



**December 2021  
Monthly Project Report**

**I-64 HAMPTON ROADS  
BRIDGE-TUNNEL  
EXPANSION**

**Report No. 33**  
Project No. 0064-M06-032



## Table of Contents

<b>1. Executive Summary.....</b>	<b>1</b>
1.1 Overview.....	1
1.2 Priorities.....	1
1.3 Key Updates .....	2
<b>2. Project Schedule.....</b>	<b>6</b>
2.1 Schedule Status .....	6
2.2 Longest Path.....	6
2.3 Impact Analysis .....	6
<b>3. Project Budget .....</b>	<b>8</b>
3.1 Overall Budget.....	8
3.2 Design-Build Contract Cost Status .....	10
3.3 Budget by Funding Source .....	11
3.4 Contingency.....	12
<b>4. Environmental.....</b>	<b>14</b>
<b>5. Construction.....</b>	<b>15</b>
5.1 Construction Area 1: Hampton Landside .....	16
5.2 Construction Area 2: Marine Work .....	16
5.3 Construction Area 3: Tunnels and Islands .....	19
5.4 Construction Area 4: Norfolk Landside.....	22
<b>6. Operations .....</b>	<b>23</b>
<b>7. Quality.....</b>	<b>24</b>
<b>8. Safety .....</b>	<b>25</b>
<b>9. Civil Rights &amp; DBE/SWaM Business Opportunities.....</b>	<b>26</b>
<b>10. Public Outreach &amp; Media.....</b>	<b>27</b>

**Issue Date: January 18, 2022**

Prepared by:

Virginia Department of Transportation

[www.hrbtexpansion.org](http://www.hrbtexpansion.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 November 21, 2021 – December 11, 2021. 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 recorded:

- South Island Progress:
  - Completed capping beam for the TBM Launching Pit.
  - Began mass excavation of the TBM Launching Pit.
- North Island Progress:
  - Guide wall installation in preparation for slurry walls.
  - Slurry wall equipment and treatment plant mobilization.
- North Island Expansion Progress:
  - Completed fill material placement to final elevation for the North Island Expansion.
- The final shipment of TBM components arrived at the Port of Virginia.
- Completed demolition of the deck of the south side of Mallory St Bridge.
- Two (2) additional On-the-Job training participants graduated from the program.

### 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

HRCP is currently in the process of developing a Revised Baseline schedule to be submitted and approved no later than April 1, 2022. 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.

- 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.
- Approximately 37% of the scheduled time has elapsed to date.

### Project Budget

The project budget summary below includes the preliminary payment application for December 2021 activities. Figures are subjected to change pending the VDOT's review of the official submission of the payment application by HRCP.

- Project budget overview:

Current total project budget:	\$ 3,935,451,641
Total expenditures to date:	\$ 1,218,308,742
<b>Remaining project budget:</b>	<b>\$ 2,717,142,899</b>

- 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:	\$ 1,152,732,309
<b>Remaining design-build contract amount:</b>	<b>\$ 2,222,903,061</b>

- Design-build progress to date:

<b>Overall:</b>	<b>33.95%</b>
Project Management:	36.19%
Design:	83.86%
Physical Construction Progress:	18.41%

## Environmental

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

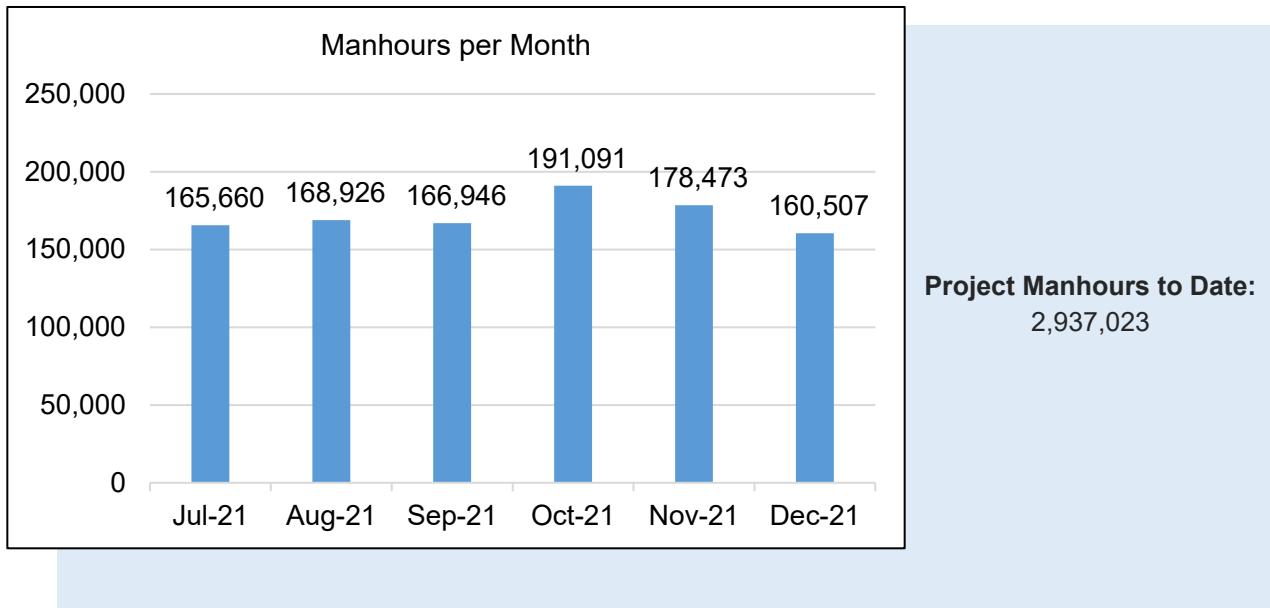
- To address a Warning Letter from the Department of Environment Quality (DEQ) regarding water quality permitted exceedances at the South Island treatment plant, HRCP is working on a mixing study that will determine methods for bringing water treatment plant discharges into compliance. A final report and proposed discharge modifications are expected to be presented to DEQ in December 2021.
- Virginia Marine Resources Commission (VMRC) approved HRCP's placement plan for demolition material at artificial reef sites.
- HRCP provided additional information to DEQ regarding the air permit applications for the North and South Islands.

