



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

Report No. 49
Project No. 0064-M06-032



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Issue Date: May 5, 2023

Prepared by:

Virginia Department of Transportation

www.hrbtextension.org

1. Executive Summary

1.1 Overview

This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from March 19, 2023 – April 22, 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:
 - Waterproofing launching pit walls 61% complete.
- Tunnel Progress:
 - Began commissioning TBM on March 29, 2023.
- North Island Progress:
 - Completed jet grout break-in/break-out block.
 - Completed capping beams (receiving pit and approach section).
- Landside Progress:
 - Completed lead-abatement and repainting operations for existing eastbound and westbound 1st View St. bridges.
- Marine Progress:
 - North Trestle eastbound decks 61% complete.
 - North Trestle westbound piles 34% complete.
 - South Trestle eastbound beams 24% 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 44 (data date: March 19, 2023), and the schedule information in this report reflects this update.

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

Project Budget

The project budget summary below now includes all incurred to date costs through April 22, 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:	\$	1,779,710,951
Remaining project budget:	\$	2,155,740,690

- Design-build contract overview:

Design-build contract original amount:	\$	3,299,997,227
Net change orders:	\$	4,974,587
Exercised Options:	\$	73,454,414
Material Price Adjustments to Date:	\$	2,371,371
Assessed Liquidated Damages (LD):	\$	(735,000)
Design-build contract sum to date:	\$	3,380,062,599
Expenditures to date:	\$	1,693,746,592
Remaining design-build contract amount:	\$	1,686,316,007

- Design-build progress to date:

Project Management:	59.6%
Design:	90.1%
Physical Construction Progress:	31.2%
Overall:	50.1%

Environmental

Environmental updates for this reporting period include:

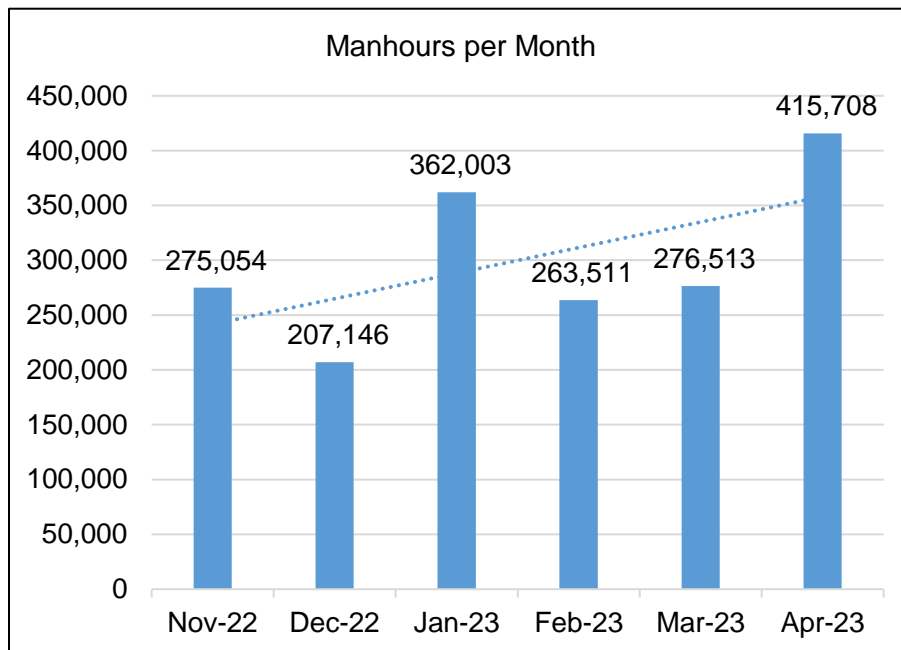
- DEQ issued permit modification for slurry treatment plant and bi-component plant.

