



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

Report No. 50
Project No. 0064-M06-032



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Issue Date: June 7, 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 April 23, 2023 – May 20, 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 24th of each month.

During this reporting period, project accomplishments included the following:

- South Island Progress:
 - Installation of South Island concrete batch plant 70% complete.
- Tunnel Progress:
 - Began tunnel excavation on April 24, 2023.
 - Began installing permanent concrete tunnel ring structure.
- North Island Progress:
 - Completed excavation for receiving pit.
- Landside Progress:
 - Completed final site-work preparations for traffic switch onto new ramp structure at Bay Ave. Bridge.
- Marine Progress:
 - North Trestle eastbound beams 65% complete.
 - North Trestle westbound piles 43% complete.
 - South Trestle eastbound beams 28% complete.
 - First concrete deck placed at South Trestle eastbound.

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 44 (data date: March 19, 2023), and the schedule information in this report reflects this update. Schedule Update 45 was returned as Revise and Resubmit on May 18, 2023.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 44 is reporting Substantial Completion on September 18, 2026.
- HRCP's Schedule Update 44 is reporting Final Completion on November 17, 2026.

Project Budget

The project budget summary below now includes all incurred to date costs through May 20, 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: | \$ 1,823,713,458 |
| Remaining project budget: | \$ 2,111,738,183 |

- Design-build contract overview:

| | |
|--|-------------------------|
| Design-build contract original amount: | \$ 3,299,997,227 |
| Net change orders: | \$ (13,765,084) |
| Exercised Options: | \$ 73,454,414 |
| Material Price Adjustments to Date: | \$ 2,641,148 |
| Assessed Liquidated Damages (LD): | \$ (735,000) |
| Design-build contract sum to date: | \$ 3,361,592,706 |
| Expenditures to date: | \$ 1,733,946,902 |
| Remaining design-build contract amount: | \$ 1,627,645,804 |

- Design-build progress to date:

| | |
|---------------------------------|--------------|
| Project Management: | 61.3% |
| Design: | 90.8% |
| Physical Construction Progress: | 32.3% |
| Overall: | 51.3% |

Environmental

Environmental updates for this reporting period include:

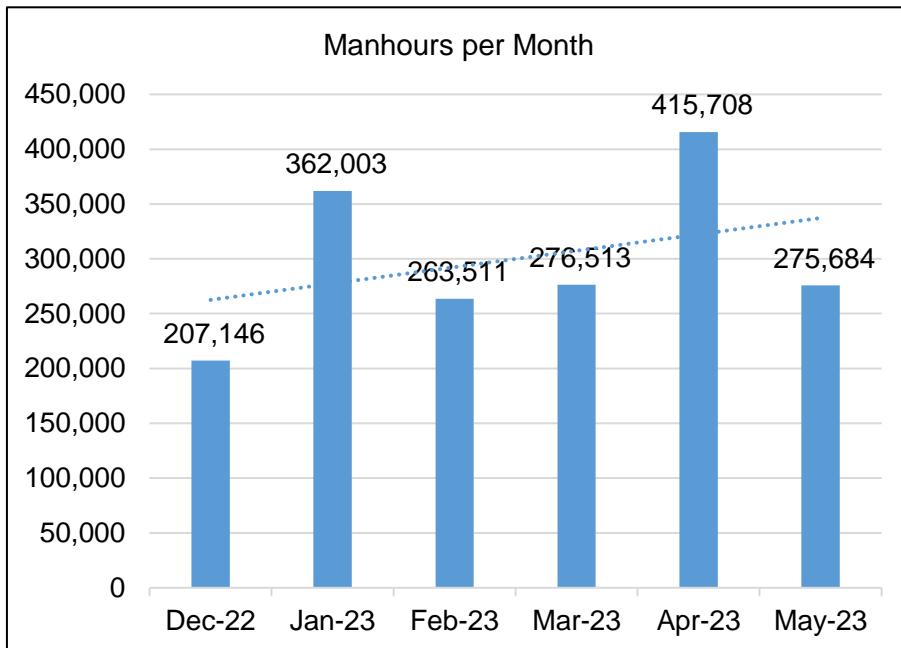
- HRCP submitted JPA permit modification #10 to the agencies.