## Construction

Progress updates for this reporting period include:

- Hampton Landside
  - Completed demolition of the deck at the south side of Mallory St Bridge.
  - Completed girder removal at the south side of Mallory St Bridge.
  - Completed temporary drainage installation along I-64 Eastbound in Hampton.
- Marine Works
  - Permanent pile driving operations for the North Trestle and South Trestle.
  - Completed fill material placement and compaction to final elevation for the North Island Expansion at this stage of the project.
  - Began initial pile driving operations at the South MOT Westbound Trestle.
- Tunnels and Islands
  - Began mass excavation at the TBM Launch Pit.
  - Construction of the conveyor system and TBM Quay at the South Island.
  - Ground improvement with deep soil mixing and jet grouting operations on the South Island.
  - Capping beam placement at the South Island Launching Pit.
  - Work on the TBM slab at the South Island Launching Pit.
  - Slurry wall mobilization operations at the North Island.
  - Installed guide walls at the North Island.
- Norfolk Landside
  - Bay Avenue Bridge widening at abutments.
  - Demolished sound wall along I-64 Eastbound between Bay Ave Bridge and Evans St.
  - Construction of the Willoughby Bay Bridge, Oastes Creek Bridge, and Evans St Bridge for Eastbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of December 31, 2021:



## Operations

The following operations activities took place during this reporting period:

- Performed short term stoppages to facilitate demolition and widening work at the Mallory St Bridge.
- Short-term detours throughout the project corridor.
- Long-term detour at West Evans St.
- Long-term lane closures at Bay Avenue, Bayview Blvd, and Mallory St.
- Lane shift on the I-64 EB 4th View Off-Ramp in Norfolk.

## Quality

Quality updates for this reporting period include:

- VDOT continues to monitor HRCP's Quality Program per the quarterly updates of the Quality Management System Plan, the Design Quality Management Plan, and the Construction Quality Management Plan.
- VDOT continues to track Owner's Independent Assurance (OIA) and Owner's Verification Sampling and Testing (OVST) requirements and conducts testing as needed.
- VDOT continues to monitor and audit HRCP's material book records for compliance.

## Safety

Safety procedures and activities during this reporting period include:

- The following safety performance indicator information is provided by HRCP and is current as of December 31, 2021:
  - Total Recordable Incidence Rate: 1.84 (National Average: 2.5)
  - Lost Time Incidence Rate: 0.20 (National Average: 1.6)

## Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP has awarded **277** subcontracts, subconsultant agreements, and purchase orders. Contract awards represent a total of **\$386.2 million** to active DBE/SWaM firms on the project.

- HRCP continues to make progress towards its 80-participant On-the-Job Training goal, with two additional graduates this period.
- VDOT continued to conduct routine compliance reviews on civil rights activities.
- HRCP and VDOT are in the process of developing the second edition of its DBE/SWaM Success publication for distribution.

## Public Outreach & Media

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

- Presentation to the Governor's Transportation Conference.
- Media coverage on traffic alerts.

## 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 to be submitted and approved no later than April 1, 2022. 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
<b>NTP</b>		Sep 9, 2020	Sep 11, 2020	Sep 11, 2020
<b>Substantial Completion</b>	Sep 1, 2025	Aug 27, 2025	Sep 1, 2025	
<b>Final Completion</b>	Nov 1, 2025	Nov 1, 2025	Nov 1, 2025	

### 2.2 Longest Path

The longest path to achieve the completion date of the 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 the 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

