eastbound widening.
- Completed cap placement at Pier 2 for westbound widening.
- Began repair/rehabilitation of existing eastbound bridge.

### **Bay Avenue Bridge:**

- Completed placement of beam seats at Abutment A for eastbound widening.
- Continued demolition of mainline parapet and deck overhang for eastbound widening.
- Began installation of mainline stay-in-place (SIP) forms and overhangs for eastbound widening.
- Began pile driving at Bents 21 and 36 for eastbound widening.
- Completed installation of precast cap at Bent 21 and cast-in-place cap at Bent 36 for eastbound widening.
- Completed installation of Span 22 girders for eastbound widening.

### **Evans Street Bridge:**

- Continued repair/rehabilitation of existing eastbound bridge.
- Completed installation of concrete footing at Abutment A for eastbound widening.

**Bayview Boulevard Bridge:**

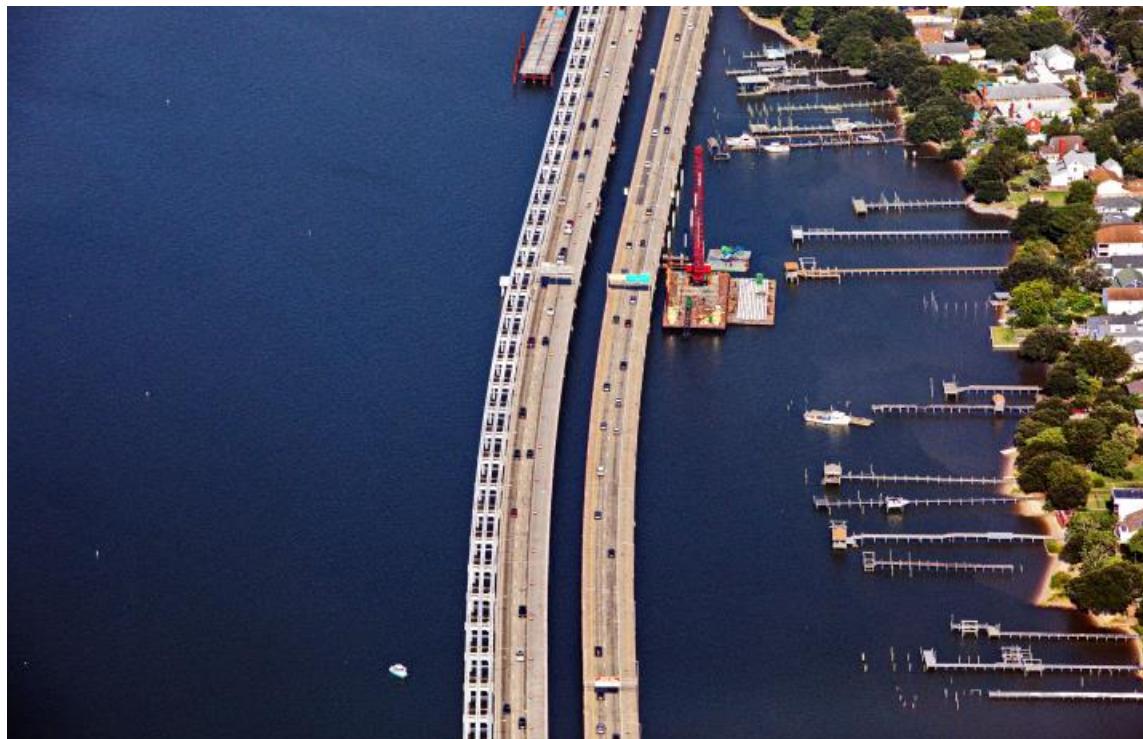
- Continued repair/rehabilitation of existing eastbound and westbound bridges.

**Oastes Creek Bridge:**

- Continued forming, reinforcing, and placing concrete for bridge deck link slabs for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

**Patrol Road Bridge:**

- Completed pile driving at median pier for westbound widening.



► **Willoughby Bay Bridge**  
New eastbound structure and initial westbound pile driving

## 6. Operations

Operations activities include shoulder and lane closures, creation and maintenance of Intelligent Transportation System (ITS) architecture, other maintenance within the corridor, coordination with existing VDOT Operations, and communication with the Hampton Roads Harbor Tunnels (HRHT) facility staff. The following operations activities occurred during this reporting period:

### **Short-Term Lane Closures:**

- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound to facilitate ongoing beam placement as well as concrete placement for piles, caps, and decks.
- North Trestle and South Trestle westbound for concrete pours.
- Willoughby eastbound and westbound for paving.
- Striping maintenance and pavement marker removal throughout project corridor.
- Mallory eastbound and westbound for bridge girder placement.
- Mallory westbound for overhead sign structure #10 drilled shaft foundations.

