



March 2022
Monthly Project Report

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION

Report No. 36

Project No. 0064-M06-032



Table of Contents

| | |
|--|-----------|
| 1. Executive Summary | 1 |
| 1.1 Overview | 1 |
| 1.2 Priorities | 1 |
| 1.3 Key Updates | 2 |
| 2. Project Schedule | 6 |
| 2.1 Schedule Status | 6 |
| 2.2 Longest Path | 6 |
| 2.3 Impact Analysis | 7 |
| 3. Project Budget | 8 |
| 3.1 Overall Budget | 8 |
| 3.2 Design-Build Contract Cost Status | 10 |
| 3.3 Budget by Funding Source | 11 |
| 3.4 Contingency | 12 |
| 4. Environmental | 14 |
| 5. Construction | 15 |
| 5.1 Construction Area 1: Landside Roadways | 16 |
| 5.2 Construction Area 2: Marine Trestle Work | 16 |
| 5.3 Construction Area 3: Tunnels and Islands | 17 |
| 5.4 Construction Area 4: Landside Bridges | 19 |
| 6. Operations | 21 |
| 7. Quality | 22 |
| 8. Safety | 24 |
| 9. Civil Rights & DBE/SWaM Business Opportunities | 25 |
| 10. Public Outreach & Media | 26 |

Issue Date: April 20, 2022

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 February 20, 2022 – March 19, 2022. 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, the following project accomplishments were achieved:

- South Island Progress:
 - Mass excavation of the TBM Launch Pit to 49%.
 - Ground Improvement along the tunnel path to 78%.
 - Placed concrete for fourth section of TBM assembly slab.
 - Began work on STP (slurry treatment plant) slab.
 - TBM quay installation to 71%.
- North Island Progress:
 - Guide walls to 94% complete at Receiving Pit.
 - Slurry walls to 12% complete at Receiving Pit.
- Landside Progress:
 - Mallory St Bridge – completed pile driving at the south abutment.
 - Bay Avenue Bridge EB – completed existing parapet demolition on existing eastbound on-ramp.
- Marine Progress:
 - North Trestle EB – 71% complete for piles driven.
 - South Trestle – 56% complete for piles driven.

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 26 (data date: September 19, 2021), and the schedule information in this report reflects this update. The current schedule of record update is being submitted and reviewed for progress only as HRCP is developing a revised baseline schedule.

- HRCP is reporting Substantial Completion in accordance with the contract milestone of September 1, 2025.
- HRCP is reporting Final Completion in accordance with the contract milestone of November 1, 2025.

Project Budget

The project budget summary below now includes all incurred to date costs through March 2022 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: | \$ 1,293,626,661 |
| Remaining project budget: | \$ 2,641,824,980 |

- Design-build contract overview:

| | |
|--|-------------------------|
| Design-build contract original amount: | \$ 3,299,997,227 |
| Net change orders: | \$ 2,183,729 |
| Exercised Options: | \$ 73,454,414 |
| Design-build contract sum to date: | \$ 3,375,635,370 |
| Expenditures to date: | \$ 1,232,205,495 |
| Remaining design-build contract amount: | \$ 2,143,429,875 |

- Design-build progress to date:

| | |
|---------------------------------|--------------|
| Project Management: | 39.3% |
| Design: | 85.4% |
| Physical Construction Progress: | 20.9% |
| Overall: | 37.1% |

Environmental

During this reporting period, HRCP took the following steps in support of environmental management:

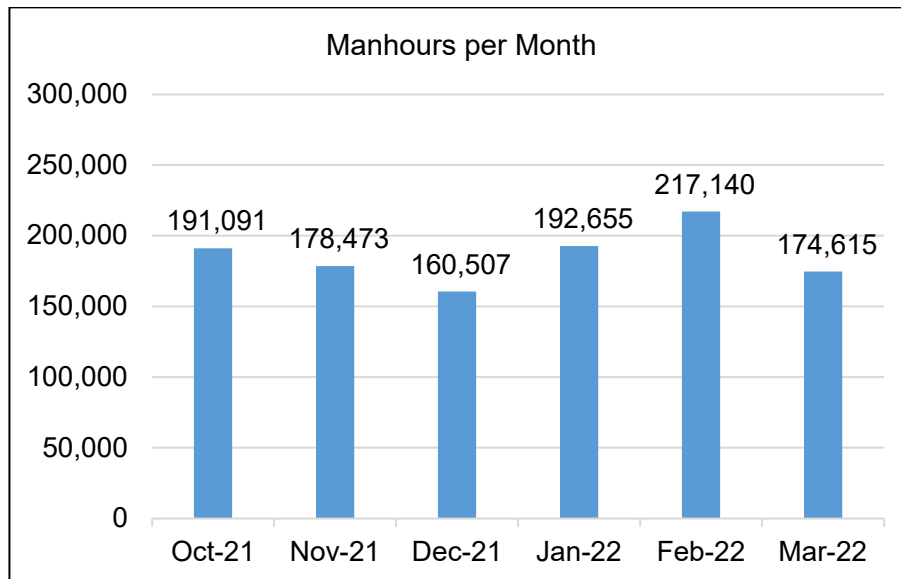
- HRCP presented new water quality modeling results to DEQ on March 14, 2022, addressing water treatment plant discharges. HRCP is proposing changes to the discharge pipe configuration to satisfy water quality requirements.
- HRCP submitted permit modification #6 to the regulatory agencies on January 28, 2022, and a meeting was held on February 10, 2022.