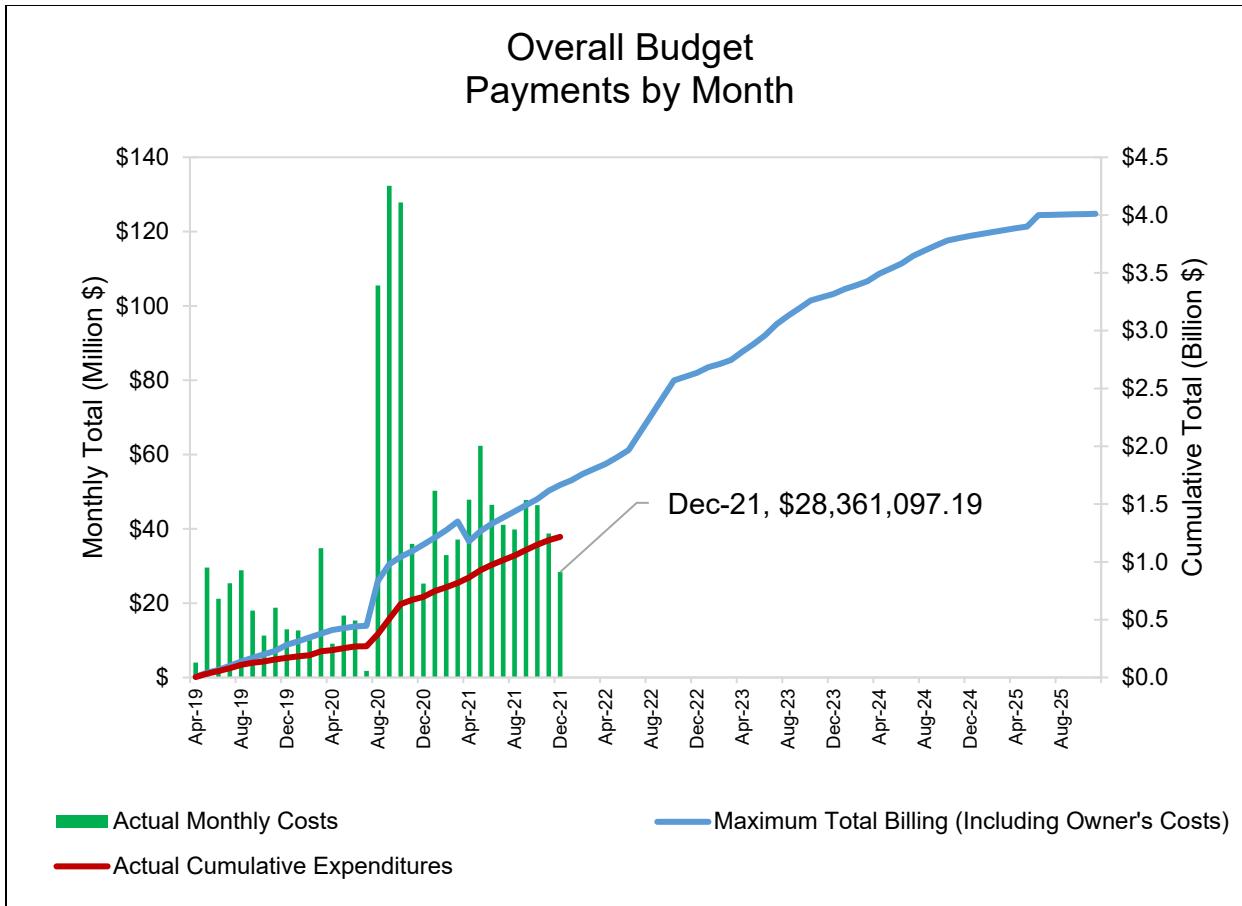
### 3. Project Budget

#### 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).

*\*Note - The project budget summary below includes the preliminary payment application for December 2021 activities. Figures are subjected to change pending the VDOT's review of the official submission of the payment application by HRCP.*

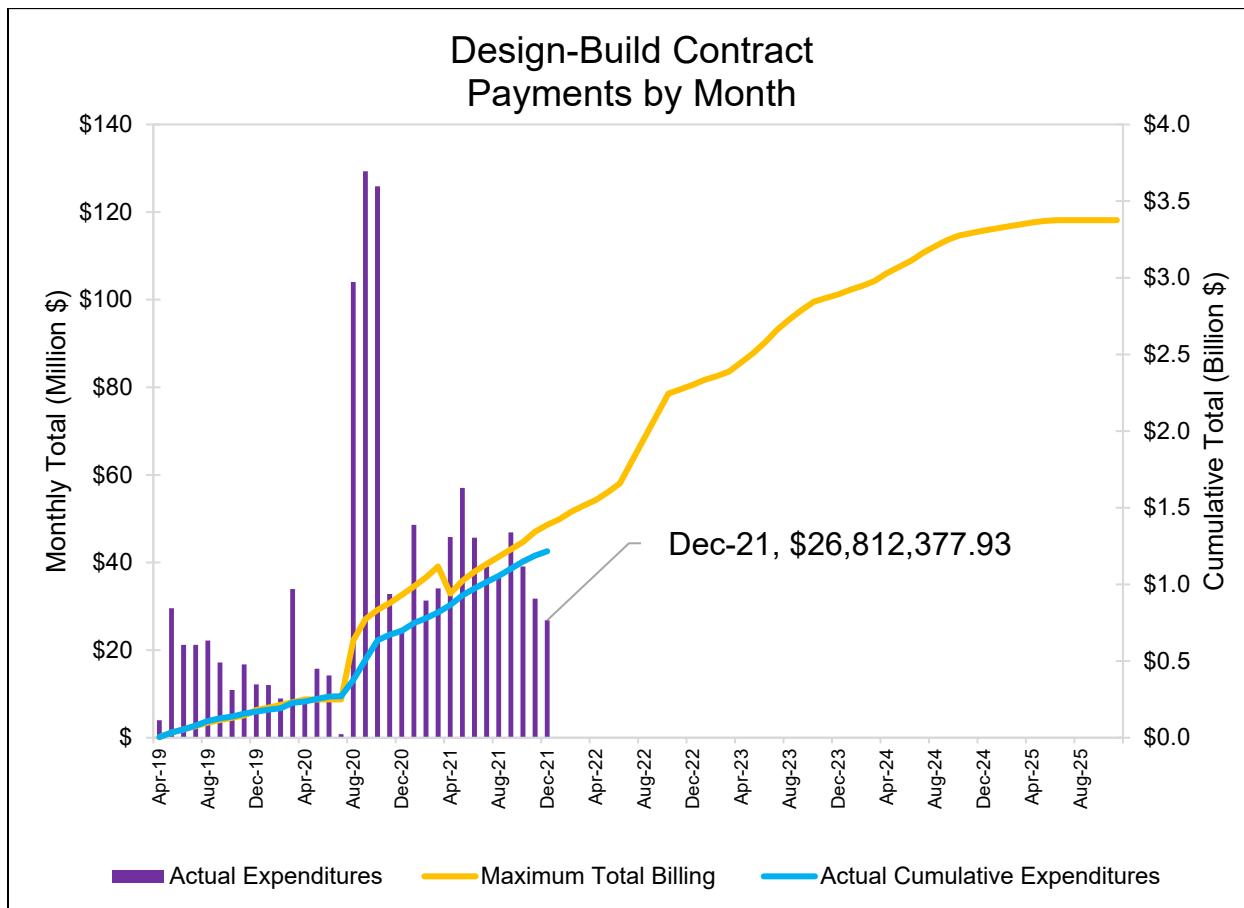
	Amount this Period:	Total to Date:	Original Total Budget:	Total Remaining Budget:	Percent To-date:
<b><u>Comprehensive Agreement</u></b>					
*Construction	\$26,812,377.93	\$1,152,732,309.00	\$3,299,997,227.00	\$2,147,264,918.00	34.93%
<b><u>Owner Costs</u></b>					
Administration	\$289,803.15	\$42,230,544.62	\$122,000,000.00	\$79,769,455.38	34.62%
Right of Way	\$92,762.64	\$8,454,771.00	\$15,000,000.00	\$6,545,229.00	56.37%
No-Excuses Incentive	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
*Contingency	\$1,166,153.47	\$14,891,117.77	\$335,000,000.00	\$320,108,882.23	4.45%
*Bridge Repair Work Option	\$0.00	\$0.00	\$73,454,413.96	\$73,454,413.96	0.00%
<b>Total</b>	<b>\$28,361,097.19</b>	<b>\$1,218,308,742.39</b>	<b>\$3,935,451,640.96</b>	<b>\$2,717,142,898.57</b>	<b>30.96%</b>



\*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 (Including Owner's Costs) is now showing an adjustment in May 2021 due to the executed Change Order #40 - Update Maximum Cumulative Cost Curve.*

### 3.3 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. Amounts this period reflect amounts paid for Construction, Engineering, Administration, Right of Way, and Contingency between November 21, 2021 – December 11, 2021.

