



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

**Report No. 57**  
Project No. 0064-M06-032



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**Issue Date: January 5, 2024**

Prepared by:

Virginia Department of Transportation

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## 1. Executive Summary

### 1.1 Overview

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This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from November 19, 2023 – December 9, 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:
  - Completed installation of all shear keys for shaft walls.
- Tunnel Progress:
  - Excavated 227 ft this period (3,693 ft total excavation) for High Occupancy Toll (HT) tunnel.
- North Island Progress:
  - Completed jet grout approach plug.
  - Installation of concrete for headwall 77% complete.
  - Completed installation of level 2 struts in Cell 2 of receiving shaft.
- Landside Progress:
  - Completed installation of steel girders at Mason Creek Bridge for eastbound widening.
  - Completed installation of Abutment A backwall at Oastes Creek Bridge for eastbound widening.
- Marine Progress:
  - North Trestle eastbound piles 91% complete.
  - North Trestle westbound caps 21% complete.
  - South Trestle eastbound decks 34% complete.
  - South Trestle Ramp A piles 58% complete.

### 1.2 Priorities

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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 50 (data date: September 24, 2023), and the schedule information in this report reflects this update. Schedule 50 was returned Approved as Noted on October 16, 2023.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 50 is reporting Substantial Completion on September 24, 2026.
- HRCP's Schedule Update 50 is reporting Final Completion on November 23, 2026.

### Project Budget

The project budget summary below now includes all incurred to date costs through December 9, 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:	\$	2,150,829,374
<b>Remaining project budget:</b>	<b>\$</b>	<b>1,784,622,266</b>

- Design-build contract overview:

Design-build contract original amount:	\$	3,299,997,227
Net change orders:	\$	(10,951,121)
Exercised Options:	\$	73,454,414
Material Price Adjustments to Date:	\$	3,428,294
Assessed Liquidated Damages (LD):	\$	(939,000)
Design-build contract sum to date:	\$	3,364,989,814
Expenditures to date:	\$	2,045,263,835
<b>Remaining design-build contract amount:</b>	<b>\$</b>	<b>1,319,725,979</b>

- Design-build progress to date:

Project Management:	73.1%
Design:	91.7%
Physical Construction Progress:	43.6%
<b>Overall:</b>	<b>60.8%</b>

## Environmental

Environmental updates for this reporting period include:

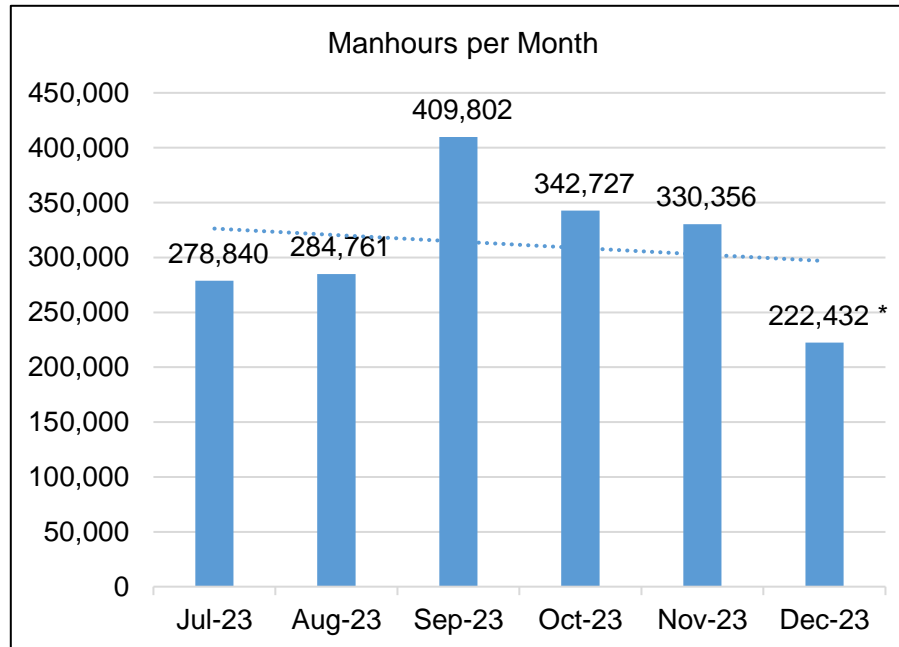
- HRCP provided weekly inspection report summaries to the U.S. Army Corps of Engineers.
- HRCP conducted in-house environmental compliance training with work crews from Landside, Islands, and Trestle construction areas.