Construction

Progress updates for this reporting period include:

- Landside Roadways
 - Completed drainage jack & bore at several locations in Hampton and Norfolk.
- Marine Works
 - Piles installed at the eastbound permanent North Trestle (6 installed).
 - Caps installed at the eastbound permanent North Trestle (4 installed).
 - Piles installed at the permanent South Trestle (20 installed).
 - Piles installed at the eastbound MOT Trestle (16 installed).
 - Piles installed at the eastbound MOT Trestle (10 installed).
 - Girders installed at eastbound permanent North Trestle (14 installed).
- Tunnels and Islands
 - Continued dewatering in all cells of TBM launch pit.
 - Mass excavation of the TBM Launch Pit to 49%.
 - Ground Improvement along the tunnel path to 78%.
- Landside Bridges
 - Completed pile driving at south abutment at Mallory St Bridge.
 - Completed median pier shoring tower installation for Phase 1 demolition at Mallory St Bridge.
 - Installed columns at westbound Evans St Bridge (4 installed).
 - Set first span of girders for the eastbound Bay Ave Bridge
 - Began removal of temporary trestle at Willoughby Bay Bridge

The number of construction manhours worked each month is provided by HRCP and is current as of March 31, 2022:



Project Manhours to Date:
3,346,818

Operations

The following operations activities took place during this reporting period:

- Short-term lane closures throughout the project corridor to support construction activities.
- Lane shift on I-64 EB near Bayville on Ramp.
- Long-term lane closures at Bay Avenue, Bayview Blvd, and Mallory St.
- Long-term detours at Mason Creek Rd and the eastbound Bayville off ramp.
- Long-term detour at West Evans St.

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 coordinates with VDOT Materials Division for shop inspections as required.
- VDOT continues to monitor and audit HRCP's material book records for compliance.
- VDOT continues to engage HRCP in discussions on HRCP's implementation of their QMSP and the effectiveness of the plan.
- VDOT has reviewed the daily reporting and records for tunnel lining segment production and provided HRCP with comments noting reporting improvements needed.

Safety

Safety procedures and activities during this reporting period include:

- VDOT continued to conduct routine visits to promote safe work practices throughout the project.
- The following safety performance indicator information is provided by HRCP and is current as of March 31, 2022:
 - Total Recordable Incidence Rate: 1.94 (National Average: 2.5)
 - Lost Time Incidence Rate: 0.23 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP has awarded **293** subcontracts, subconsultant agreements, and purchase orders. Contract awards represent a total of **\$413.4 million** to certified DBE/SWaM firms on the project.

- HRCP continues to make progress towards its 80-participant On-the-Job Training goal with a total of 9 graduates and 19 currently active in the program.
- Project workforce representation: 52% minority and 13% women.
- HRCP has enhanced its website to include available contracting opportunities for small businesses.

Public Outreach & Media

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

- HRBT Project Team presented to the Hampton Roads Chamber Regional Board of Directors.
- HRBT Project Team presented at the Canon Virginia Engineers Week.
HRBT Project Team presented to the Virginia Peninsula Chamber in a panel for 757 Vision Transportation.

2. Project Schedule

2.1 Schedule Status

The following table depicts key milestone dates outlined in the contract requirements. This table will be used as a benchmark to track milestone achievements and has been updated as of the current approved schedule. HRCP and VDOT have collaborated and determined that a Revised Baseline schedule is appropriate, with the design of the project nearing completion and construction sequencing becoming more finalized. HRCP is currently in the process of developing a Revised Baseline schedule. The last approved schedule for the project is Update 26 (data date: September 19, 2021), and the schedule information in this report reflects this update.

| | Contract Requirement | Schedule of Record Dates | September 2021 (Update 26) | Actual |
|-------------------------------|----------------------|--------------------------|----------------------------|--------------|
| NTP | | Sep 9, 2020 | Sep 11, 2020 | Sep 11, 2020 |
| Substantial Completion | Sep 1, 2025 | Aug 27, 2025 | Sep 1, 2025 | |
| Final Completion | Nov 1, 2025 | Nov 1, 2025 | Nov 1, 2025 | |

2.2 Longest Path

The longest path in Project Schedule Update 26 is driven by the following activities:

- South Portal Launching Pit Capping Beam Cell 1,2,3
- South Portal Launching Pit Excavation Part 2,3,4
- South Portal Cell 1 Place Lean Concrete
- South Portal Temporary Headwall Cell 1
- Assembly of the Tunnel Boring Machine (TBM) in launching pit
- TBM drive in High Occupancy Toll (HOT) Tunnel
- TBM U-Turn
- TBM drive in General Purpose (GP) Tunnel
- TBM Disassembly in south pit
- South Portal Cut & Cover Structures Phase 4 Cell 1
- South Portal Mechanical, Electrical, and Plumbing (MEP)
- GP Tunnel Site Integration Acceptance
- Tunnel Systems Integration-ITS
- Commissioning and Testing of all Systems (Roadway, Bridges, Structures, Tunnels)
- 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 critical or near critical, meaning there is less than one month of float in the Schedule Update 26:

Design

- Design Segment 3 Roadway

Procurement

- North EB MOT Trestle procurement
- South WB MOT Trestle procurement

Construction

South Portal

- Dewatering-Testing & Commissioning
- Launch Pit Excavation Part 1
- Launch Pit Temporary Headwall-Partial Excavation
- Launch Pit Demolish Abandoned Slurry Wall
- Launch Pit Stiffening Columns & Struts
- Base Slab Concrete Works Phase 1
- Rectilinear section on-shore U-Wall
- Jet Grout Break-in/out Phase 2

North Portal

- Receiving Pit Slurry Walls
- North Ground Improvement-Bore Proximity slurry walls

North Trestle

- EB Zone 1 (Pier Caps, Beams Deck)
- EB Zone 2 (Pier Caps)
- EB Zone 3 (Piles, Pier Caps, Abutment)
- EB MOT Zone 5 (Piles)
- WB Zone 6 (Piles)

South Trestle

- EB MOT Zone 3 (Piles, Pier Caps, Beams, Deck, Abutment, Finishes)
- WB MOT Zone 4 (Piles, Pier Caps, Beams)