#### 3.3.1 HRTAC and Smart Scale

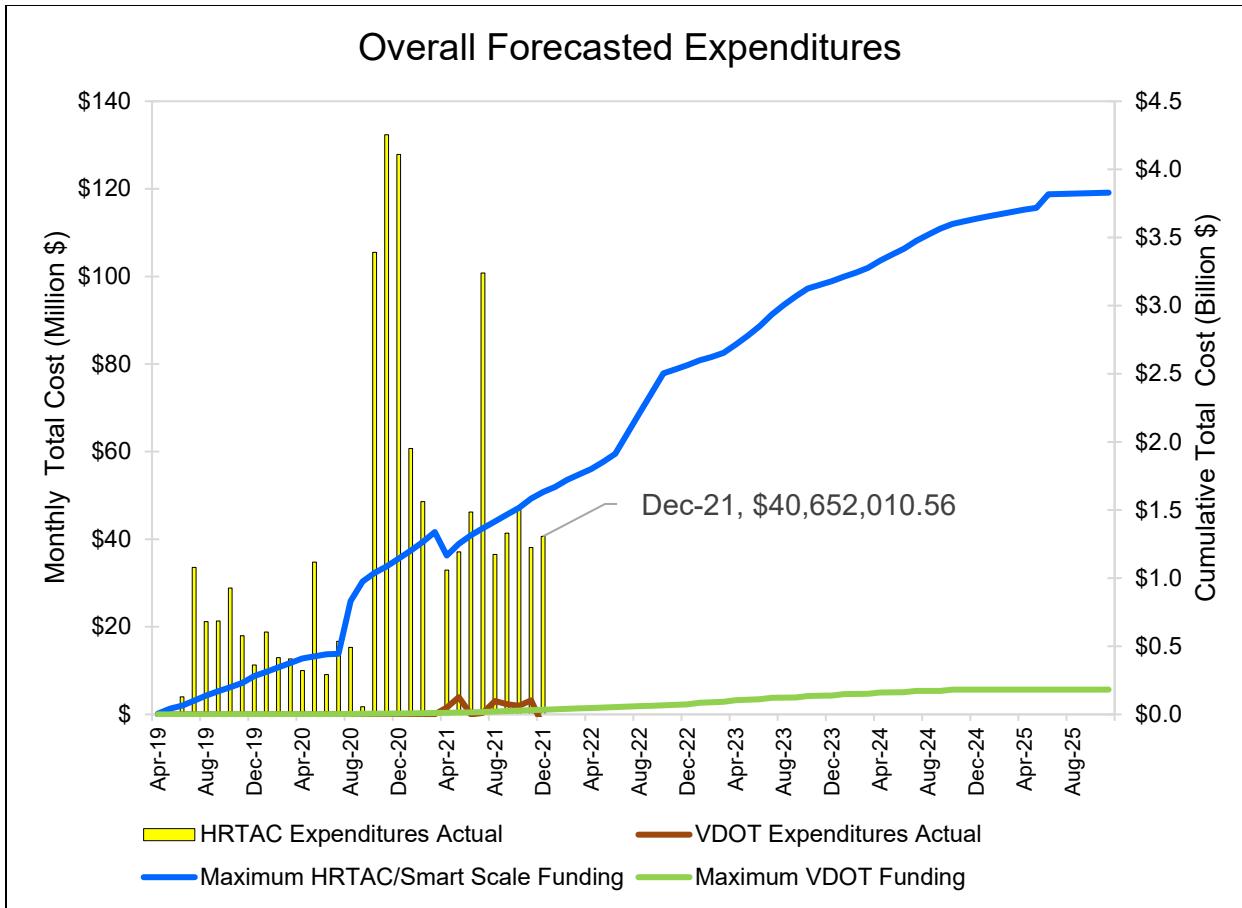
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget Including Smart Scale:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
*Construction	\$34,920,101.10	\$1,115,250,234.81	\$3,204,569,251.00	\$2,089,319,016.19	34.80%
<u>Owner Costs</u>					
Administration	\$3,951,737.69	\$37,905,676.78	\$118,472,054.00	\$80,566,377.22	32.00%
Right of Way	\$1,780,171.77	\$8,306,653.92	\$15,000,000.00	\$6,693,346.08	55.38%
No-Excuses Incentive	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
Contingency	\$0.00	\$8,056,535.62	\$325,428,277.00	\$317,371,741.38	2.48%
<b>Total</b>	<b>\$40,652,010.56</b>	<b>\$1,169,519,101.13</b>	<b>\$3,753,469,582.00</b>	<b>\$2,583,950,480.87</b>	<b>31.16%</b>

\*Payment received by VDOT from HRTAC on December 22, 2021.

#### 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>					
**Construction	(\$3,174,360.00)	\$10,669,696.26	\$95,427,976.00	\$84,758,279.74	11.18%
<u>Owner Costs</u>					
Administration	\$67,396.00	\$873,136.00	\$3,527,946.00	\$2,654,810.00	24.75%
Right of Way	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
No-Excuses Incentive	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
Contingency	\$454,600.49	\$984,966.13	\$9,571,724.00	\$8,586,757.87	10.29%
Bridge Repair Work Option	\$0.00	\$0.00	\$73,454,413.96	\$73,454,413.96	0.00%
<b>Total</b>	<b>(\$2,652,363.51)</b>	<b>\$12,527,798.39</b>	<b>\$181,982,059.96</b>	<b>\$169,454,261.57</b>	<b>6.88%</b>

\*\*This represents a transfer of expenditures from the Westbound South Trestle to the Eastbound South Trestle to correct and invoicing error made by HRCP.



### 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-53	Sound Wall Quantity Reconciliation	12/6/2021	\$ (16,561,217.63)	0 days
		<b>TOTAL</b>	<b>\$ 75,638,143.47</b>	<b>0 days</b>

\*The total change order dollar amount figure has been updated to include the Bridge Repair Work-Exercise Option amount.

### Material Price Adjustments

- No new activities.