## Construction

Summary progress updates for this reporting period include:

- Landside Roadways
  - Completed installation of panels, drainage, and reinforced backfill along retaining wall 108 adjacent to North Trestle Abutment A for eastbound widening.
- Marine Works
  - Placed beams at North eastbound permanent trestle (26 installed this period).
  - Placed cap at North westbound permanent trestle (1 installed this period).
  - Placed decks at South eastbound permanent trestle (2 installed this period).
- Tunnels and Islands
  - Excavated 227 ft this period (3,693 ft total excavation) for High Occupancy Toll (HT) tunnel.
  - Completed jet grout approach plug at North Island.
  - Completed installation of level 2 struts in Cell 2 at North Island.
  - Began level 3 excavation in Cell 2 at North Island receiving shaft.
  - Completed installation of shear keys for permanent shaft walls at South Island.
- Landside Bridges
  - Completed pile driving at Bents 27 – 31 at Willoughby Bay Bridge for westbound widening.
  - Completed installation of Abutment A backwall at Evans St. Bridge for eastbound widening.
  - Completed installation of Abutment B backwall at Bayview Blvd. Bridge for eastbound widening.
  - Began installation of formwork for Abutment B backwall at Patrol Rd. Bridge for eastbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of December 31, 2023:



**Project Manhours to Date:**  
9,830,226

\* HRCP Estimated for December 2023

## Operations

The following operations activities took place during this reporting period:

- Short-term detour of WB Bay Ave. off-ramp to facilitate mobilization of bridge paving equipment.
- Long-term detour on Mason Creek Rd. to facilitate bridge widening.
- Brief stops on I-64 at Willoughby for office trailer deliveries.

## 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 December 31, 2023:

- Total Recordable Incidence Rate: 1.61 (National Average: 2.5)
- Lost Time Incidence Rate: 0.24 (National Average 1.6)

## Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **347** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$545.3 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:

- The Project Team hosted a site visit for CAPT Janet Days, Commanding Officer, Naval Station Norfolk, and key members of her staff.
- The Project Team published the November/December 2023 HRBT Expansion Project Monthly Newsletter.

## 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 50 (data date: September 24, 2023), and the schedule information in this report reflects this update. Contractual Substantial and Final Completion dates remain unchanged.

	Contract Requirement	September 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 50 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

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 50.

## **South Portal**

- South Island Expansion – Rectilinear Approach Construction – Cell 1 Mud Slab, Cell 2 Mud Slab, Base Slab, Ballast Concrete, & Exterior Walls
- 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, Flood Gate House 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 – Cell 2 Mud Slab & Base Slab, Cell 1 & 2 Exterior Walls, Interior Walls & Slabs
- North Portal – Rectilinear Approach Permanent Structures

## **North Island**

- North Island – Temporary Structures – TBM Slab
- 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> View Bridge – Eastbound Substructure & Superstructure
- 13<sup>th</sup> View Bridge – Westbound Median Pier 1 & 2, West Bound Rehabilitation – Expansion Joints & Decks
- Willoughby Bay Bridge – Eastbound Superstructure Construction & Rehabilitation, Westbound Substructure, Superstructure Construction & Rehabilitation
- 4<sup>th</sup> View Bridge – Westbound Rehabilitation
- Mason Creek – Eastbound Substructure Construction, Westbound Rehabilitation
- 1<sup>st</sup> View Bridge – Eastbound Substructure Construction, Westbound Rehabilitation
- Bay Avenue Bridge – Westbound Rehabilitation
- Evans Street Bridge – Eastbound Substructure Construction & Rehabilitation, Westbound Rehabilitation
- Bay View Bridge – Eastbound Substructure & Superstructure Construction, Westbound Rehabilitation
- Oastes Creek Bridge – Westbound Substructure, Superstructure Construction & 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, Zone 5 Finishes
- North Trestle Westbound – Zone 7, 8, 9, and 10 – Substructure/Superstructure Construction
- North Trestle – Eastbound and Westbound Demolition
- South Island Expansion – Marine Trestle Works, Land Ramp 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**