Construction

Summary progress updates for this reporting period include:

- Landside Roadways
 - Continued roadway widening, drainage, and supporting construction throughout the project extents.
- Marine Works
 - Placed decks at North eastbound permanent trestle (2.5 installed this period).
 - Drove piles at North westbound permanent trestle (18 installed this period).
 - Placed caps at South eastbound permanent trestle (4 installed this period).
 - Set beams at South eastbound permanent trestle (72 installed this period).
- Tunnels and Islands
 - Began mobilization of batch plant and pugmill at South Island.
 - Continued mobilization for approach jet grout plug at North Island.
 - TBM assembly is 98% complete, and commissioning has started.
- Landside Bridges
 - Began concrete placements for diaphragms and installation of bridge deck reinforcing steel at Willoughby Bay bridge for eastbound widening.
 - Completed Pier 2 cap and Pier 1 footing at 4th View St. bridge for eastbound widening.
 - Continued repair/rehabilitation of existing Mason Creek bridge eastbound and westbound.
 - Completed Abutment A footing and Abutment B footing at 1st View St. Bridge for eastbound widening.
 - Completed overlay placement at Bay Ave. Bridge Spans 34-36 for eastbound widening (ramp).
 - Continued repair/rehabilitation at existing Bayview Blvd. Bridge eastbound and westbound.
 - Began installation of bridge deck reinforcing steel at Oastes Creek Bridge for eastbound widening.

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



Project Manhours to Date:
7,350,788

Operations

The following operations activities took place during this reporting period:

- New short-term detour at W Bay Ave. westbound I-64 off ramp for lighting installation.

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 April 30, 2023:

- Total Recordable Incidence Rate: 1.47 (National Average: 2.5)
- Lost Time Incidence Rate: 0.16 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **328** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$518.8 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 presented at the International Bridge, Tunnel and Turnpike Association (IBTTA) conference in Norfolk.
- Hampton Roads District Engineer presented to the Hampton Roads Chapter, Military Officers Association of America.

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 HRCPC 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

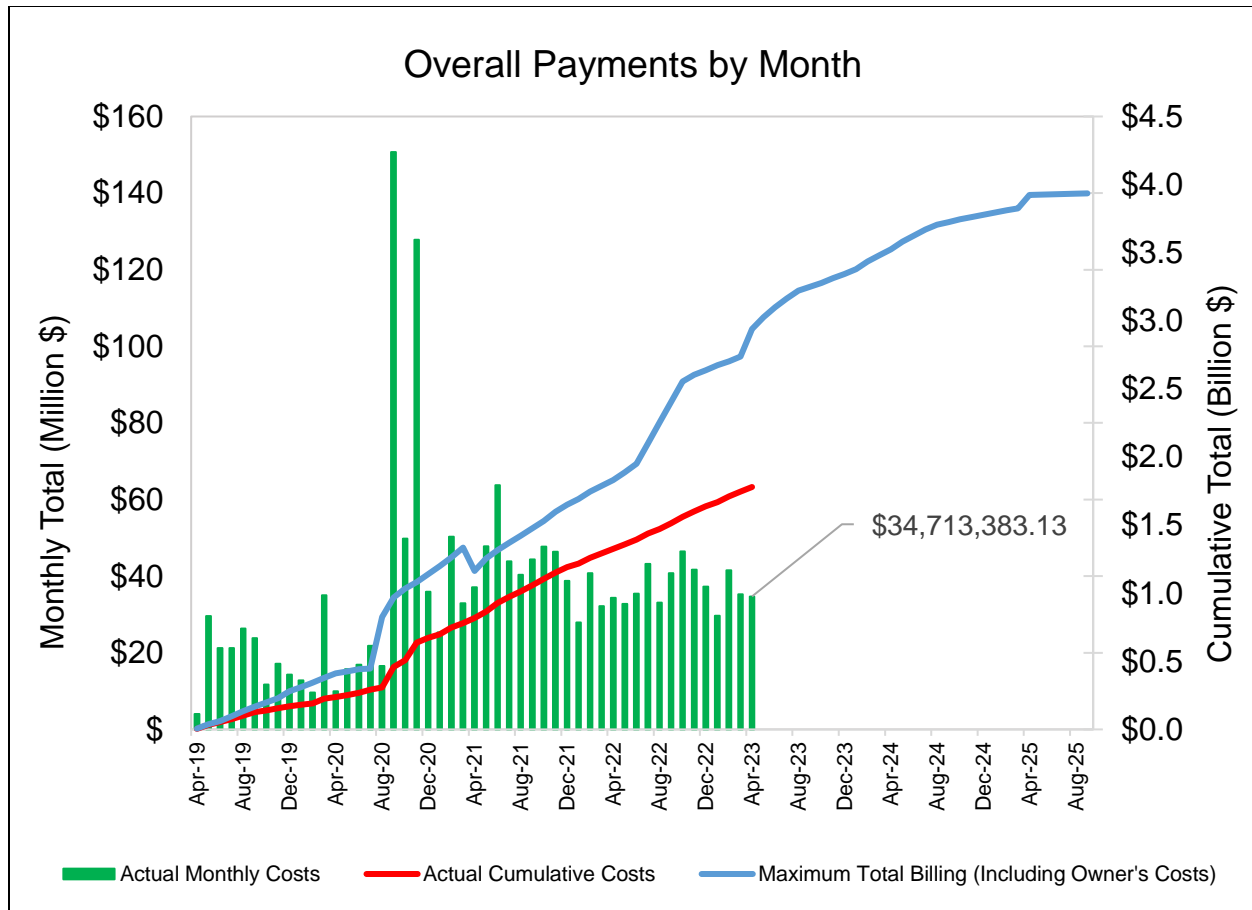
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning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