Construction

Summary progress updates for this reporting period include:

- Landside Roadways
 - Continued roadway widening, drainage, and supporting construction throughout the project corridor.
- Marine Works
 - Placed beams at North eastbound permanent trestle (8 installed this period).
 - Drove piles at North westbound permanent trestle (21 installed this period).
 - Placed beams at South eastbound permanent trestle (28 installed this period).
 - First beams placed at South westbound MOT trestle (12 installed this period).
 - First concrete deck placed at South eastbound trestle.
- Tunnels and Islands
 - 74.2 ft excavated for the High Occupancy Toll (HT) tunnel.
 - Completed slurry treatment plant assembly.
- Landside Bridges
 - Completed two (2) concrete deck placements at Willoughby Bay Bridge for eastbound widening.
 - Completed concrete placement for Pier 1 columns at 4th View St. Bridge for eastbound widening.
 - Completed pile driving at Abutment B and Pier 2 at 1st View St. Bridge for westbound widening.
 - Completed Phase 2A MOT barrier wall and striping installation at Bay Ave. Bridge in preparation for traffic switch onto new ramp structure.
 - Completed five (5) concrete deck placements at Oastes Creek Bridge for eastbound widening.

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



Project Manhours to Date:
7,626,472

Operations

The following operations activities took place during this reporting period:

- New short-term lane closure at Bay Ave. eastbound for paving.
- New short-term lane closure at Willoughby South Shore for temporary stoppage for sign structure removal.
- New long-term lane closure at Mallory St. in Hampton to facilitate bridge widening.

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 May 31, 2023:

- Total Recordable Incidence Rate: 1.49 (National Average: 2.5)
- Lost Time Incidence Rate: 0.18 (National Average 1.6)



Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **329** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$519.4 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 a STEM exhibit at Joint Base Langley-Eustis "Air Power Over Hampton Roads" Air Show & Open House.
- Project team presented to Hampton Roads Military and Federal Facilities Alliance.

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 44 (data date: March 19, 2023), and the schedule information in this report reflects this update. Contractual Substantial and Final Completion dates remain unchanged.

| | Contract Requirement | March 2023 Schedule | Actual |
|-------------------------------|----------------------|---------------------|--------------|
| NTP | | Sep 11, 2020 | Sep 11, 2020 |
| Substantial Completion | Sep 1, 2025 | Sep 18, 2026 | |
| Final Completion | Nov 1, 2025 | Nov 17, 2026 | |

2.2 Longest Path

The longest path/critical path in Project Schedule Update 44 is driven by the following activities:

- TBM Commissioning
- TBM drive in High Occupancy Toll Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose Tunnel
- TBM Disassembly in south pit
- South Portal Cut and Cover Structures – Phase 4 Cell 1
- South Island Ventilation Building and Gate House – Phase 2
- South Ventilation Building Commissioning
- South Island Buildings Integrated Functional Testing
- Tunnel Systems Integration – ITS
- 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 44.

South Portal

- South Portal – Rectilinear Approach Capping Beams – Phases 1, 2, and 3
- South Portal – Rectilinear Approach Permanent Structures
- Tricell – Cells 1, 2, and 3 – Wall Surface Prep, Shotcrete and Waterproofing
- South Portal Cut and Cover Structures – Phases 5 and 6
- South Portal Cell 2 Permanent Structures – Exterior Walls, Ballast, Interior Slabs
- South Portal Cell 3 Permanent Structures – Exterior Walls, Interior Walls and Slabs, and Roof Slabs

South Island

- South Island – Slurry Treatment Plant – Complete Filter Press Area, Bi-Component Plant, Utility Surface Piping and Building
- South Island – Slurry Treatment Plant Commissioning
- South Island – Additional Conveyor and Quay Mooring Piles and Fenders
- South Island – Temporary Private Utilities (Verizon & VDOT/Cox)
- South Island Buildings – Ventilation Building, Inspection Booths, Generator Building, and Fuel & Water Tanks

Tunneling

- Tunneling – Final – Gantry Assembly
- Tunneling – TBM Final Systems Assembly and Commissioning
- Tunneling – Precast Inverts Procurement
- General Purpose Tunnel – Interior Structures Construction

North Portal

- North Portal – Cell 1 and 2 Excavation
- North Portal – Mud Slab, Temporary Headwall, and Base Slabs Construction
- North Portal – Phases 2, 3 and 4 –Tunnel Construction

North Island

- NI 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 Phase 4 – 13th 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 4th 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
- Willoughby Bay Bridge – Eastbound/Westbound Superstructure Construction, Westbound Rehabilitation
- Bay Ave. Bridge – Eastbound and Westbound Substructure and Superstructure Construction, Westbound Rehabilitation
- Evans St. Bridge – Eastbound Abutment B and Approach Slab Construction
- Bayview Blvd. Bridge – Eastbound Abutment A and Superstructure
- Oastes Creek Bridge – Westbound Substructure/Superstructure and Abutment B Approach Slab
- Patrol Rd. Bridge – Eastbound Abutment A

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, 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