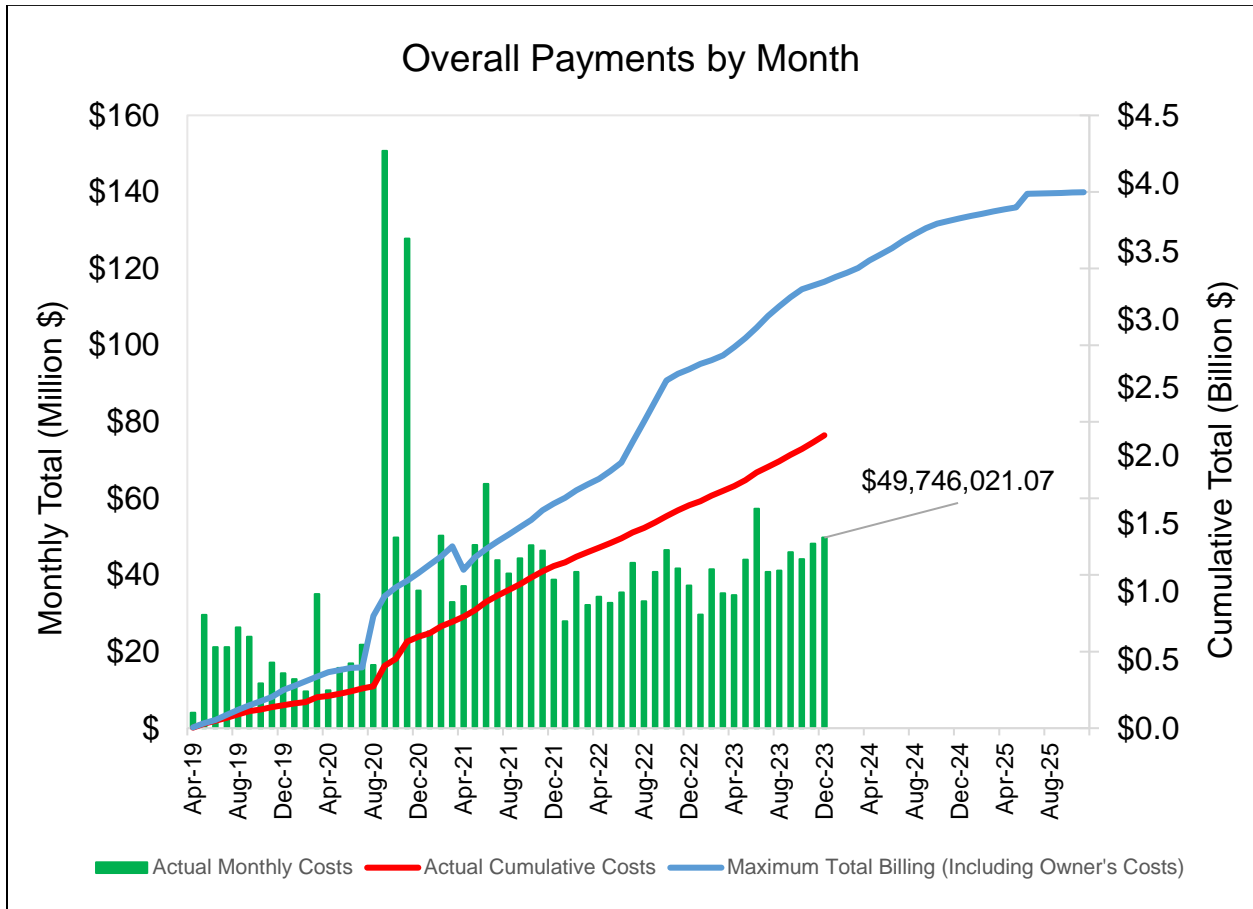
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning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