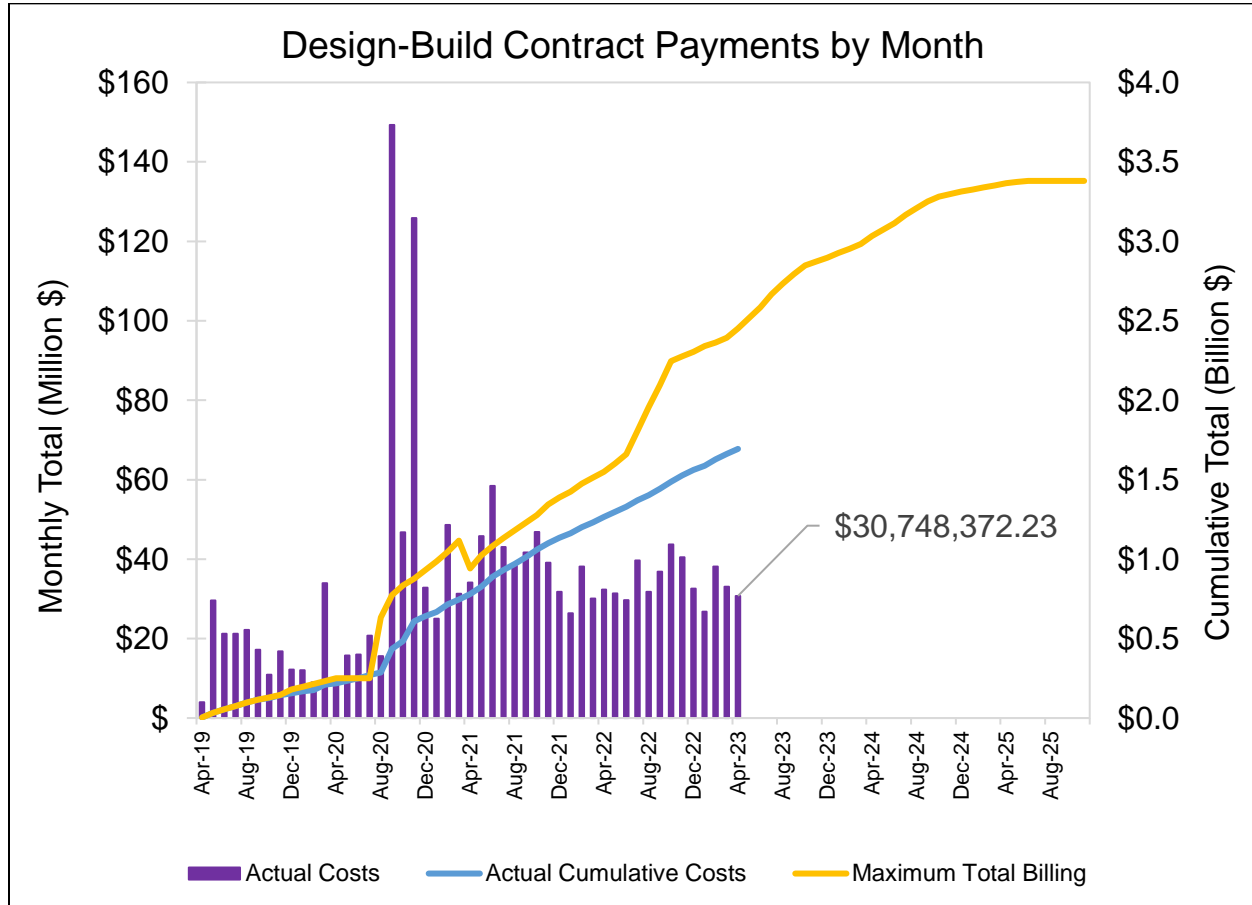
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$30,748,372.23	\$1,667,598,490.82	\$3,299,997,227.00	\$1,632,398,736.18	50.53%
<u>Owner Costs</u>					
<i>Administration</i>	\$3,425,563.84	\$73,214,865.52	\$122,000,000.00	\$48,785,134.48	60.01%
<i>Right of Way</i>	\$15,534.65	\$8,749,493.36	\$15,000,000.00	\$6,250,506.64	58.33%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$509,488.68	\$25,631,824.32	\$335,000,000.00	\$309,368,175.68	7.65%
<i>Bridge Repair Work Option</i>	\$14,423.73	\$4,516,277.16	\$73,454,413.96	\$68,938,136.80	6.15%
<u>Total</u>	\$34,713,383.13	\$1,779,710,951.18	\$3,935,451,640.96	\$2,155,740,689.78	45.22%