Roadway

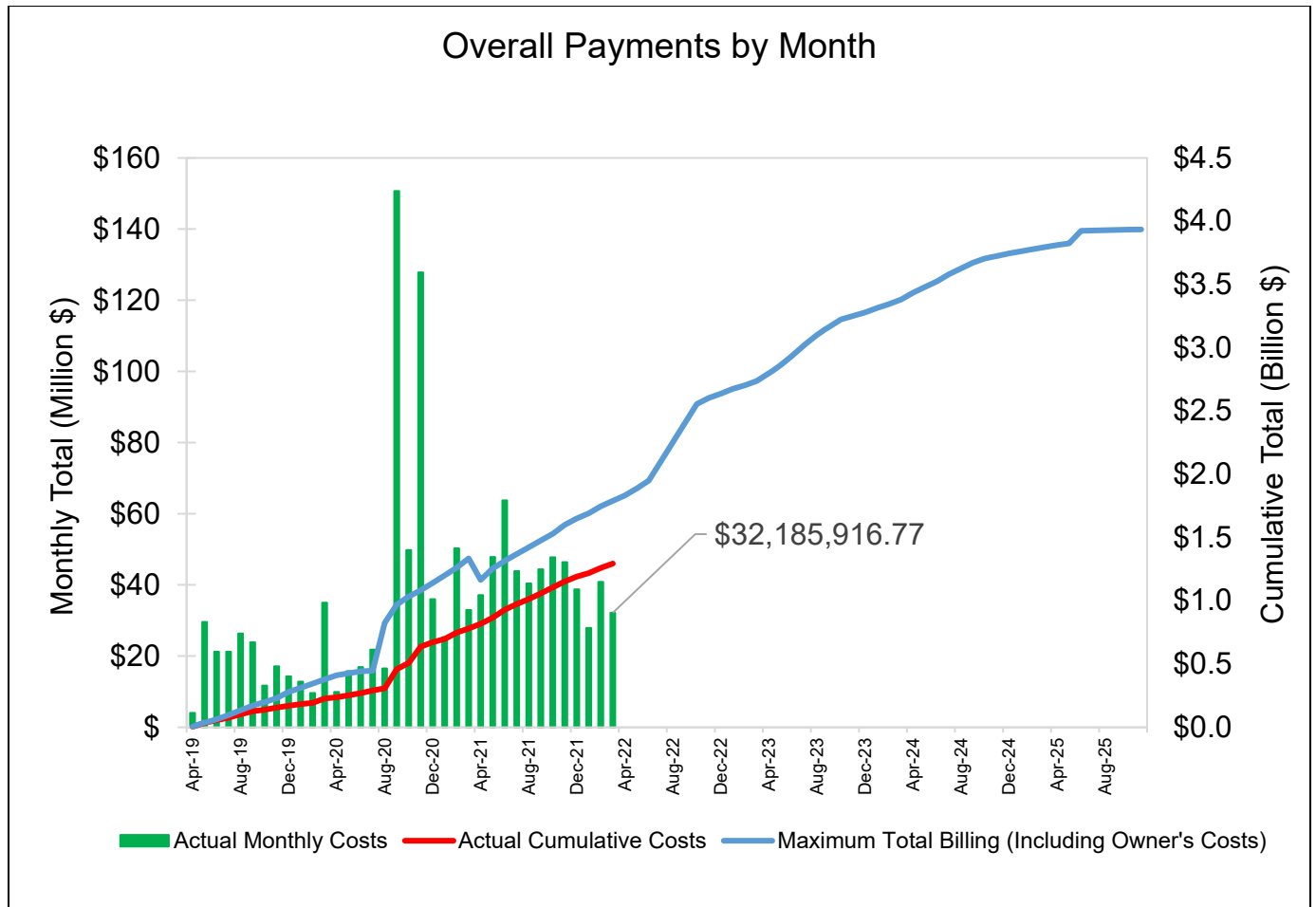
- Segment 3 Roadway from South Trestle to Mason Creek Rd

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).