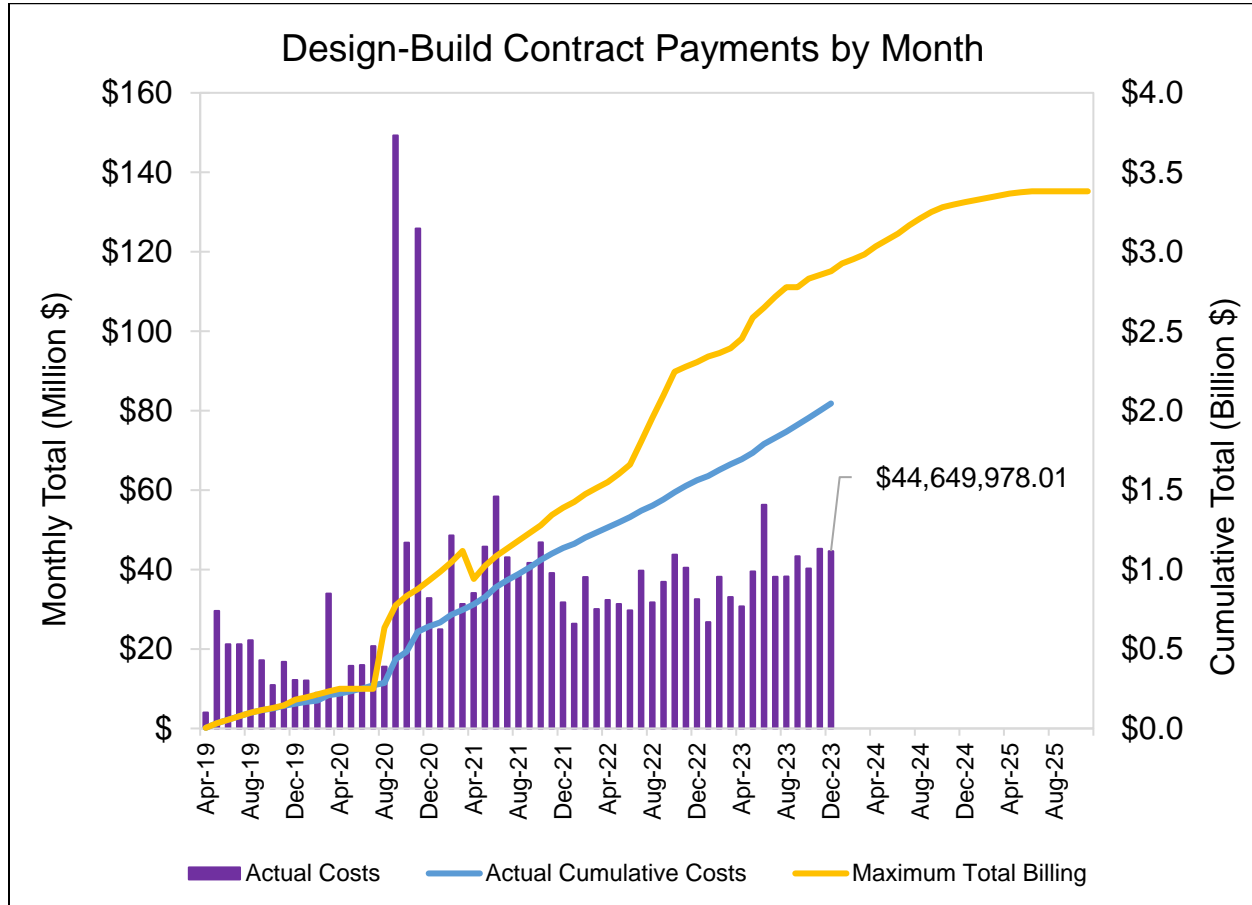
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<b><u>Comprehensive Agreement</u></b>					
<i>Construction</i>	\$44,649,978.01	\$2,013,244,997.29	\$3,299,997,227.00	\$1,286,752,229.71	61.01%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$4,154,535.87	\$92,152,637.07	\$122,000,000.00	\$29,847,362.93	75.53%
<i>Right of Way</i>	\$498,325.80	\$9,412,902.16	\$15,000,000.00	\$5,587,097.84	62.75%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$443,181.39	\$30,758,511.69	\$335,000,000.00	\$304,241,488.31	9.18%
<i>Bridge Repair Work Option</i>	\$0.00	\$5,260,326.26	\$73,454,413.96	\$68,194,087.70	7.16%
<b><u>Total</u></b>	<b>\$49,746,021.07</b>	<b>\$2,150,829,374.47</b>	<b>\$3,935,451,640.96</b>	<b>\$1,784,622,266.49</b>	<b>54.65%</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