**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

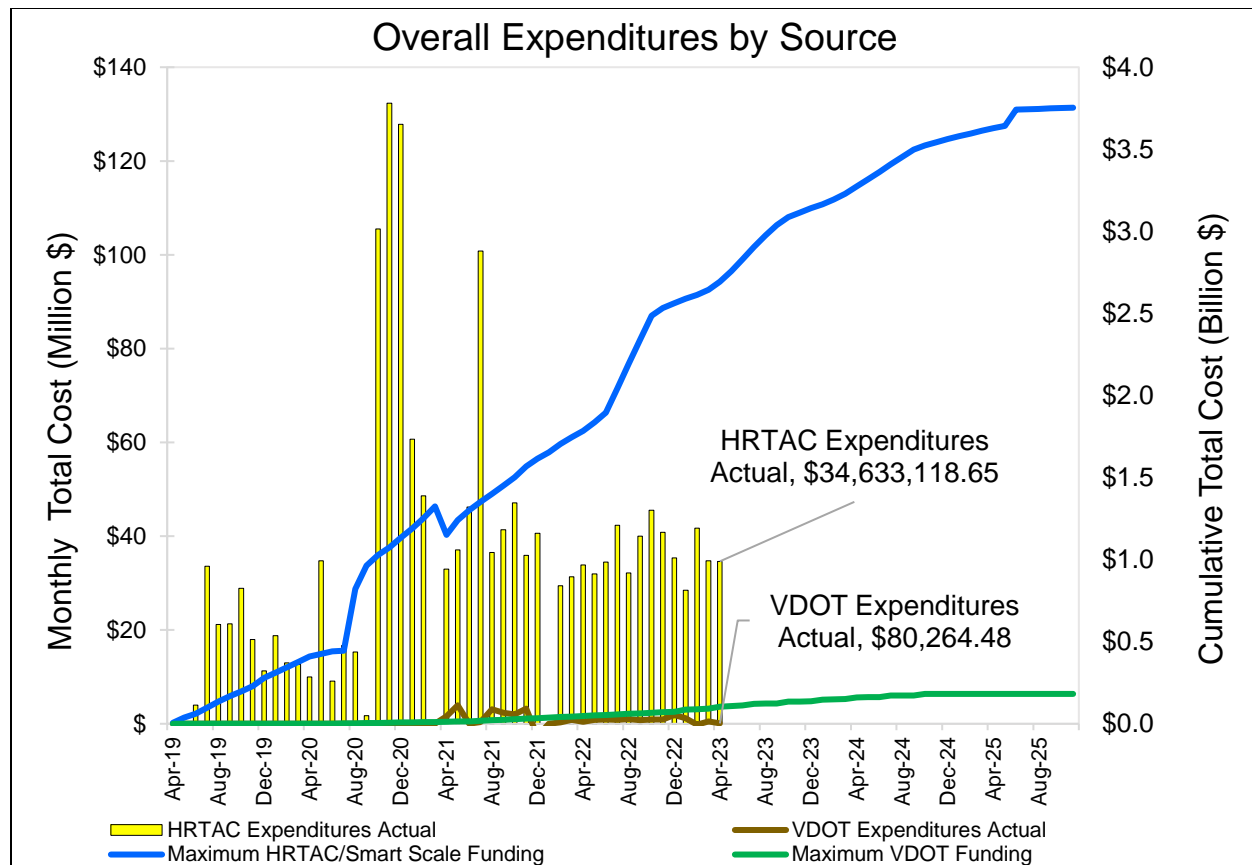
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as 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:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$30,748,372.23	\$1,651,737,826.06	\$3,204,569,251.00	\$1,552,831,424.94	51.54%
<u>Owner Costs</u>					
<i>Administration</i>	\$3,416,612.84	\$71,111,530.52	\$118,472,054.00	\$47,360,523.48	60.02%
<i>Right of Way</i>	\$15,534.65	\$8,749,493.36	\$15,000,000.00	\$6,250,506.64	58.33%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$452,598.93	\$24,555,885.61	\$325,428,276.00	\$300,872,390.39	7.55%
<u>Total</u>	\$34,633,118.65	\$1,756,154,735.55	\$3,753,469,581.00	\$1,997,314,845.45	46.79%

3.3.2 VDOT

	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>	\$0.00	\$15,860,664.76	\$95,427,976.00	\$79,567,311.24	16.62%
<u>Owner Costs</u>					
<i>Administration</i>	\$8,951.00	\$2,103,335.00	\$3,527,946.00	\$1,424,611.00	59.62%
<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>	\$56,889.75	\$1,075,938.71	\$9,571,724.00	\$8,495,785.29	11.24%
<i>Bridge Repair Work Option</i>	\$14,423.73	\$4,516,277.16	\$73,454,413.96	\$68,938,136.80	6.15%
<u>Total</u>	\$80,264.48	\$23,556,215.63	\$181,982,059.96	\$158,425,844.33	12.94%



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-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			\$ 78,429,001.26	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	\$ 543.29	\$ 57,044.28	February 2023
Fuel	\$ 5,538.88	\$ 269,982.61	February 2023
Steel	\$ 15,447.34	\$ 2,044,344.23	October 2022
	Total	\$ 2,371,371.12	

4. Environmental

The following environmental management activities occurred during this reporting period:

Permits:

- DEQ issued permit modification for slurry treatment plant and bi-component plant.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- HRCP completed passive bird measures for 2023 migration season, and continued patrolling with dogs on South Island, North Island, and Willoughby Spit.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- 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):

- Installation of overhead sign structure (OHSS) foundations along median and eastbound exterior south of Mallory St.