## 4. Environmental

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

**Permits** - HRCP received a Warning Letter from DEQ on September 20, 2021 due to water quality permitted exceedances at the South Island treatment plant. HRCP continued efforts to bring the permit into compliance by completing a mixing model study this period. Final results and proposed modifications are expected to be presented to DEQ in December 2021.

Following an earlier meeting with VMRC representatives, HRCP submitted a demolition material placement plan to VMRC for review and approval to use artificial reef sites. VMRC approved the plan on December 3, 2021.

HRCP continues to coordinate with DEQ regarding air permits for the North and South Islands.

**Marine Mammal Protection** - All remaining pile driving activities are being covered by the Letter of Authorization (LOA), which is valid through April 1, 2026.

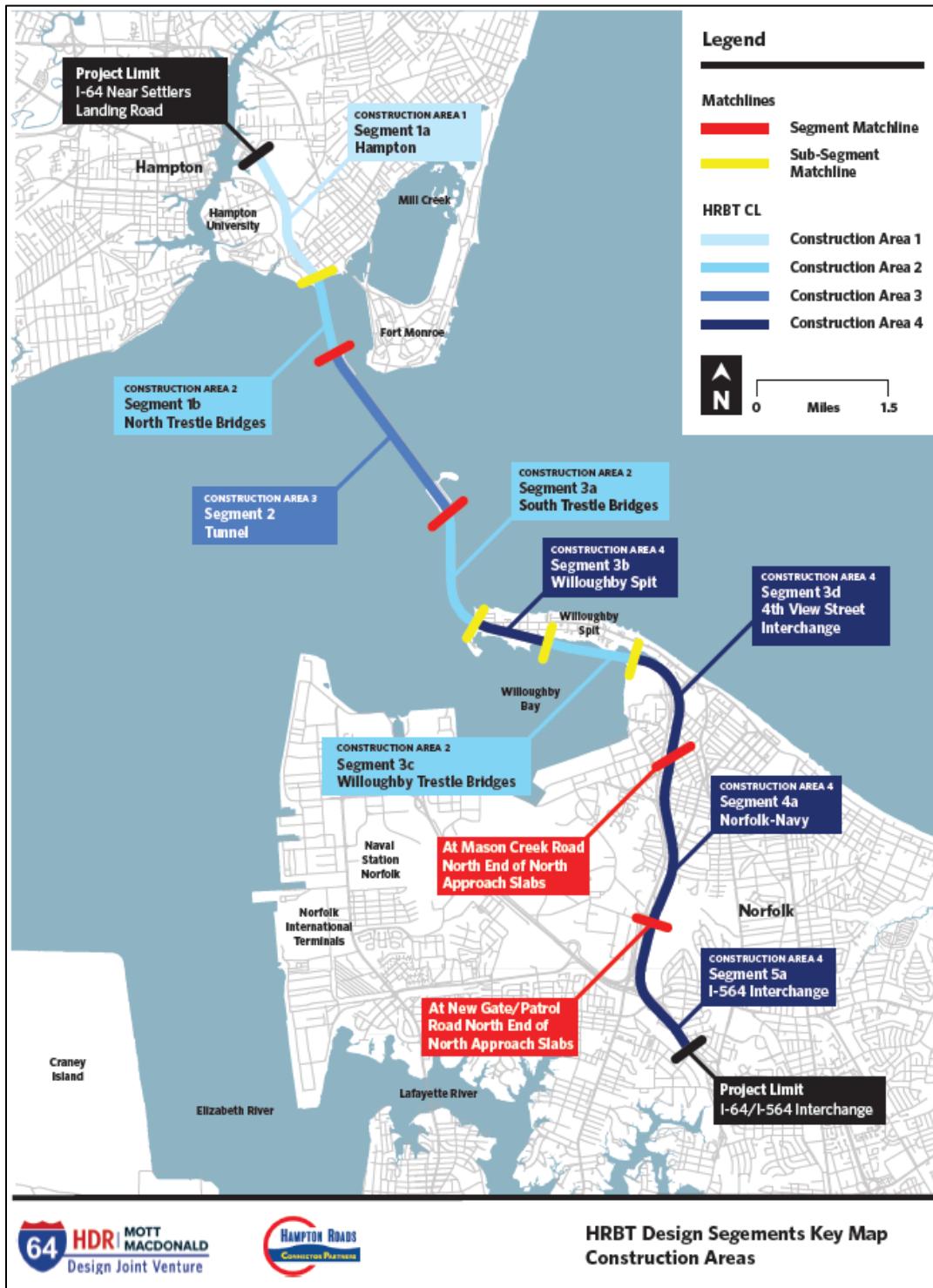
**Bird Mitigation** - Bird nesting season officially ended on September 1, 2021. HRCP suspended dog patrols until the 2022 season begins.

**Threatened & Endangered Species** - HRCP's marine mammal observers have not made any sightings within the project area since November 17, 2021.

**Archeological Discoveries** - No new discoveries during this time period. VDOT and the William and Mary Center for Archaeological Resources continue to assess the timbers and stones found near the North Island Expansion to address the Virginia Department of Historic Resources comments. A draft report is expected in January 2022.

## 5. Construction

The figure below illustrates the project limits and the four construction areas throughout the project identified by HRCP.



## 5.1 Construction Area 1: Hampton Landside

During the reporting period, HRCP performed the following work:

- Mallory St - drainage and temporary signal work.
- Mallory St Bridge - demolition of the Mallory St Bridge; south side girder removal.
- I-64 Eastbound - temporary drainage installation along the North Shore.
- I-64 Westbound - median drainage installation.