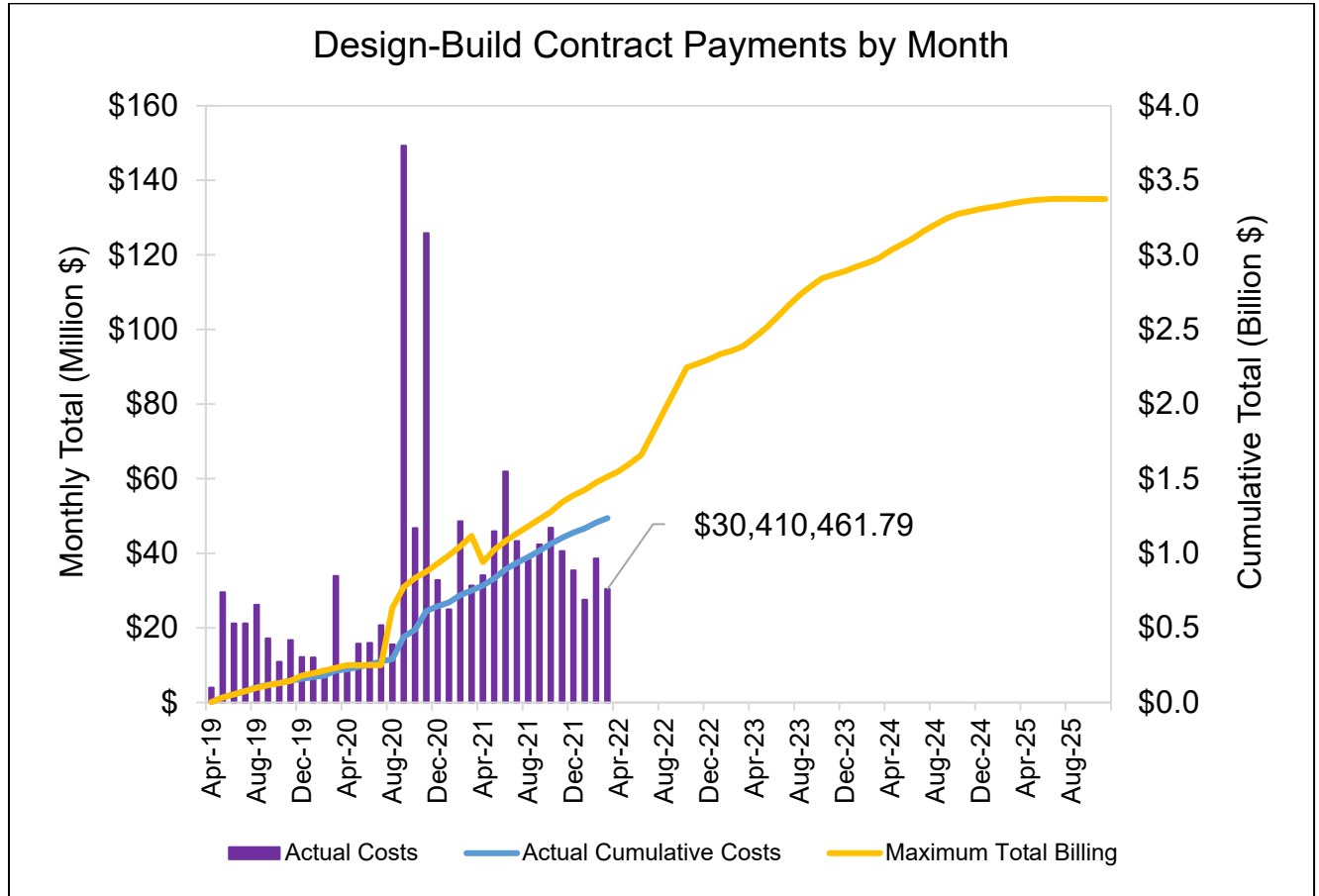
| | Amount this Period: | Total to Date: | Original Total Budget: | Total Remaining Budget: | Percent To-date: |
|---------------------------------------|------------------------|---------------------------|---------------------------|---------------------------|------------------|
| <u>Comprehensive Agreement</u> | | | | | |
| <i>Construction</i> | \$30,057,253.59 | \$1,220,452,553.49 | \$3,299,997,227.00 | \$2,079,544,673.51 | 36.98% |
| <u>Owner Costs</u> | | | | | |
| <i>Administration</i> | \$1,767,945.28 | \$48,873,496.18 | \$122,000,000.00 | \$73,126,503.82 | 40.06% |
| <i>Right of Way</i> | \$7,509.70 | \$8,547,669.93 | \$15,000,000.00 | \$6,452,330.07 | 56.98% |
| <i>No-Excuses Incentive</i> | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| <i>Contingency</i> | \$148,472.42 | \$15,521,788.38 | \$335,000,000.00 | \$319,478,211.62 | 4.63% |
| <i>Bridge Repair Work Option</i> | \$204,735.78 | \$231,153.30 | \$73,454,413.96 | \$73,223,260.66 | 0.31% |
| <u>Total</u> | \$32,185,916.77 | \$1,293,626,661.28 | \$3,935,451,640.96 | \$2,641,824,979.68 | 32.87% |