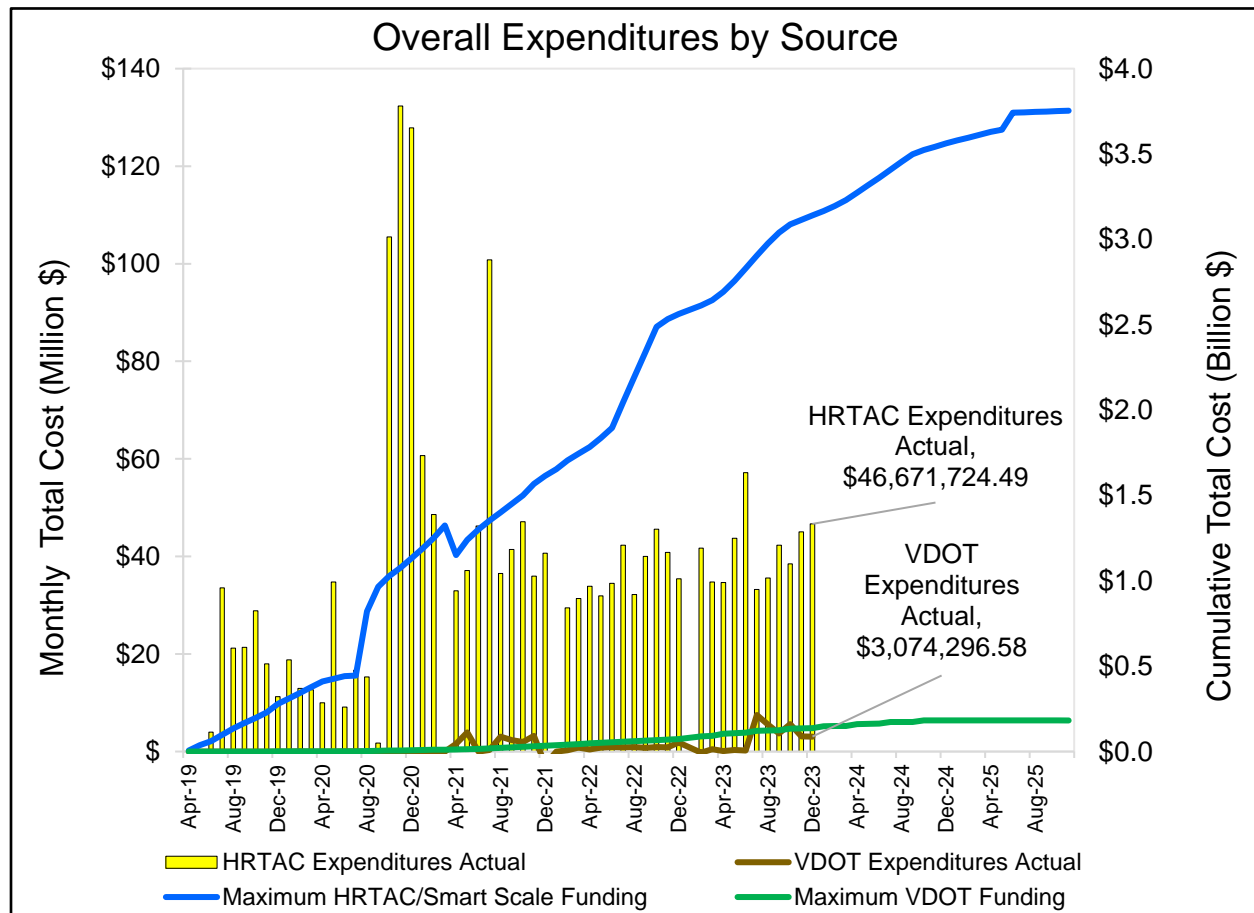
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as HRCF 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><u>Comprehensive Agreement</u></b>					
<i>Construction</i>	\$41,822,470.97	\$1,973,482,992.95	\$3,204,569,251.00	\$1,231,086,258.05	61.58%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$3,907,746.33	\$88,635,502.07	\$118,472,054.00	\$29,836,551.93	74.82%
<i>Right of Way</i>	\$498,325.80	\$9,412,902.16	\$15,000,000.00	\$5,587,097.84	62.75%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$443,181.39	\$26,669,873.91	\$325,428,276.00	\$298,758,402.09	8.20%
<b><u>Total</u></b>	<b>\$46,671,724.49</b>	<b>\$2,098,201,271.09</b>	<b>\$3,753,469,581.00</b>	<b>\$1,655,268,309.91</b>	<b>55.90%</b>