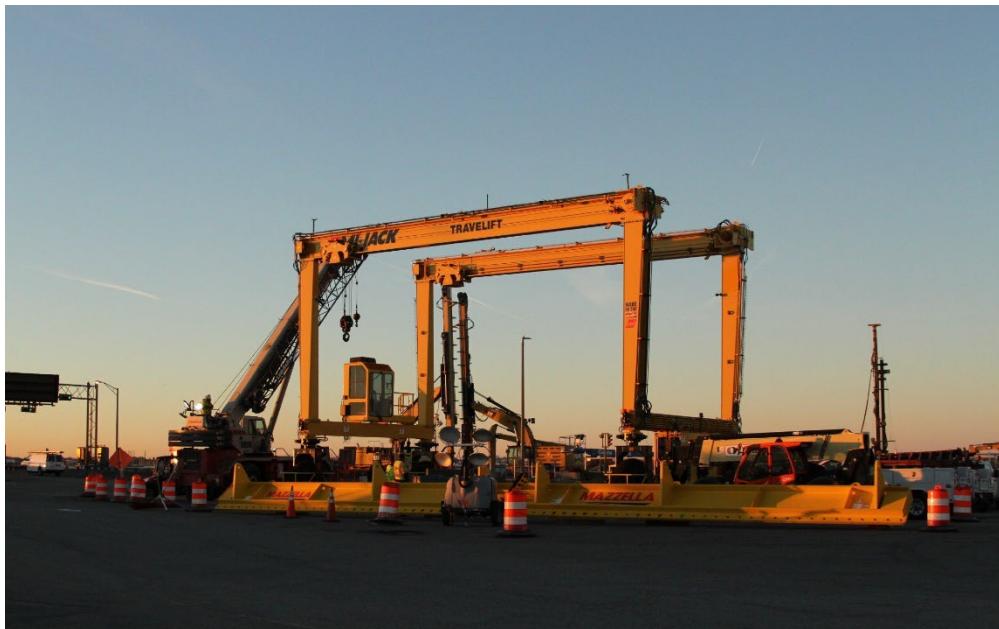


◀ **Mallory St Bridge**  
Girder Removal

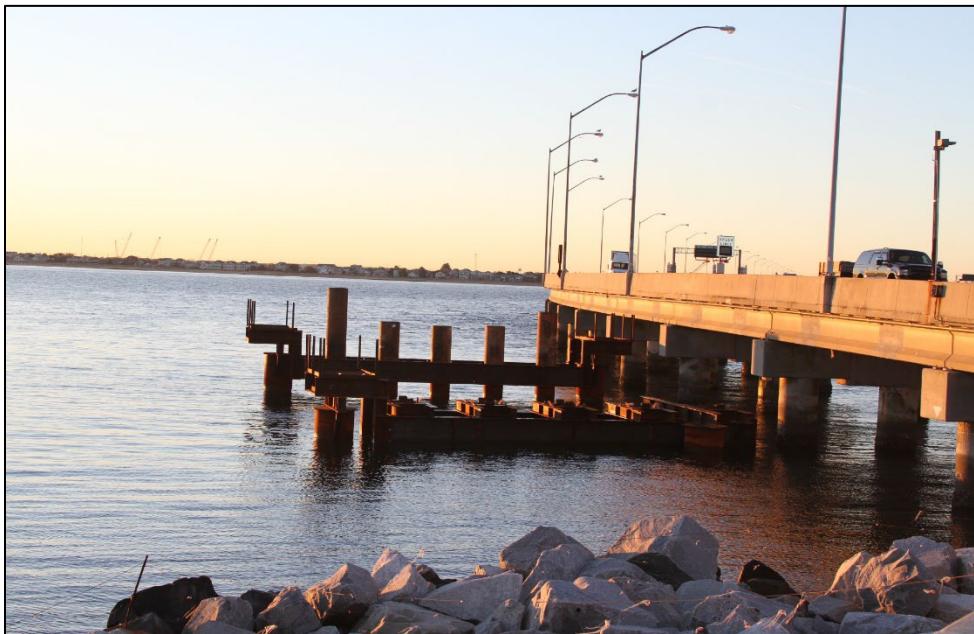
## 5.2 Construction Area 2: Marine Work

During the reporting period, HRCP performed the following work:

- Permanent North Eastbound Trestle - drove piles, installed precast caps, placed concrete for an abutment footing.
- Permanent North Westbound Trestle - drove piles.
- Permanent South Trestle - drove piles and installed precast caps.
- South 1 Temporary Construction Trestle - removed the sunken vessel obstructing work at this location.
- North MOT Trestle - drove piles.
- South MOT Trestles - drove piles and installed caps; assembled gantry crane to support superstructure work at the South MOT EB Trestle.
- North Island Expansion Work - completed fill material placement and compaction to final elevation at this stage of the project.



► South Trestle  
Gantry crane



► **South MOT WB Trestle**

Initial pile driving for temporary structure that will carry WB traffic during construction of new permanent trestle.

### 5.3 Construction Area 3: Tunnels and Islands

**During the reporting period, HRCP performed the following work at the South Island:**

- Conveyor & TBM Quay Installation - constructed the superstructure of the conveyor for the removal of excavated materials and TBM spoils; drove the remaining piles for the TBM quay at the interface between the onshore and offshore piles; installed the pile caps for the future quay dock; placed concrete for the quay abutment.
- Ground Improvement Operations - deep soil mixed along the tunnel path and jet grouted for the TBM break in/break out block; field trial program for the approach section jet grout plug.
- Capping Beams - completed placement of capping beam for the Launch Pit.
- Struts - installed steel strut between Cell 2 & Cell 3; began work on the cast in place concrete strut between Cell 1 and Cell 2 of the TBM Launch Pit.
- Dewatering Wells - began dewatering in Cell 3.
- TBM Assembly Slab - began tying reinforcing steel and installed framework for first section of TBM slab
- Mass Excavation - began mass excavation within Cell 3 of the TBM Launch Pit.