**The Maximum Total Billing (Including Owner's Costs) 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

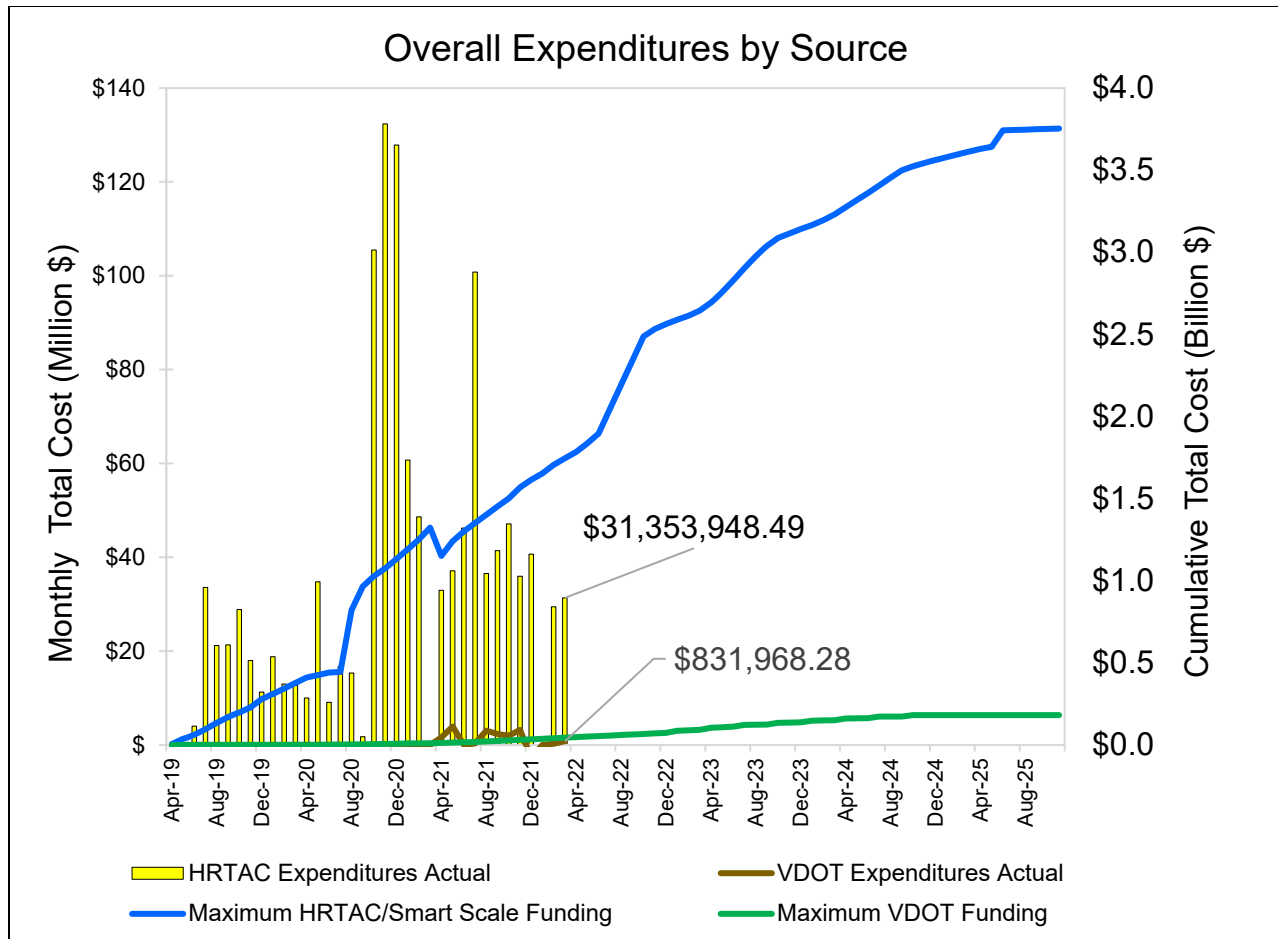
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation 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> | \$29,443,389.09 | \$1,209,013,946.73 | \$3,204,569,251.00 | \$1,995,555,304.27 | 37.73% |
| <u>Owner Costs</u> | | | | | |
| <i>Administration</i> | \$1,754,577.28 | \$47,867,863.18 | \$118,472,054.00 | \$70,604,190.82 | 40.40% |
| <i>Right of Way</i> | \$7,509.70 | \$8,547,669.93 | \$15,000,000.00 | \$6,452,330.07 | 56.98% |
| <i>No-Excuses Incentive</i> | \$0.00 | \$0.00 | \$90,000,000.00 | \$90,000,000.00 | 0.00% |
| <i>Contingency</i> | \$148,472.42 | \$14,536,822.25 | \$325,428,276.00 | \$310,891,453.75 | 4.47% |
| <u>Total</u> | \$31,353,948.49 | \$1,279,966,302.09 | \$3,753,469,581.00 | \$2,473,503,278.91 | 34.10% |

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> | \$613,864.50 | \$11,438,606.76 | \$95,427,976.00 | \$83,989,369.24 | 11.99% |
| <u>Owner Costs</u> | | | | | |
| <i>Administration</i> | \$13,368.00 | \$1,005,633.00 | \$3,527,946.00 | \$2,522,313.00 | 28.50% |
| <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 | \$0.00 | 0.00% |
| <i>Contingency</i> | \$0.00 | \$984,966.13 | \$9,571,724.00 | \$8,586,757.87 | 10.29% |
| <i>Bridge Repair Work Option</i> | \$204,735.78 | \$231,153.30 | \$73,454,413.96 | \$73,223,260.66 | 0.31% |
| <u>Total</u> | \$831,968.28 | \$13,660,359.19 | \$181,982,059.96 | \$168,321,700.77 | 7.51% |



3.4 Contingency

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 | \$ 73,454,313.00 | 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-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-49 | HRCP Senior Representative Change | 7/2/2021 | \$ - | 0 days |
| CO-50 | Change in Precast Form Tolerance & Change in Curing Methods | 1/10/2022 | \$ - | 0 days |
| CO-53 | Sound Wall Quantity Reconciliation | 12/6/2021 | \$ (16,561,217.63) | 0 days |
| CO-57 | Design-Builder's Senior and Representative Changes | 1/11/2022 | \$ - | 0 days |
| TOTAL | | | \$ 75,638,143.47 | 0 days |

Material Price Adjustments

This progress period included the following material price adjustments through August 2021:

| Material | Amount Invoiced | Total to Date |
|----------|-----------------|---------------|
| Asphalt | \$ 11,896.42 | \$11,896.42 |
| Fuel | \$ 2,804.76 | \$2,804.76 |
| Steel | \$16,749.84 | \$16,749.84 |

4. Environmental

HRCP has completed or is performing several compliance tasks included in permit conditions:

Permits:

- HRCP presented new water quality modeling results to DEQ on March 14, 2022, addressing water treatment plant discharges. HRCP is proposing changes to the discharge pipe configuration to satisfy water quality requirements.
- HRCP submitted permit modification #6 to the regulatory agencies on January 28, 2022, and a meeting was held on February 10, 2022. HRCP's formal response addressing agency comments is under review by the agencies.

Marine Mammal Protection:

- Permit modification #6 includes changes to the size and configuration of pilings previously authorized by the National Oceanic Atmospheric Administration (NOAA) Letter of Authorization (LOA). HRCP submitted supporting information regarding the piling changes that is being reviewed by NOAA.
- There have been no marine mammal sightings within the project area since December 15, 2021.

Bird Mitigation:

- HRCP has increased the use of patrol dogs and handlers on the North Island, South Island, and Willoughby Spit. HRCP also initiated repair of passive bird deterrent measures on the South Island in advance of the April 1, 2022, bird season.

Programmatic Agreement:

- HRCP is proposing a change to the project's sound wall posts by utilizing steel in place of concrete. The Final Aesthetics Plan was revised and sent to VDOT Central Office for coordination with the Department of Historic Resources and all Programmatic Agreement stakeholders.

Archeological Discoveries:

- No discoveries during this period.

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 and bridge 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 bridge work.