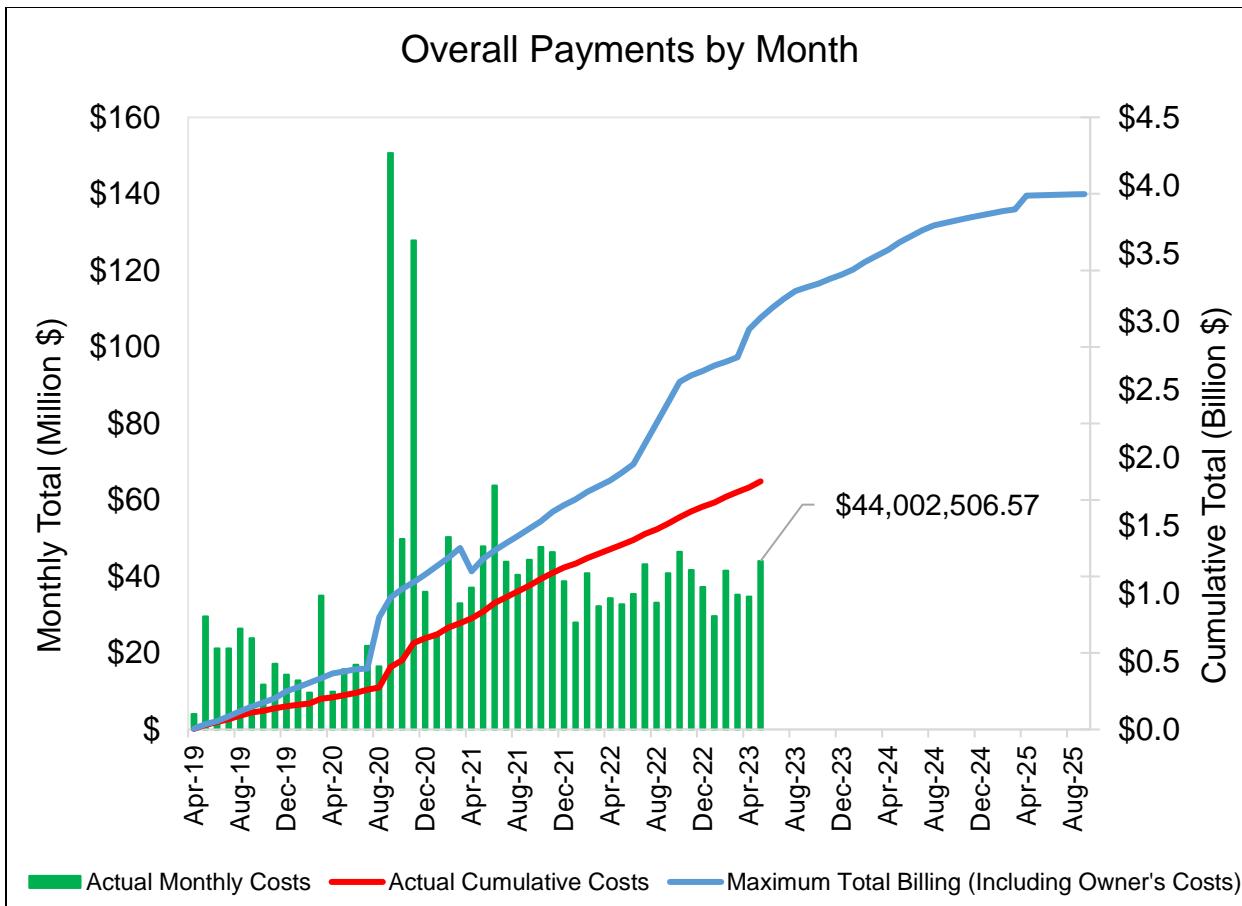
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning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