#### 3.3.2 VDOT

	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>	\$2,827,507.04	\$39,762,004.34	\$95,427,976.00	\$55,665,971.66	41.67%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$246,789.54	\$3,517,135.00	\$3,527,946.00	\$10,811.00	99.69%
<i>Right of Way</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>Contingency</i>	\$0.00	\$4,088,637.78	\$9,571,724.00	\$5,483,086.22	42.72%
<i>Bridge Repair Work Option</i>	\$0.00	\$5,260,326.26	\$73,454,413.96	\$68,194,087.70	7.16%
<b><u>Total</u></b>	<b>\$3,074,296.58</b>	<b>\$52,628,103.38</b>	<b>\$181,982,059.96</b>	<b>\$129,353,956.58</b>	<b>28.92%</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-77	Scope Reduction – Segment 5 ITS Trunk Line	11/12/2023	\$ (153,079.38)	0 days
CO-78	Steel Escalation Price Adjustments	9/19/2023	\$ 2,835,839.00	0 days
<b>TOTAL</b>			<b>\$ 62,503,292.80</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	\$ 8,682.22	\$ 148,856.88	October 2023
Fuel	\$ 14,947.41	\$ 412,301.30	October 2023
Steel	\$ 234,373.06	\$ 2,867,135.67	June 2023
<b>Total</b>	<b>\$ 258,002.69</b>	<b>\$ 3,428,293.85</b>	

\* The finalization of the steel index takes the Federal government about 4 months to complete.

## 4. Environmental

The following environmental management activities occurred during this reporting period:

**Permits:**

- HRCP provided weekly inspection report summaries to the U.S. Army Corps of Engineers on December 1, 2023 and December 8, 2023.
- HRCP met with VDOT staff to review draft emissions data for the North Island and South Island generators in preparation to discuss path forward with DEQ air permit staff.
- HRCP conducted additional in-house environmental compliance training with work crews from Landside, Islands, and Trestle construction areas.

**Marine Mammal Protection:**

- No new activities.

**Bird Mitigation:**

- No new activities.

**Programmatic Agreement:**

- No new activities.

**Archeological Discoveries:**

- No new activities.

**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):

- Completed installation of panels, drainage, and reinforced backfill along retaining wall 108 adjacent to North Trestle Abutment A for eastbound widening.

### I-64 (Segment 3):

- Continued installation of wick drain working platform between 15<sup>th</sup> View St. and 13<sup>th</sup> View St. for eastbound widening.
- Continued drainage work for sound wall 3-3 along I-64 eastbound between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.
- Began installation of precast coping and moment slab for retaining wall 301 adjacent to South Trestle Abutment D.

### I-64 (Segment 4):

- Continued grading for embankment between Mason Creek and 1<sup>st</sup> View bridges for eastbound widening.
- Continued grading for embankment adjacent to Evans St. Abutment A for eastbound widening.
- Continued installation of drainage at Patrol Rd.



◀ **Mason Creek and 1<sup>st</sup> View Eastbound Embankment work between Mason Creek and 1<sup>st</sup> View Bridges**

## 5.2 Construction Area 2: Marine Trestle Work

### North Trestle:

- **Eastbound Trestle**
  - Partial cap placed during this period (31 out of 36 total caps).
  - 1 deck placed during this period (27.5 out of 36 total decks placed).
  - 2 piles driven during this period (232 out of 256 total piles driven).
  - 26 beams placed during this period (268 out of 296 total beams placed).
- **Westbound Trestle**
  - 1 cap placed during this period (9.5 out of 46 total caps placed).

### South Trestle:

- **Eastbound Trestle**
  - 2 decks placed during this period (18 out of 53 total decks placed).
- **HOT Lanes Trestle**
  - 3 piles driven during this period (19 out of 66 total piles driven).
  - 1 cap placed during this period (4 out of 16 total caps placed).
- **Ramp A**
  - 3 piles driven during this period (19 out of 33 total piles driven).



#### ◀ North Trestle Westbound

Bent 3 piles prepared to receive the final precast cap segment

### 5.3 Construction Area 3: Tunnels and Islands

#### South Island:

- Completed installation of shear keys for permanent shaft walls.
- 54% complete for installation of temporary struts at rectilinear approach section leading into Cell 3 of launch shaft.
- 11% complete for installation of south portal external walls.

#### North Island:

- Completed jet grout plug at approach section, with over 1200 columns total.
- 77% complete for headwall concrete placement at Cell 1 of receiving shaft.
- Completed installation of level 2 struts in Cell 2 of receiving shaft.
- Began level 3 excavation in Cell 2 of receiving shaft.

#### Tunnel:

- 46.5% complete for High Occupancy Toll (HT) tunnel excavation (3,693 ft out of 7940 total ft excavated).
- 34 concrete tunnel rings installed this period (547 out of 1,194 total rings installed).
- First booster pump installed to maintain pressure in slurry return line for excavated soil.
- 97% complete for precast tunnel segment liner production.
- Began installation of cement-treated base (CTB) ballast for tunnel roadway.