5.1 Construction Area 1: Landside Roadways

Mainline I-64:

- Completed drainage jack & bore near North Shore in Hampton for mainline I-64.
- Drainage installation along I-64 median between Willoughby Bay and 4th View St. for the westbound widened section.
- Completed drainage jack & bore between 15th View St. and 13th View St. for mainline I-64.
- Fill placement for wick drain working platform along I-64 Eastbound between 15th View St. and 13th View St.
- Temporary wire wall installation between South Trestle and 15th View St. for eastbound widening.
- Drainage installation and fill placement for embankment along I-64 Eastbound between Bay Avenue and Evans St. for the eastbound widened section.
- Undercut for gravity retaining wall between Bay Ave and Evans St. for eastbound widening.

5.2 Construction Area 2: Marine Trestle Work

- **North Trestle**
 - **Eastbound North Trestle:**
 - 6 piles installed during this period (181 out of 254 total piles driven).
 - 16 out of 21 piles driven at MOT trestle.
 - Forming, reinforcing, and placing concrete for Abutment B.
 - 4 cap segments installed during this period (14 out of 47 total precast bent cap segments).
 - 14 girders installed during this period (18 out of 296 total girders).
 - **Westbound North Trestle:**
 - 5 piles installed during this period (14 out of 261 total piles driven).
 - 1 out of 57 total precast bent cap segments placed.
- **South Trestle**
 - 20 piles installed during this period (264 out of 465 total piles driven at permanent trestle).
 - 1 cap segment installed during this period (1 out of 65 total precast bent cap segments).
 - 5 piles installed during this period (50 out of 122 total piles driven at eastbound MOT trestle).
 - 10 out of 109 piles driven at westbound MOT trestle.



◀ **EB North Trestle**
Girder placement.

5.3 Construction Area 3: Tunnels and Islands

South Island:

- 71% complete for TBM quay dock superstructure.
- 78% complete for ground improvement along tunnel path.
- 3% complete for jet grouting operations at tunnel approach.
- 50% complete for mid-elevation chord struts in Cell 2.
- Continued dewatering in all cells of TBM launch pit.
- 66% complete for TBM assembly slab
- 49% complete for mass excavation of TBM launch pit.

North Island:

- 94% complete for guide wall installation.
- 12% complete for slurry wall installation at North Island receiving pit and approach section.

Tunnel:

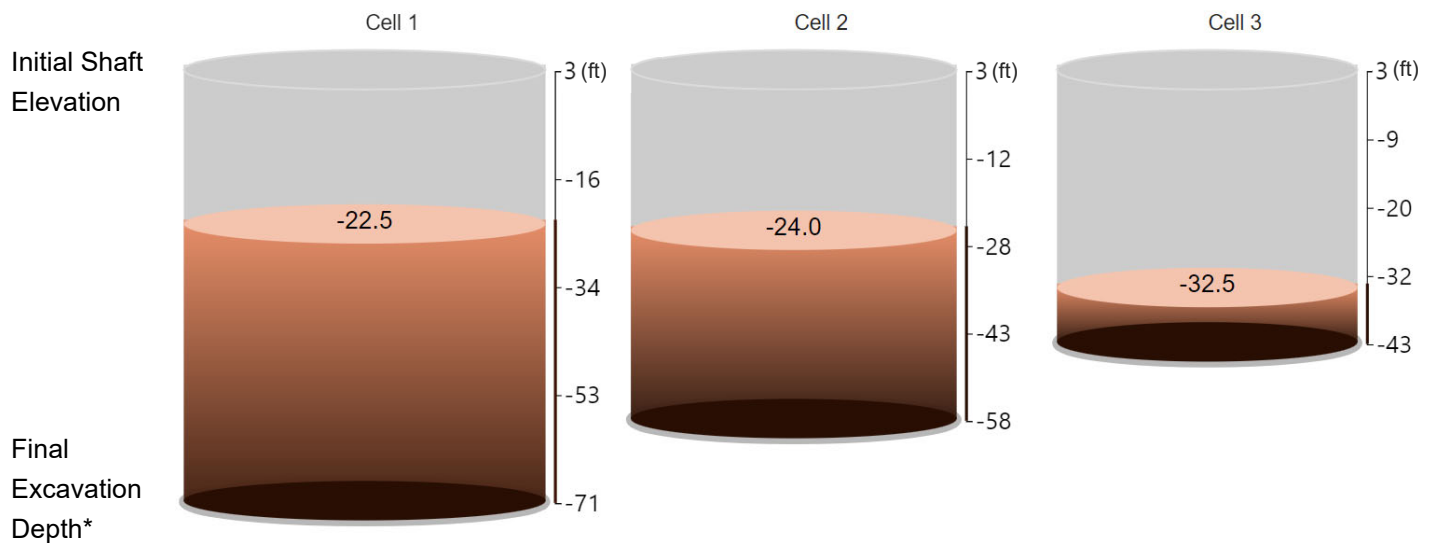
- 3% complete for precast tunnel segment liner production.



◀ **Precast Tunnel Segment Liners**
Steam cure of cast elements

| Total Segments Required: | Conforming Segments Cast To-Date: | Percentage Complete: |
|--------------------------|-----------------------------------|----------------------|
| 21,492 | 654 | 3.0% |

South Island Launching Pit – Mass Excavation Progress
Progress of Shaft Excavation by Average Elevation



**Final excavation depth in each cell increases with proximity to tunnel opening.*

5.4 Construction Area 4: Landside Bridges

Mallory Street Bridge (Hampton):

- Started and completed pile driving at south abutment.
- Completed median pier shoring tower installation for Phase 1 demolition.

Oastes Creek Bridge:

- Set girders for the eastbound widened section.

Bayview Boulevard Bridge:

- No activity this period.

Evans St Bridge:

- Installed one cap for the eastbound widened section.
- Installed four columns and one cap for the westbound widened section.