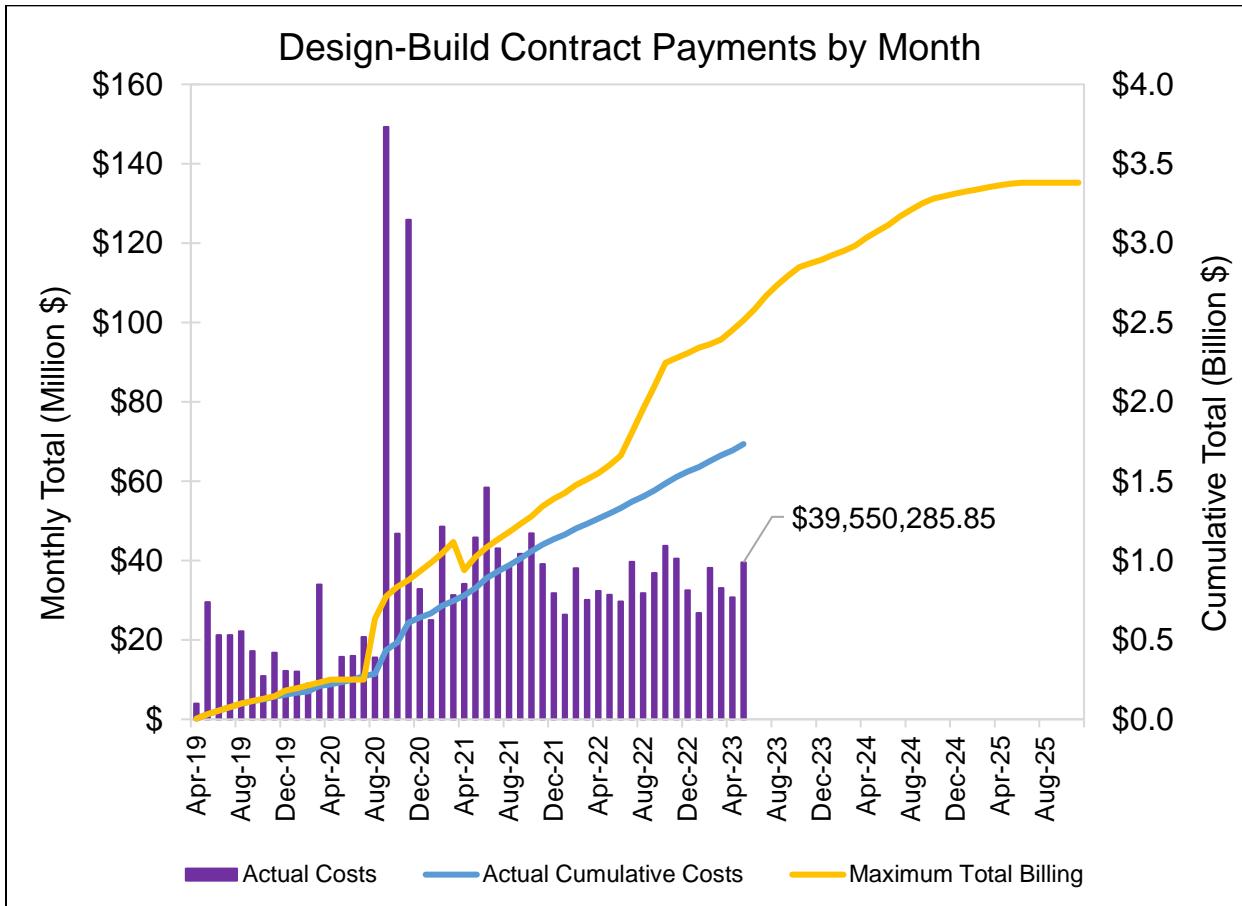
| | Amount Spent this Period: | Total Spent to Date: | Original Total Budget: | Total Remaining Budget: | Percent Spent To-date: |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| <u>Comprehensive Agreement</u> | | | | | |
| <i>Construction</i> | \$39,550,285.85 | \$1,707,148,776.67 | \$3,299,997,227.00 | \$1,592,848,450.33 | 51.73% |
| <u>Owner Costs</u> | | | | | |
| <i>Administration</i> | \$3,779,333.75 | \$76,994,199.27 | \$122,000,000.00 | \$45,005,800.73 | 63.11% |
| <i>Right of Way</i> | \$22,862.90 | \$8,772,356.26 | \$15,000,000.00 | \$6,227,643.74 | 58.48% |
| <i>No-Excuses Incentive</i> | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| <i>Contingency</i> | \$649,630.77 | \$26,281,455.09 | \$335,000,000.00 | \$308,718,544.91 | 7.85% |
| <i>Bridge Repair Work Option</i> | \$393.30 | \$4,516,670.46 | \$73,454,413.96 | \$68,937,743.50 | 6.15% |
| Total | \$44,002,506.57 | \$1,823,713,457.75 | \$3,935,451,640.96 | \$2,111,738,183.21 | 46.34% |