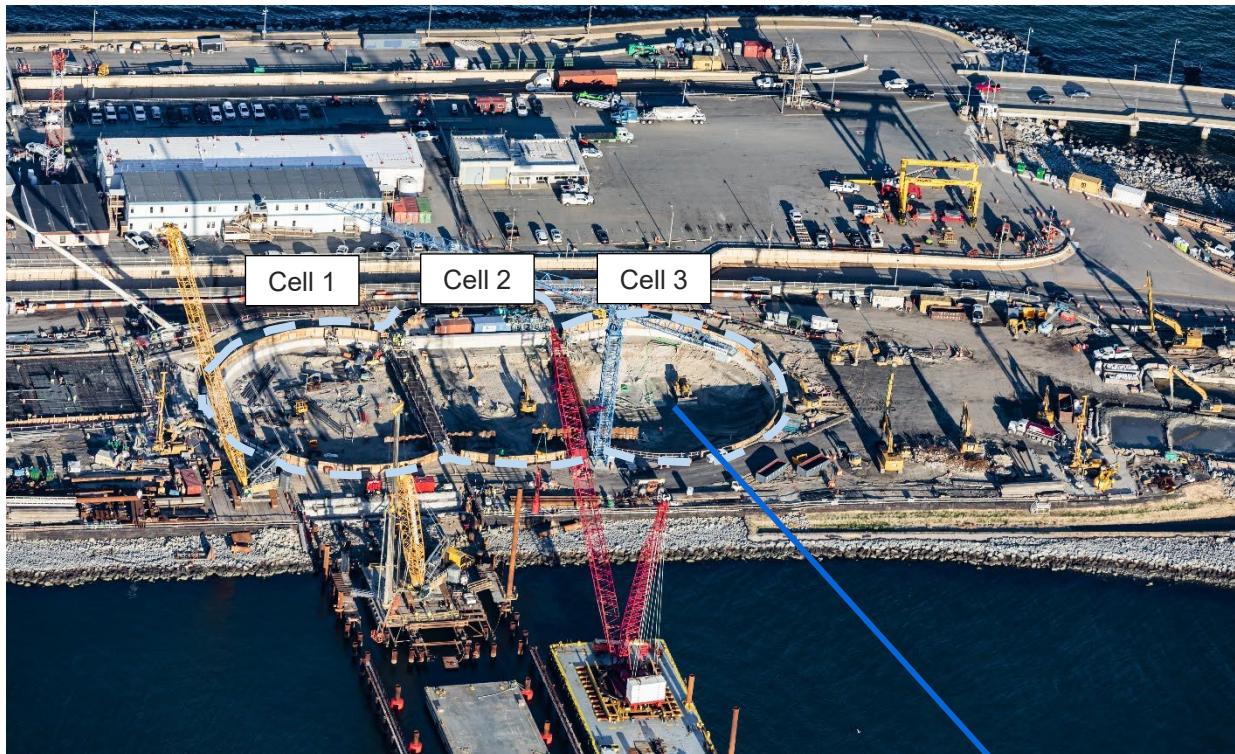
**During the reporting period, HRCP performed the following work at the North Island:**

- Hydromill Concrete Slab - no activity this period.
- Slurry Walls – installed guide walls at the North Island in preparation for slurry wall construction at the TBM Receiving Pit; mobilized equipment and slurry treatment plant to North Island.

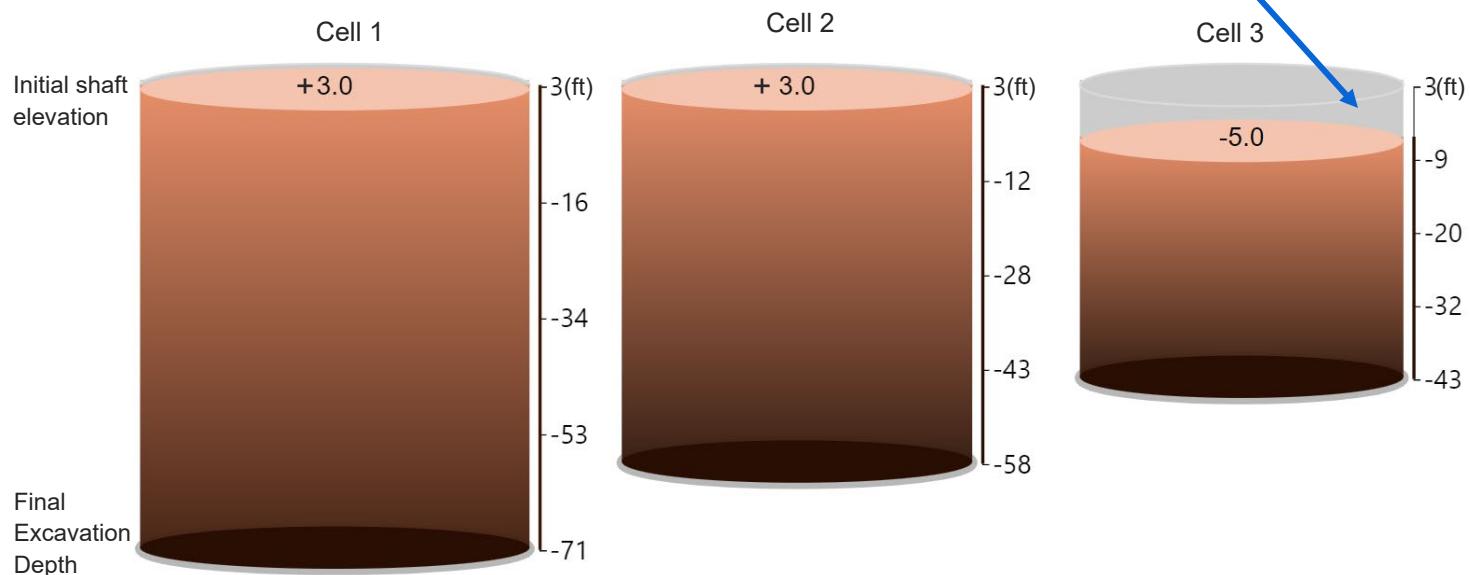
**During the reporting period, HRCP performed the following work for the tunnel:**

- Tunnel Boring Machine (TBM) - the 3<sup>rd</sup> and final TBM shipment arrived at the Port of Virginia.

South Island Launching Pit – Mass Excavation Progress (photo date: 12/14/2021)



Progress of Shaft Excavation by Average Elevation



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



► **South Island**

Steel strut installation  
between Cell 2 and Cell 3  
to support slurry walls as  
shaft is excavated.



► **South Island**

Mass excavation  
beginning in Cell 3

## 5.4 Construction Area 4: Norfolk Landside

During the reporting period, HRCP performed the following work:

- Bay Avenue Bridge - widened at abutments; installed temporary lighting at on-ramp. Began demolition of existing EB on ramp.
- I-64 Eastbound - demolished sound wall along I-64 Eastbound between Bay Avenue and Evans St; jack and bore drainage operation at 4<sup>th</sup> View Off Ramp.
- Evans St Bridge - drove piles for Westbound interior bridge widening.
- Oastes Creek Bridge - abutment work and installed precast caps.
- Willoughby Bay Bridge - drove piles for Eastbound trestle widening and installed precast caps; mobilized surveys for bridge rehabilitation.