Bay Avenue Bridge:

- Set first span of girders for the eastbound widened section.
- Pile driving for the eastbound widened section.
- Existing deck demolition on the existing eastbound on-ramp exterior.
- Completed existing parapet demolition on the existing eastbound on-ramp.
- Began removal of existing girders on the existing eastbound on-ramp exterior.

Mason Creek Road Bridge:

- Began pile driving for the eastbound widened section.

Willoughby Bay Bridge:

- Set girders for the eastbound widened section.
- Repair/rehabilitation for the existing eastbound bridge.
- Began removal of temporary trestle.

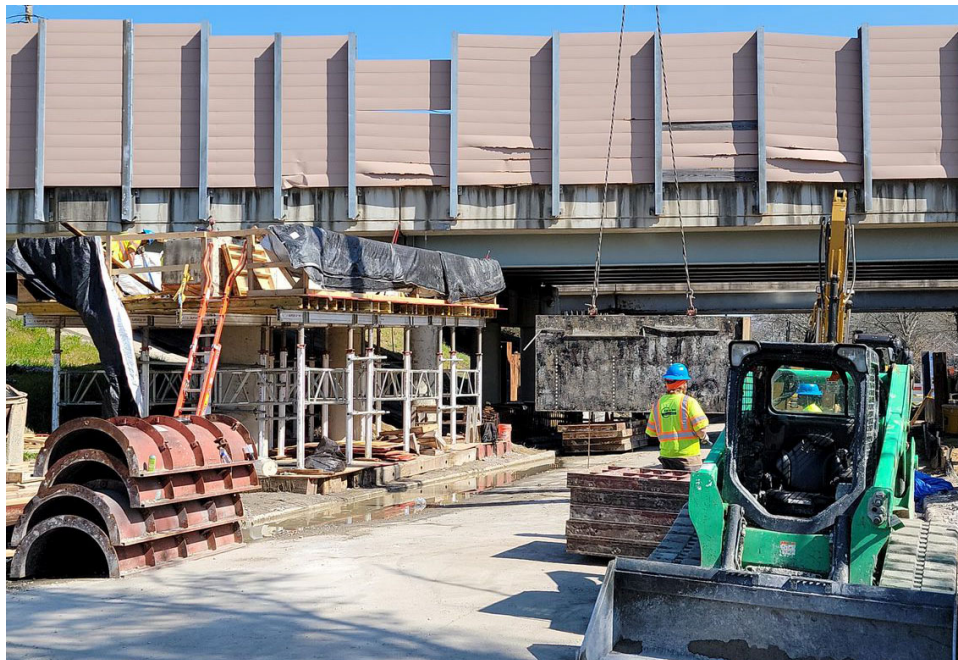


◀ Bay Ave Bridge

Setting first span of girders for the eastbound widened section



◀ **Mallory St Bridge**
H-Pile at South Abutment for
Phase 1 bridge replacement



◀ **Evans St Bridge**
Eastbound cap placement
at Pier 1

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 Eastbound Bridge and the North Eastbound Trestle to facilitate concrete pile and cap placement.
- North Eastbound Trestle for girder placements.
- I-64 near Oastes Creek in Norfolk for temporary lighting installation.
- Striping maintenance throughout the project corridor.
- Mallory St short term stoppages to move a crane in the median.
- Hampton North Shore to mobilize for jack & bore operation along I-64.

Long-Term Lane Closures:

- Bay Avenue in Norfolk to facilitate access to a staging area for the widening of the Oastes Creek Bridge.
- Bayview Blvd in Norfolk and Mallory St in Hampton to facilitate bridge widening.

Hampton Lane Shifts:

- No new activities this period for I-64 EB/WB.

Norfolk Lane Shifts:

- I-64 EB near Bayville on ramp.

Detours:

- Long-term detour at West Evans St to facilitate bridge widening. Also continued nightly temporary detours on the West Bay Ave on-ramps for bridge widening work.
- Long-term detour at Mason Creek Rd in Norfolk to facilitate bridge widening.

Routine Maintenance:

- HRCP performed routine incident management and maintenance operations within the corridor.
- VDOT continues to monitor HRCP's performance with respect to the approved maintenance management plan.

7. Quality

Quality updates for this reporting period include:

Construction Quality Management Plan (CQMP) Updates:

- VDOT reviews these updates as part of final “Released for Construction” (RFC) design packages and “Notice of Design Change” (NDC) packages. There were 3 updates reviewed this period, including the CQMP updates for NDC packages received. 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 coordinates with VDOT Materials Division for shop inspections as required. This testing includes oversight of the HRCP Precast Yard in Chesapeake and Technopref’s Precast Yard in Cape Charles producing the tunnel lining segments. VDOT also reviews HRCP’s Frequency of Testing data to confirm that QA and QC are performing the required tests.

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. HRCP submitted Rev 15 of the QMSP in response to VDOT’s comments of the quarterly update. VDOT is currently reviewing this document.

Quarterly Updates of Quality Plans:

- HRCP submitted the quarterly updates of the Quality Management System Plan, Construction Quality Management Plan, and the Design Quality Management Plan for the first quarter of 2022. VDOT completed the review of these submissions and returned to HRCP with comments.

Tunnel Quality Plan (TQP):

- HRCP continues to update its Tunnel Quality Plan and address VDOT’s comments. VDOT has reviewed the daily reporting and records for tunnel lining segment production and provided HRCP with comments noting reporting improvements needed.

Material Book Records:

- VDOT to date completed and closed audits of seven material book record volumes. HRCP continues to submit records for subsequent volumes of material books according to the established audit schedule. VDOT also 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.