### **Long-Term Lane Closures:**

- Bay Ave. in Norfolk to facilitate staging-area access for widening Oastes Creek Bridge.
- Bayview Blvd. in Norfolk and Mallory St. in Hampton to facilitate bridge widening.
- West Ocean Ave. in Norfolk traffic shift to facilitate bridge widening.
- 4<sup>th</sup> View St. in Norfolk traffic shift to facilitate bridge widening.
- Patrol Rd. in Norfolk traffic shift to facilitate bridge rehabilitation and widening.
- 13<sup>th</sup> View St. underpass beneath I-64 reduced to one lane to facilitate utility work. Traffic is controlled by temporary automatic one-lane, two-way traffic control signal.

### **Hampton Lane Shifts:**

- No new activities.

### **Norfolk Lane Shifts:**

- No new activities.

### **Detours:**

- Short-term daily detours at 4<sup>th</sup> View on-ramp eastbound to facilitate sound wall construction.
- Short-term daily detours at W. Bay Avenue on-ramp eastbound to facilitate bridge widening.
- Long-term detour at West Evans St. to facilitate bridge widening.
- Long-term detour on 1<sup>st</sup> View St. to facilitate bridge widening.

### **Intelligent Transportation System (ITS):**

- Relocation activities associated with RCU #10 at North Island.
- Installation of ITS and private utility conduit on the North Trestle.

### **Overhead Sign Structures:**

- Installation of overhead sign structure foundations at various locations through the corridor.



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**Routine Maintenance:**

- HRCP performed routine incident management / maintenance operations within corridor.
- HRCP continued removing raised pavement markers throughout corridor.

**Power Systems:**

- No new activities.

## 7. Quality

Quality updates for this reporting period include:

### **Construction Quality Management Plan (CQMP) Updates:**

- VDOT reviews CQMP updates as part of final “Released for Construction” (RFC) design packages and “Notice of Design Change” (NDC) packages. There were no packages submitted this period.
- HRCP submitted Interim Update V14 of the CQMP for review. The update included Appendix R – Precast System Operating Procedures for review. The Interim Plan was returned Approved as Noted.

### **Independent Assurance (IA) Testing Activities:**

- VDOT continues to monitor HRCP’s QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Department for shop inspections as required. This testing included oversight of the HRCP precast yard in Chesapeake and Technopref’s precast yard in Cape Charles producing the tunnel lining segments.

### **Quality Management System Plan (QMSP):**

- VDOT continues to engage HRCP in discussions on HRCP’s implementation of their QMSP and the effectiveness of the plan, which is updated quarterly.

### **Tunnel Quality Plan (TQP):**

- HRCP submitted its Tunnel Quality Plan – Rev 6 for review. VDOT completed its review and returned the plan to HRCP as Revise and Resubmit.

### **Quarterly Updates of Quality Plans:**

- Fourth quarter submission is due next month.

### **Material Book Records:**

- VDOT conducted a monthly review of the current records, and HRCP is responding to audit comments provided by VDOT. Review of the Material Book records includes confirming that HRCP is completing the proper documentation for Buy America compliance. VDOT has completed the full audit of seventeen volumes of Material Book records and is currently auditing two volumes of the Material Book records.

### **Routine Quality Activities:**

- VDOT’s quality team conducted reviews of written deficiency notices (WDNs), non-conformance reports (NCRs), root cause analyses and dispositions of deficiencies, with 48 NCRs reviewed for concurrence during this period. VDOT conducted reviews of QA and QC records for accuracy and quality issues and coordinated documentation reviews through VDOT’s Material Department. VDOT also continues a review of current construction quality by performing inspections based on VDOT’s Construction Quality Improvement Program (CQIP).