#### ◀ TBM Tunnel Progress

Installation of temporary slurry booster pump in tunnel

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	20,847	97%

## 5.4 Construction Area 4: Landside Bridges

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### **Willoughby Bay Bridge:**

- Continued repair/rehabilitation of existing westbound bridge.
- Continued installation of formwork, reinforcing steel, and embedded items for light-pole supports for eastbound widening.
- Completed pile driving at Bents 27 - 31 for westbound widening.

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

- Continued demolition of parapet/overhang to facilitate bridge widening.

### **Mason Creek Bridge:**

- Completed installation of steel girders for eastbound widening.
- Continued repair/rehabilitation of existing eastbound and westbound bridges.

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

- Continued installation of deck overhangs and formwork for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

### **Bay Avenue Bridge:**

- Continued installation of formwork and concrete for slope protection at Abutment A for eastbound widening.
- Continued installation of mainline stay-in-place (SIP) deck forms and overhangs for eastbound widening.
- Continued demolition of mainline parapet and deck overhang for eastbound widening.

### **Evans Street Bridge:**

- Completed installation of Abutment A backwall for eastbound widening.

### **Bayview Boulevard Bridge:**

- Completed installation of Abutment B backwall at Bayview Blvd. Bridge for eastbound widening.

### **Oastes Creek Bridge:**

- Completed installation of Abutment A backwall for eastbound widening.

### **Patrol Road Bridge:**

- Began installation of formwork for Abutment B backwall for eastbound widening.



◀ **Mason Creek  
Bridge Eastbound  
Girder erection**



◀ **Oastes Creek  
Bridge Eastbound  
Installation of backwall  
of Abutment A**

## 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.
- Striping maintenance and pavement marker removal throughout project corridor.
- Slow rolls and all stops on I-64 at Willoughby for temporary lighting installation.
- All stops on I-64 at Willoughby for office trailer deliveries.

### 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.

### Norfolk Lane Shifts:

- None this period.

### Detours:

- Short-term detour of Bay Ave. off-ramp westbound to facilitate mobilization of bridge paving equipment.
- Short-term daily detours at W. Bay Ave. on-ramp eastbound to facilitate bridge widening.
- Long-term detour at W. Evans St. to facilitate bridge widening was continued.
- Long-term detour on 1<sup>st</sup> View St. to facilitate bridge widening was lifted and the roadway was reopened to traffic.
- Long-term detour on Mason Creek Road was established to facilitate bridge widening.

### Intelligent Transportation System (ITS):

- Relocation activities associated with RCU #10 at North Island.
- Relocation activities associated with CCTV 783 at 13<sup>th</sup> View St.
- Installation of ITS and private utility conduit on North Trestle.
- Quarterly Concept of Operations meeting was held on December 5, 2023. The primary topic was status of Advanced Traffic Management System (ATMS) development.

### Overhead Sign Structures:

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

**Roadway Lighting:**

- Continued temporary lighting installation.
- Installation of permanent lighting conduit and junction chambers at Willoughby Bridge and North Trestle.

**Routine Maintenance:**

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

## 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. HRCP submitted two packages this period, and both are currently under VDOT review. One package from last period was returned to HRCP as Approved.

### **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.

### **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 twenty volumes of Material Book records and is currently auditing three 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 23 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