I-64 (Segment 3):

- Excavation and 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.
- Installation of temporary wire wall between 13th View St. and Willoughby Bay bridge Abutment A for westbound widening.
- Drainage installation along I-64 on and off ramps at 4th View St. for eastbound widening.
- Installation of panels and leveling pad for retaining wall 301 near I-64 off-ramp to Bayville St. for eastbound widening.
- Completed coping installation and continued embankment placement along retaining wall 311 between 4th View St. and Mason Creek Rd. for eastbound widening.

I-64 (Segment 4):

- Completed coping installation for retaining wall 401 between Mason Creek Rd. and 1st View St. for eastbound widening.
- Installation of OHSS foundations along eastbound exterior between Bay Ave. and Patrol Rd.
- Began drainage and roadway barrier installation at Abutment D approach at Bay Ave. on ramp for eastbound widening.
- Permanent subgrade preparation between Bay Ave. and Evans St. for eastbound widening.
- Completed excavation and began panel installation at retaining wall 402 adjacent to Bay Ave. Abutment A for eastbound widening.



◀ Bay Avenue
Retaining wall 402
panel installation

5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound Trestle**
 - 6 piles driven during this period (194 out of 256 total piles driven).
 - 2.5 decks placed during this period (22 out of 36 total decks placed).
- **Westbound Trestle**
 - 18 piles driven during this period (90 out of 261 total piles driven).
 - 1 deck placed during this period (1 out of 45 total decks placed).

South Trestle:

- **Eastbound Trestle**
 - 4 caps placed during this period (32.5 out of 70 total caps placed).
 - 72 beams placed during this period (169 out of 698 total beams placed).
- **Westbound Trestle MOT**
 - 1 pile driven during this period (65 out of 107 total piles driven).



◀ South Eastbound Trestle

Installation of metal deck formwork in preparation for concrete placement

5.3 Construction Area 3: Tunnels and Islands

South Island:

- Began preparation for external walls in launching pit and installation of rebar.
- 61% complete for waterproofing launching pit walls.
- 22% complete for installation for rectilinear approach capping beams.
- 15% complete for installation of conveyor/quay mooring piles.
- Began mobilization of batch plant and pugmill.

North Island:

- Completed capping beams (receiving pit and approach section).
- Completed jet grout break-in/break-out block.
- Mobilized for jet grout plug at approach section.
- 50% complete for excavation for Cell 1 receiving pit.
- Began demolition of receiving pit crosswalls.

Tunnel:

- 64% complete for precast tunnel segment liner production.
- Began commissioning TBM on March 29, 2023; completed work on TBM thrust frame assembly; completed installation of surface utility pipe; began installation of thrust blocks on slurry lines (98% complete for TBM assembly).
- Installed piping on filter presses for Slurry Treatment Plant.



◀ **South Island**
PVC waterproofing
membrane installation
in Cell 3 (west side)

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	13,792	64%

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.
- Began concrete placements for diaphragms and installation of bridge deck reinforcing steel for eastbound widening.
- Continued installation of lighting brackets.

4th View St Bridge:

- Completed Pier 2 cap and Pier 1 footing for eastbound widening.

Mason Creek Bridge:

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

1st View Street Bridge:

- Completed Abutment A footing and Abutment B footing for eastbound widening.
- Installation of piles at Abutment B for westbound widening.
- Completed coating operations for eastbound and westbound bridges.