## 8. Safety

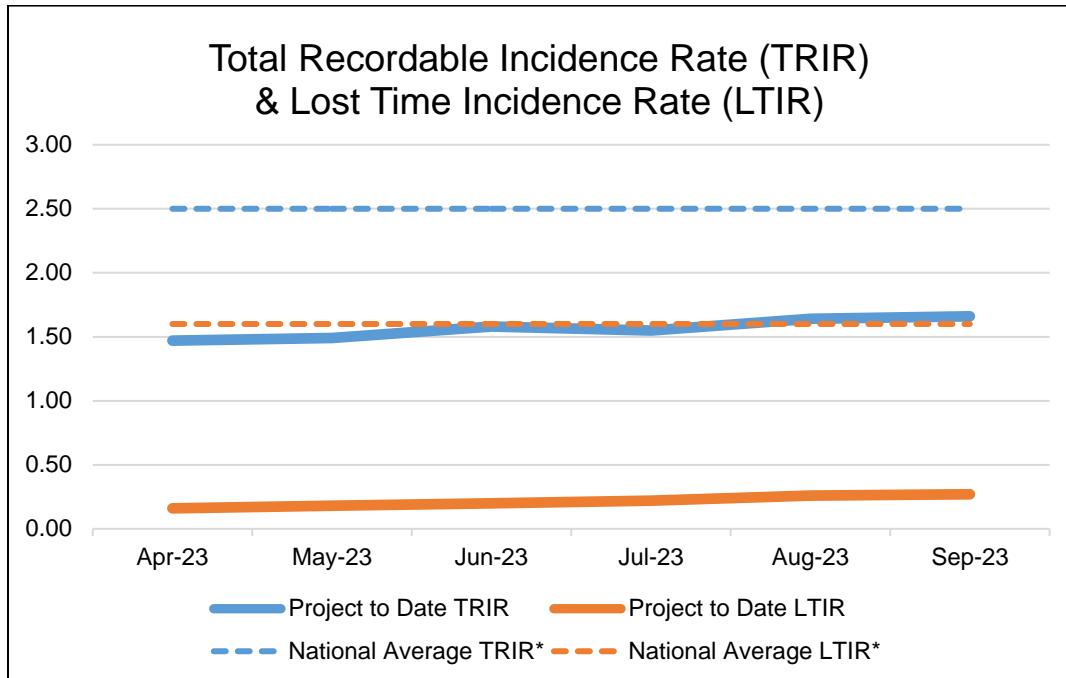
Safety procedures and activities during this reporting period include:

### Safety Activities:

- HRCP leadership presented their plan to address an upward trend in incidents on the project.
- HRCP continues OSHA 10 training with supervisors and foremen.

### Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of September 30, 2023:



*\*National averages are from the Bureau of Labor Statistics, US Department of Labor – 2021 Data for Construction Industry, Published November 9, 2022.*

## 9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP has awarded **344** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was an increase in contract awards for a total of **\$541.7 million** due to newly issued agreements and change orders issued to active DBE/SWaM firms on the project. A total of **\$333.6 million** has been paid for work completed by DBE/SWaM firms.

### Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on September 20, 2023 for the monthly project and compliance update. Discussion focused on the status of payments to select DBE/SWaM subcontractors on the project, annual employment data submissions due, the status of OJT enrollees, and the upcoming joint hiring event.

### Workforce Development Activities:

- For this reporting period, HRCP remained at 32 graduates toward a goal of 80 candidates for VDOT/VTCA's On-the-Job Training (OJT) program. There are currently 12 candidates enrolled with 2 pending VDOT's approval.
- HRCP and VDOT will host the first joint construction hiring expo on October 26, 2023, at the Hampton Roads Workforce Council Resource Center in Norfolk. The event is designed to promote current and upcoming employment opportunities.

### Business Development Activities:

- During this reporting period, business development and outreach activities included:
  - September 7, 2023 – ACEC Disadvantaged Business Enterprise Roundtable, in Richmond
  - September 15, 2023 – Cities of Norfolk and Hampton Construction Vendor Fair, in Norfolk
  - September 19, 2023 – Women's Transportation Seminar – Hampton Roads Diversity, Equity, and Inclusion Luncheon and Panel Discussion, in Norfolk

## 10. Public Outreach & Media

The following public outreach and project media activities occurred in this period:

### Public Outreach

- September 5, 2023 – Project team hosted a project site visit for NAVFAC Mid-Atlantic (CAPT Riethmiller).
- September 15, 2023 – Project team hosted an exhibit/outreach tent at NAS Oceana STEM Event/Air Show.
- September 21, 2023 – Project team presented at the Virginia Zoning Officials Conference in Virginia Beach.

### Public Materials

- September 14, 2023 – Summer 2023 Project Magazine released

### Lane Closures/Advisories

- August 25, 2023 – Weekly Lane Closure Report
- September 1, 2023 – Weekly Lane Closure Report
- September 8, 2023 – Weekly Lane Closure Report
- September 8, 2023 – Travel Advisory – Multiple Stoppages on I-64 East/West on Mallory Street Bridge
- September 15, 2023 – Weekly Lane Closure Report

### Media

- September 6, 2023 – (13 News Now) 200 year old shipwreck remains found during HRBT expansion, says William & Mary archaeologists  
<https://www.13newsnow.com/article/news/local/mycity/norfolk/hrbt-expansion-artifacts-from-early-1800s-shipwreck/>

**Visit our website to view more information:**

[www.hrbtexpansion.org](http://www.hrbtexpansion.org)