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

3.3 Budget by Funding Source

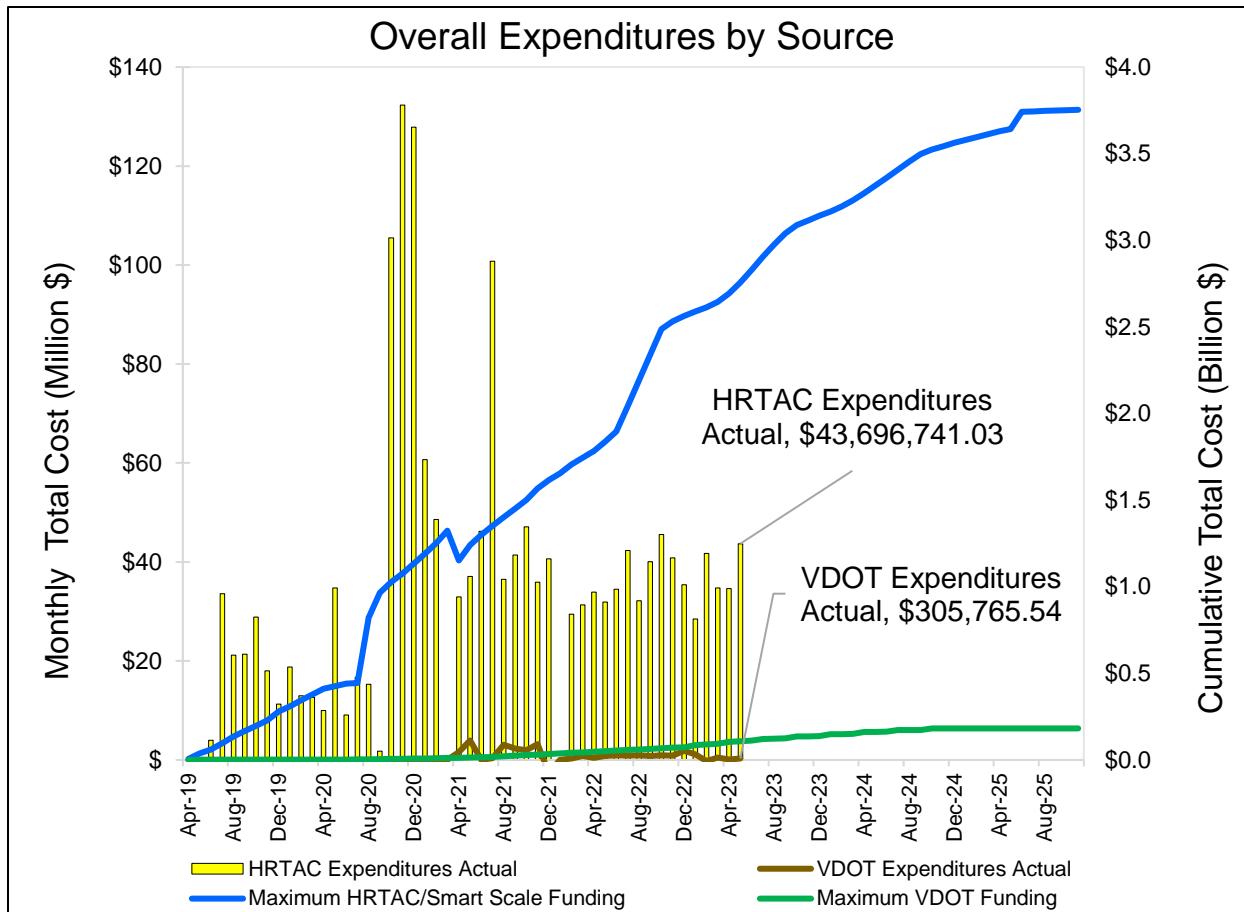
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation 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: |
|--------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| Comprehensive Agreement | | | | | |
| <i>Construction</i> | \$39,456,033.18 | \$1,691,193,859.24 | \$3,204,569,251.00 | \$1,513,375,391.76 | 52.77% |
| Owner Costs | | | | | |
| <i>Administration</i> | \$3,576,144.75 | \$74,687,675.27 | \$118,472,054.00 | \$43,784,378.73 | 63.04% |
| <i>Right of Way</i> | \$22,862.90 | \$8,772,356.26 | \$15,000,000.00 | \$6,227,643.74 | 58.48% |
| <i>No-Excuses Incentive</i> | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| <i>Contingency</i> | \$641,700.20 | \$25,197,585.81 | \$325,428,276.00 | \$300,230,690.19 | 7.74% |
| Total | \$43,696,741.03 | \$1,799,851,476.58 | \$3,753,469,581.00 | \$1,953,618,104.42 | 47.95% |