Routine Quality Activities:

- VDOT's quality team conducted reviews of written deficiency notices (WDNs) and nonconformance reports (NCRs) and coordinated with VDOT's resident engineers for acceptance of root cause analyses and dispositions of deficiencies. VDOT also conducted reviews of QA and QC records for accuracy and quality issues and coordinated documentation reviews through VDOT's Material Department. VDOT also began a review of current construction quality by performing an inspection based on VDOT's Construction Quality Improvement Program (CQIP).

8. Safety

Safety procedures and activities during this reporting period include:

COVID-19 Update:

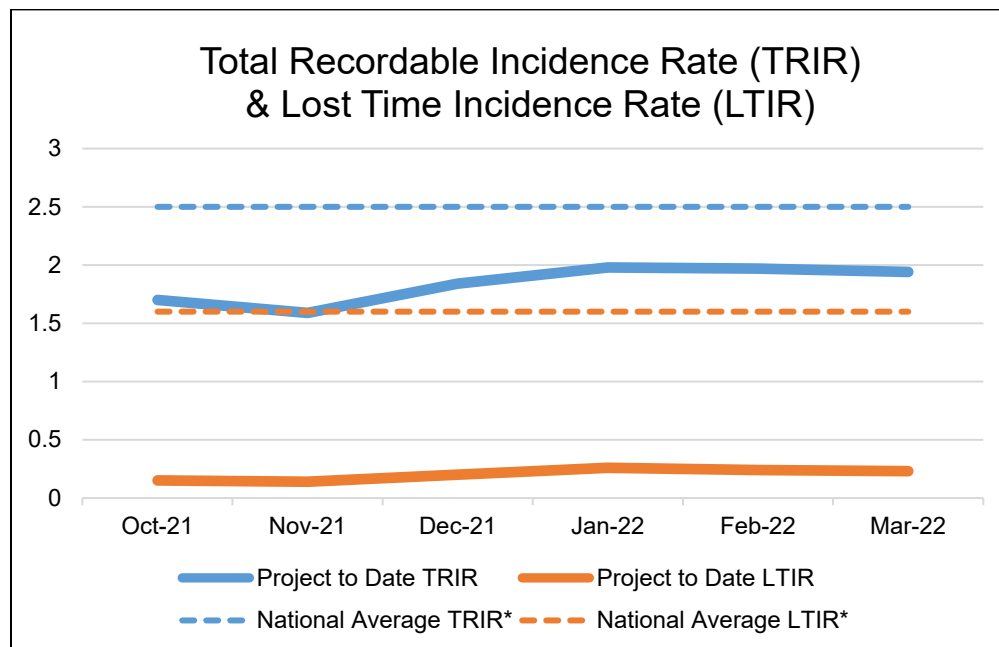
- VDOT and HRCP continue to follow latest CDC Guidelines regarding COVID-19.

Safety Site Visits:

- VDOT continued to conduct routine visits to promote safe work practices throughout the project.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of March 31, 2022.



**National averages are from the Bureau of Labor Statistics, US Department of Labor – 2020 Data for Construction Industry, Published November 3, 2021.*

9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP has awarded **293** subcontracts, subconsultant agreements and purchase orders. No additional agreements were awarded during this period for certified DBE/SWaM certified firms. There was a slight increase in contract awards for a total of **\$413.4 million** due to change orders issued to active DBE/SWaM firms on the project.

Compliance Activities:

- VDOT-HRCP Civil Rights Compliance Team met on March 15, 2022 to discuss civil rights compliance matters. Discussions continued regarding the status of subcontractor payments for compliance with prompt payment provisions, procurement opportunities, price adjustments for eligible fuel items and subcontractor flow down, outreach events, compliance document submissions, and workforce development efforts.

Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 9 participants graduated with 19 currently active in the program.
- Project workforce representation: 52% minority and 13% women.
- During the reporting period, HRCP participated in the following workforce development events:
 - February 24, 2022 – Live, Love & Work in Virginia, Virginia Career Works
 - March 8, 2022 – Academies of Hampton Public Schools, Career Hiring Event

Business Development Activities:

- HRCP has enhanced its website to include available contracting opportunities for small businesses. The updated sites will be formally announced to the business community and can be found at:
 - <https://hrcpjobs.com/small-business-opportunities/>
 - <https://hrcpjobs.com/swam-dbe-opportunities/>

During this reporting period, other business development and outreach activities included:

- March 10, 2022 – Virginia Asian Chamber of Commerce, 2022 ProcureCon

10. Public Outreach & Media

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

Public Outreach

- February 22, 2022 – HRBT Project Team presented at the Canon Virginia Engineers Week
- March 9, 2022 – HRBT Project Team presented to the Hampton Roads Chamber Regional Board of Directors



◀ March 9, 2022

HRBT Project Team
Presenting Hampton Road
Chamber Regional Board
of Directors

- March 16, 2022 – HRBT Project Team presented to the Virginia Peninsula Chamber in a panel for 757 Vision Transportation
- March 17, 2022 – Hampton Roads Bridge-Tunnel featured in the ASCE Centennial Banquet with video
- March 18, 2022 – HRBT Project Team presented to the Oyster Point Rotary Club

Media

- February 21, 2022, WY Daily – [Progress Being Made on the HRBT Expansion Project](#)
- February 21, 2022, WTKR-TV – [Kaine, Luria tour Hampton Roads projects by helicopter](#)
- February 21, 2022, 13NewsNow – [Kaine, Luria take aerial tour of places in Virginia that will benefit from \\$1.2 trillion infrastructure bill](#)
- February 23, 2022, 13NewsNow – [VDOT says progress with HRBT expansion project being made](#)
- February 27, 2022, Virginia Business – [A sampling of Virginia's major road projects](#)
- March 17, 2022, Construction Equipment Guide – [Digging It ... Joint Venture Constructs New \\$3.8B Hampton Roads Bridge-Tunnel](#)

Visit our website to view more information:
www.hrbtexpansion.org