Bay Avenue Bridge:

- Completed overlay placement at Spans 34 – 36 for eastbound widening (ramp).
- Completed mainline temporary trestle removal for eastbound widening.
- Began installation of conductor cable and poles for lighting for eastbound widening.
- Continued approach slab reconstruction and widening operations for eastbound widening (ramp).
- Completed concrete placements for parapets and light blisters for eastbound widening (ramp).

Bayview Boulevard Bridge:

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

Oastes Creek Bridge:

- Continued installation of deck forms and overhangs for eastbound widening.
- Continued forming, reinforcing, and placing concrete for diaphragms for eastbound widening.
- Began installation of bridge deck reinforcing steel for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

Patrol Road Bridge:

- Began coating operations on existing eastbound and westbound bridges.



◀ **Bay Ave. Bridge**
New on-ramp connecting West Bay Ave. to east-bound I-64 is nearing completion



◀ **Willoughby Bay Bridge**
Preparations for deck concrete placement at widening of eastbound existing bridge

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 concrete placement for piles, caps, and decks.
- North Trestle and South Trestle westbound for concrete pours.
- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound for beam placement.
- South and North Trestles for temporary conduit installation.
- Striping maintenance throughout project corridor.

Long-Term Lane Closures:

- Bay Ave. in Norfolk to facilitate access to staging area 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:

- Traffic shifted on Bayview Blvd. to facilitate bridge widening.

Detours:

- Short-term detour at West Bay Ave. westbound I-64 off ramp for lighting 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 work.
- 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 Trestle.
- Relocation of Medium Voltage and Communications cables on North Shore.

Routine Maintenance:

- HRCP performed routine incident management and maintenance operations within the corridor.
- HRCP continued removing raised pavement markers throughout the 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.
- VDOT completed the reviews of Revision 5 and 6 of the Tunnel Quality Plan, with Revision 6 returned “Approved as Noted”.

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. VDOT is currently reviewing these submissions.

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 eleven 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 37 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

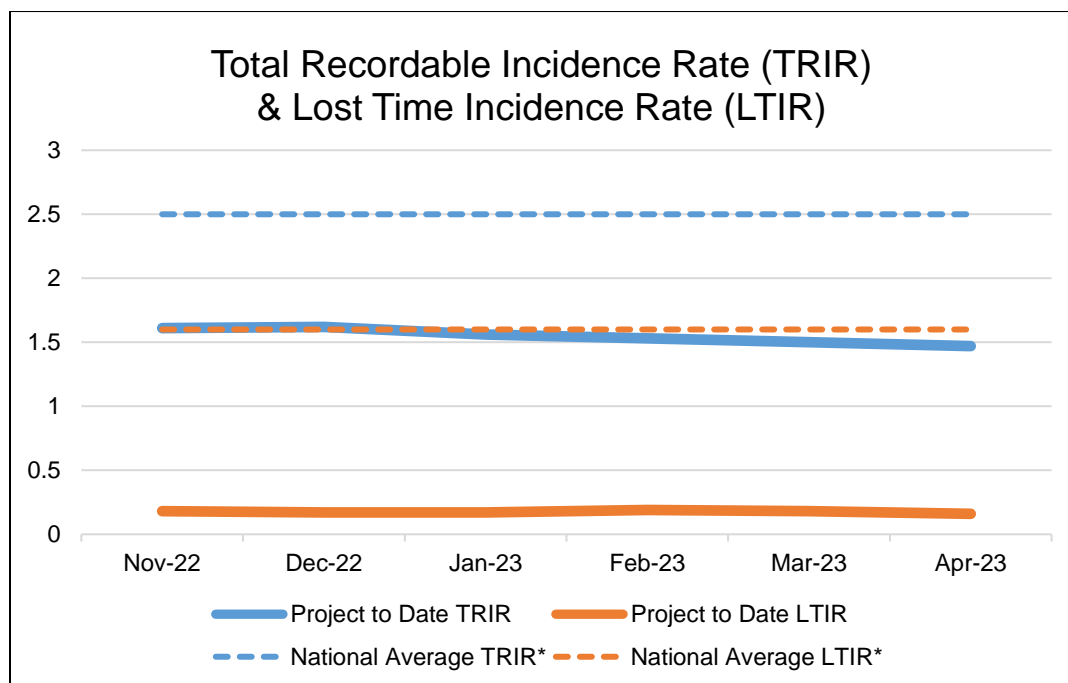
Safety procedures and activities during this reporting period include:

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 April 10, 11, 17, and 18, 2023.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of April 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 **328** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. During this reporting period, there was a slight increase in contract awards for a total of **\$518.8 million** due to newly issued change orders issued to active DBE/SWaM firms on the project.

Compliance Activities:

- HRCP and VDOT met on April 18, 2023, to address prompt pay, change orders, certified payrolls submissions, hauler pay rate documentation, and scheduled “Navigate HRCP” Subcontractor Compliance Orientation Training.
- HRCP report submissions for the first quarter ending March 31, 2023, included: Good Faith Effort Activities & C-111/C-63 (DBE/SWaM Participation & Payment Report); SWaM Utilization Plan; and Workforce Participation Plan. The reports documented HRCP’s strong level of community engagement.

Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 30 participants have completed all required training hours to graduate from the OJT program. There are currently 12 candidates active in the training program. Trades include carpenters, welders, field supervisors, excavator operators, pile drivers, mechanics, and skilled laborers.

Business Development Activities:

- VDOT and HRCP’s Compliance and Procurement staffs met on March 21, 2023, to discuss outreach efforts to increase the awareness and opportunities for disadvantaged and small businesses on the Tunnel Boring Machine Pit Spoils Management/Hauling and Tunnel Support Building packages.
- HRCP modified its existing website and launched <https://hrcpjobs.com/small-business-opportunities> from <https://hrcpjobs.com> to best reflect opportunities available for both employment and small businesses on the project.
- Outreach activities included:
 - March 23, 2023 – U.S. Minority Contractors Association (USMCA), Virginia Chapter Launch, Virginia Beach
 - March 29, 2023 – Virginia Asian Chamber of Commerce (VACC), Business Ready Academy, Virginia Beach
 - March 30, 2023 – Virginia Port Authority & Virginia Department of Small Business and Supplier Diversity, Small Business Outreach Event, Norfolk
 - April 13, 2023 – Virginia Beach Minority Business Council (MBC), Spring Contractors Roundtable

10. Public Outreach & Media

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

Public Outreach

- March 22, 2023 – Project team presented to First Responder District-Wide Leadership
- March 22, 2023 – Project team presented to Women’s Transportation Seminar Central Virginia (virtual)
- March 28, 2023 – Project team presented at the International Bridge, Tunnel and Turnpike Association (IBTTA) conference
- March 30, 2023 – Hampton Roads District Engineer, Chris Hall, presented at Virginia Transportation Construction Alliance (VTCA) spring conference
- April 7, 2023 – Project team presented to Old Dominion University Civil Engineering Senior Seminar Class
- April 21, 2023 – Hampton Roads District Engineer, Chris Hall, presented to the Hampton Roads Chapter, Military Officers Association of America

Public Materials

- No new activities

Lane Closures/Advisories

- March 24, 2023 – Weekly Lane Closure Report
- March 31, 2023 – Weekly Lane Closure Report
- April 7, 2023 – Weekly Lane Closure Report
- April 14, 2023 – Weekly Lane Closure Report
- April 21, 2023 – Weekly Lane Closure Report

Media

- March 26, 2023 – “Hampton Roads contractors get boost from historic HRBT expansion project” [Hampton Roads contractors get boost from historic HRBT expansion project | The Virginian-Pilot](#)

Visit our website to view more information:

www.hrbtexpansion.org