3.3.2 VDOT

| | Amount Spent this Period: | Total Spent to Date: | Original Total Budget: | Total Remaining Budget: | Percent Spent To-date: |
|----------------------------------|---------------------------|------------------------|-------------------------|-------------------------|------------------------|
| Comprehensive Agreement | | | | | |
| <i>Construction</i> | \$94,252.67 | \$15,954,917.43 | \$95,427,976.00 | \$79,473,058.57 | 16.72% |
| Owner Costs | | | | | |
| <i>Administration</i> | \$203,189.00 | \$2,306,524.00 | \$3,527,946.00 | \$1,221,422.00 | 65.38% |
| <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> | \$7,930.57 | \$1,083,869.28 | \$9,571,724.00 | \$8,487,854.72 | 11.32% |
| <i>Bridge Repair Work Option</i> | \$393.30 | \$4,516,670.46 | \$73,454,413.96 | \$68,937,743.50 | 6.15% |
| Total | \$305,765.54 | \$23,861,981.17 | \$181,982,059.96 | \$158,120,078.79 | 13.11% |



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-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 |
| | | TOTAL | \$ 59,689,330.44 | 0 days |

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 | \$ 0.00 | \$ 57,044.28 | March 2023 |
| Fuel | \$ 13,445.83 | \$ 283,428.44 | March 2023 |
| Steel | \$ 256,331.35 | \$ 2,300,675.58 | November 2022 |
| | Total | \$ 2,641,148.30 | |

4. Environmental

The following environmental management activities occurred during this reporting period:

Permits:

- HRCP submitted JPA permit modification #10 to the agencies.
- South Island and North Island generator permits remain in process.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- HRCP and continued patrolling with dogs on South Island, North Island, and Willoughby Spit.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- No new activities.

Protected Species:

- HRCP began coordination with U.S. Fish and Wildlife Service to determine impacts of endangered species revised requirements on the Northern Long-Eared Bat. Initial U.S. Fish and Wildlife approval and FHWA concurrence for requirements have been received.

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):

- Drainage work in the median in Hampton.

I-64 (Segment 3):

- Completed partial installation of panels for retaining wall 301 near I-64 off-ramp to Bayville St. for eastbound widening.
- Subgrade preparation in median between 15th View St. and 13th View St. for westbound widening.
- Drainage installation near Willoughby Bay Bridge Abutment A for eastbound widening.
- Completed installation of temporary wire wall between 13th View St. and Willoughby Bay Bridge Abutment A for westbound widening.
- Completed installation of overhead sign structure precast caps adjacent to Willoughby Bay Bridge eastbound.
- Completed installation of panels and leveling pad for retaining wall 308 adjacent to Willoughby Bay Bridge Abutment B.
- Drainage installation along I-64 on and off ramps at 4th View St. for eastbound widening.
- Began permanent roadway barrier installation in the median between Willoughby Bay and 4th View St. for eastbound widening.
- Placed embankment between 4th View St. and Mason Creek Rd. for eastbound widening.

I-64 (Segment 4):

- Completed drainage, roadway barrier, and minor pavement widening at Abutment D approach at Bay Ave. on-ramp for eastbound widening.
- Completed placement of cement treated aggregate, underdrain, open-graded drainage layer, and permanent asphalt for Phase 2A traffic shift for eastbound widening.
- Completed partial installation of panels for retaining wall 402 adjacent to Bay Ave. Abutment A.



► I-64, from Bay Ave. to Evans St.
Placement of asphalt stabilized open-graded drainage layer.

5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound Trestle**
 - 2 caps placed during this period (26.5 out of 36 caps placed).
 - 8 beams placed this period (192 out of 296 beams placed).
- **Westbound Trestle**
 - 21 piles driven during this period (111 out of 261 total piles driven).
 - 1 deck placed during this period (2 out of 45 total decks placed).
 - 2 caps placed during this period (5 out of 46 total caps placed).

South Trestle:

- **Eastbound Trestle**
 - Partial deck placed (0.5 out of 69 total decks placed).
 - 28 beams placed during this period (197 out of 698 total beams placed).
- **Westbound Trestle MOT**
 - 8 piles driven during this period (73 out of 107 total piles driven).
 - 4 caps placed during this period (6 out of 24 total caps placed).
 - 12 beams placed this period (12 out of 81 total beams placed).



◀ **South Trestle**
Span 28 beam erection

5.3 Construction Area 3: Tunnels and Islands

South Island:

- Began installing rebar for external walls in launching pit.
- 85% complete for installation of conveyor/quay mooring piles.
- 70% complete for installation of concrete batch plant.
- Continued excavation and rebar installation for approach capping beams.

North Island:

- Completed excavation for Cell 1 receiving pit.
- Began headwall, base slab foundation, and mud slabs.
- 9% complete for jet grout plug at approach section.

Tunnel:

- 66% complete for precast tunnel segment liner production.
- Excavated 74.2 ft and installed first 5 permanent (concrete) tunnel rings for High Occupancy Toll (HT) tunnel.
- Completed slurry treatment plant assembly.