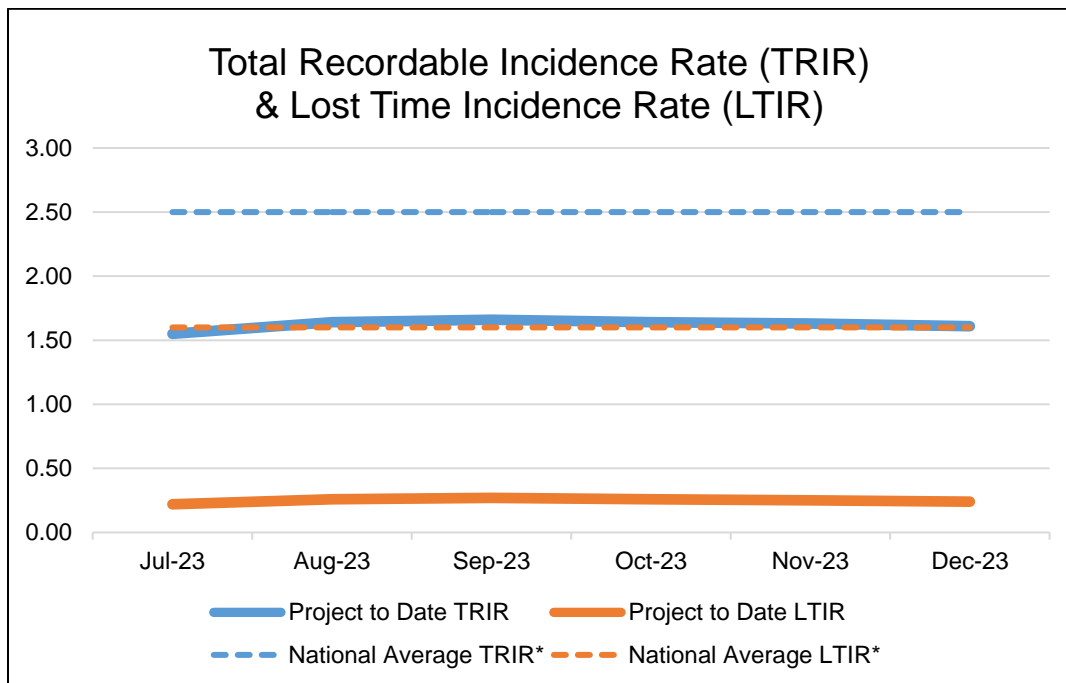
Safety procedures and activities during this reporting period include:

### Safety Activities:

- HRCP held a meeting to discuss tunnel access control and new protocols for South Island, as well as future tunnel access control at North Island.
- HRCP held a luncheon for winners of the “Crew of the Month” awards for following safety procedures and reporting an injury free month.
- HRCP implemented a new check-in/check-out procedure for accessing the tunnel to increase safety and accountability.

### Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of December 31, 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 **347** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was a slight increase in contract awards for a total of **\$545.3 million** due to new change orders issued to active DBE/SWaM firms on the project. A total of **\$360 million** has been paid for work completed by DBE/SWaM firms.

### Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on November 21, 2023, for the monthly project and compliance update. Discussion focused on the status of payments to select DBE/SWaMs on the project, listing of active/onsite subcontractors, status of OJT enrollees, procurement activity, and the upcoming bonding education training series.

### 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 14 candidates enrolled.
- HRCP has hired a Program Coordinator who will focus efforts to create strategies to increase participation in the OJT program. The Program Coordinator will also work with area managers and Human Resources staff to identify potential work that best supports entry-level skills or promotional opportunities to fulfill the intent of the OJT Program. This position will also serve as the DBE/SWaM Administrative Assistant.

### Business Development Activities:

- VDOT and USDOT Small Business Transportation Resource Center (SBTRC) hosted a 3-week Bonding Education Program (BEP) for firms in the construction industry supported by several local prime contractors starting on November 28, 2023, at the City of Virginia Beach's "The Hive", its local small business resource center in Town Center.
- At this event, HRCP facilitated a training session on Safety in a Marine Environment and Environmental Compliance on November 29, 2023. Five (5) small businesses new to the transportation industry learned about safety compliance, surety/bonding process, accessing working capital, leveraging DBE/SWaM certifications, and how to identify contracting opportunities. SBTRC and VDOT will monitor the progress of the firms over the next six months.

## 10. Public Outreach & Media

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

### Public Outreach

- November 21, 2023 – Project Team hosted a site visit for CAPT Janet Days, Commanding Officer, Naval Station Norfolk, and key members of her staff.
- December 6, 2023 – Project Team hosted a site visit for City of Norfolk/Hampton Roads Military and Federal Facilities Alliance.

### Lane Closures/Advisories

- November 22, 2023 – Weekly Lane Closure Report
- November 29, 2023 – Travel Advisory – Closure and Detour of Mason Creek Road
- December 1, 2023 – Weekly Lane Closure Report
- December 8, 2023 – Weekly Lane Closure Report

### Media

- November 21, 2023 – (HRBT podcast) “Coordinating Construction in Hampton” podcast featuring regional Communications professionals on collaboration necessary to deliver multiple simultaneous highway projects (<https://tunneltalktoday.libsyn.com/coordinating-construction-in-hampton>)
- December 4, 2023 – (via e-mail) November/December 2023 HRBT Expansion Project Monthly Newsletter (<https://conta.cc/3t4PwqQ>)
- December 4, 2023 – (HRBT social media) Project update celebrating World Tunneling Day

Visit our website to view more information:

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