◀ HT Tunnel
TBM assembling permanent ring #1

| Total Segments Required: | Conforming Segments Cast To-Date: | Percentage Complete: |
|--------------------------|-----------------------------------|----------------------|
| 21,492 | 14,185 | 66% |

5.4 Construction Area 4: Landside 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 concrete deck placements at Spans 77 and 78 for eastbound widening.
- Completed girder setting for Spans 11-33 for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

4th View St Bridge:

- Completed concrete placement for Pier 1 columns for eastbound widening.
- Completed concrete placement for Abutment A and B footings for eastbound widening.

Mason Creek Bridge:

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

1st View Street Bridge:

- Completed pile driving at Abutment B and Pier 2 for westbound widening.
- Completed concrete placements for Abutment A and B beam seats for westbound widening.
- Began pile driving at Pier 1 for westbound widening.
- Began demolition of parapet and deck overhang for eastbound widening.

Bay Avenue Bridge:

- Completed approach slab reconstruction and widening operations for eastbound widening (ramp).
- Began and completed removal of temporary trestle adjacent to ramp.
- Completed barrier wall at Abutment D approach slab for eastbound widening (ramp).
- Completed bridge deck profiling, grinding, grooving, and expansion joint installation for eastbound widening (ramp).
- Completed Phase 2A MOT barrier wall and striping installation in preparation for traffic switch onto new ramp structure.
- Began Phase 2A demolition of existing ramp/gore area 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 diaphragms for eastbound widening.
- Continued installation of bridge deck rebar and edge forms for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.
- Completed concrete placement for Spans 3-7 bridge decks for eastbound widening.

Patrol Road Bridge:

- Completed coating operations for Span 2 of the existing eastbound and westbound bridges.



◀ **Willoughby Bay Bridge**
Aerial view of south abutment



◀ **Mason Creek Bridge**
Aerial view of eastbound widening

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.
- North Trestle and South Trestle for temporary conduit installation.
- I-64 eastbound for paving at Bay Ave.
- Temporary stoppage for sign structure removal eastbound at Willoughby South Shore.
- Striping maintenance throughout project corridor.

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.
- 4th View St. in Norfolk traffic shift to facilitate bridge widening.
- Patrol Rd. in Norfolk traffic shift to facilitate bridge rehabilitation and widening.

Hampton Lane Shifts:

- No new activities.

Norfolk Lane Shifts:

- No new activities.

Detours:

- Short-term detour at West Bay Ave. westbound I-64 off ramp for ITS installation.
- Long-term detour at West Evans St. to facilitate bridge widening.
- Long-term detour on West Bay Ave. on-ramp to eastbound I-64 for bridge widening.
- Long-term detour on 1st View St. to facilitate bridge widening.

Intelligent Transportation System (ITS):

- Installation of ITS and private utility conduit on the North and South Trestles.
- Relocation of ITS power and communications at South Shore.
- Removal of sign structure at South Shore.
- Quarterly Concept of Operations meeting held May 9, 2023. Topics included status of automated traffic management system development, uninterrupted power source requirements, and transition planning.

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. There was 1 NDC update reviewed this period. These updates included specific testing and inspection plans for the work shown in the corresponding RFC plans and a staffing matrix showing quality assurance and quality control staffing for the work.

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.

Quarterly Updates of Quality Plans:

- HRCP resubmitted the quarterly updates of the Quality Management System Plan (QMSP), Construction Quality Management Plan (CQMP), and the Design Quality Management Plan (DQMP) for the first quarter of 2023. The DQMP review is complete. VDOT is currently reviewing the QMSP and CQMP revisions.

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 fourteen volumes of 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 29 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

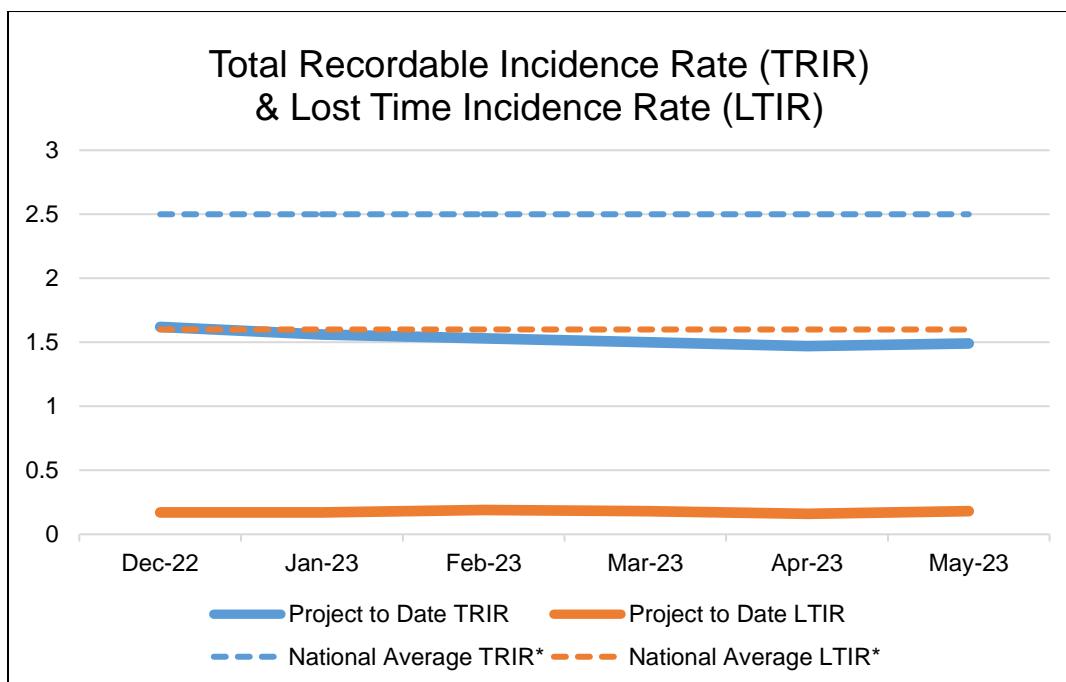
Safety procedures and activities during this reporting period include:

Safety Activities:

- VDOT continued to conduct routine visits to promote safe work practices throughout the project.
- TBM emergency access training with the Hampton and Norfolk Fire Departments conducted on May 1, 2, 8, 9, 15, and 16, 2023.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of May 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 **329** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was a slight increase in contract awards for a total of **\$519.4 million** due to newly issued change orders issued to active DBE/SWaM firms on the project.

Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on May 16, 2023 for the monthly project and compliance update. Discussion included labor compliance, certified payrolls and other on-going compliance submissions, OJT planning, procurement and outreach efforts, and DBE/SWaM performance matters.
- During this period, VDOT initiated an audit of HRCP's payments to subcontractors on the project. The external review was conducted by a CPA firm specializing in financial, information assurance, audit, and advisory services to governmental and commercial clients.

Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 32 participants have completed all required training hours to graduate from the OJT program. There are currently 10 candidates active in the training program. Trades include carpenters, welders, field supervisors, excavator operators, pile drivers, mechanics, and skilled laborers.
- HRCP recommended sharing the training opportunity with its major subcontractors in support of achieving the goal within the expected timeframe, further strengthening the construction labor market.

Business Development Activities:

- Fulton Bank representatives reached out to VDOT and HRCP regarding its ongoing interest in supporting small businesses on the project and reintroduced its banking and loan services.
- Outreach activities included:
 - April 28, 2023 – Conference of Minority Transportation Officials Hampton Roads General Meeting hosted by VDOT; special guests included the District Locally Administered Program Director and U.S. Minority Contractors Association President
 - May 17, 2023 – City of Hampton Economic Development, Small Business Fair
 - May 17, 2023 – Virginia Department of Small Business Supplier Diversity, SWaMMy Honors, Richmond
 - May 18, 2023 – Virginia Asian Chamber of Commerce, ProcureCon 2023, The Energy Small Business Summit & Expo, Richmond

10. Public Outreach & Media

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

Public Outreach

- April 24, 2023 – Project team presented to Westminster Canterbury in Virginia Beach.
- May 3, 2023 – Project team presented to Downtown Norfolk Council.
- May 3, 2023 – Project team presented to the Norfolk Sertoma Club.
- May 5, 2023 – Project team hosted a STEM exhibit at Joint Base Langley-Eustis “Air Power Over Hampton Roads” Air Show & Open House.
- May 16, 2023 – Project team presented to Hampton Roads Military and Federal Facilities Alliance.

Public Materials

- No new activities.

Lane Closures/Advisories

- April 28, 2023 – Weekly Lane Closure Report
- May 5, 2023 – Weekly Lane Closure Report
- May 12, 2023 – Weekly Lane Closure Report
- May 19, 2023 – Weekly Lane Closure Report

Media

- May 1, 2023 – “Women of the HRBT Expansion Project” [Women of the HRBT Expansion Project | CoVaBIZ](#).
- May 15, 2023 – “Inside Business annual Power List 2023: 60 power players” – Ryan Banas, [Inside Business annual Power List 2023: 60 power players | The Virginian Pilot](#).
- May 19, 2023 - “Virginia TBM Project Marks Progress” [Virginia TBM Project Marks Progress | ENR MidAtlantic](#).

Visit our website to view more information:

www.hrbtexpansion.org