► Oastes Creek Bridge  
Precast cap placement

## 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:**

- Performed short term stoppages and maintained nightly short-term lane closures along I-64 EB and WB under the Mallory St Bridge to allow for demolition and widening work.
- Short-term lane closures on the Willoughby EB Bridge and the North EB Trestle to facilitate concrete pile placement.
- Installation of temporary lighting along mainline I-64 near Bay Avenue in Norfolk, with intermittent short-term lane closures.
- Began installation of temporary lighting on I-64 EB near Willoughby North Shore, with intermittent short-term lane closures.

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

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

### **Hampton Lane Shifts:**

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

### **Norfolk Lane Shifts:**

- Completed a lane shift on the I-64 EB 4th View Off-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.

### **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 four (4) 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 has also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinates with VDOT Materials Department for shop inspections as required. This testing includes oversight of the HRCP Precast Yard in Chesapeake and Technopref's Precast Yard in Cape Charles for the production of 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. HRCP submitted version 13 of the QMSP to VDOT for review. This submission is in response to VDOT's comments on the Quarterly Update of this plan.

**Quarterly Updates of Quality Plans** - HRCP previously submitted the quarterly updates of the Quality Management System Plan, Construction Management Quality Plan, and the Design Quality Management Plan for the third quarter of 2021. VDOT completed the reviews of these documents and returned them to HRCP.

**Tunnel Quality Plan (TQP)** - HRCP continues to update their Tunnel Quality Plan and address VDOT's comments. The current focus of the plan is the quality procedures needed to begin precast production of the tunnel lining segments. VDOT reviewed the TQP Rev 2 and all comments have been addressed allowing the tunnel lining segment production to begin.

**Material Book Records** - VDOT completed and closed audits of six 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. HRCP is responding to audit comments provided by VDOT.

**Routine Quality Activities** - VDOT conducted reviews of deficiencies and nonconformance reports (NCRs) and coordinated with the 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 has initiated a formal audit of HRCP's QA and QC Daily Reports.

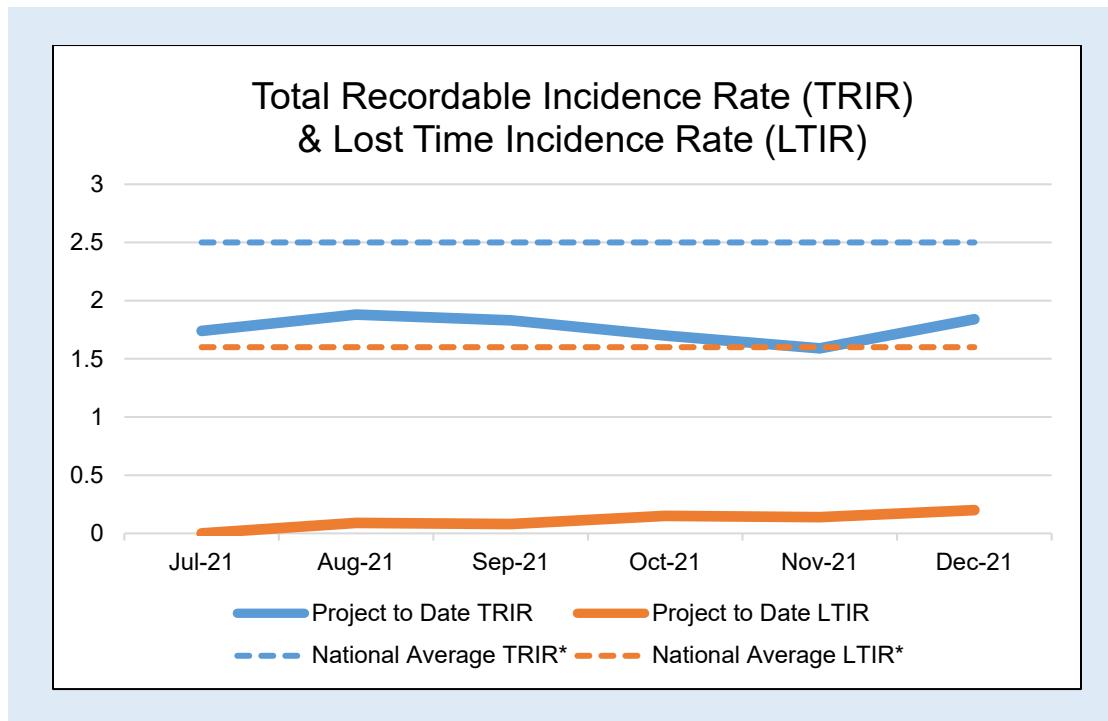
## 8. Safety

Safety procedures and activities during this reporting period include:

**COVID-19 Policies** - VDOT and HRCP are continuing to monitor and implement COVID-19 recommendations for project personnel.

**Safety Site Visits** - VDOT continued to conduct routine site visits to promote safe work zones.

**Safety Performance Indicators** - The following safety performance indicator information is provided by HRCP and is current as of December 31, 2021.



*\*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 **277** 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 **\$386.2 million** due to change orders issued to active DBE/SWaM firms on the project.

### Compliance Activities:

- While no formal compliance meetings were held during this period, there were on-going discussions between VDOT and HRCP regarding document reviews, DBE commercially useful function reviews, onsite project monitoring, payment resolutions, On-the-Job Training enrollments and reviews, Title VI compliance, and upcoming procurement opportunities.

### Workforce Development Activities:

- HRCP continued to make progress towards the 80-participant On-the-Job Training (OJT) contract goal. To date, seven (7) enrollees have graduated with twelve (12) currently active in the program. HRCP is developing a plan to expand the OJT Program to first tier subcontractors to enhance training and promotional employment opportunities for their workers.
- During this period, the HRCP continued implementing its recruitment campaign in partnership with ABC 13 News. Candidates hired prior to December 31, 2021 are being offered sign-on bonuses as an added benefit in the region's highly competitive labor market.

### Business Development Activities:

- HRCP is taking steps to develop a website to share upcoming procurement and employment opportunities with the public.
- HRCP and VDOT are in the process of developing the second edition of its DBE/SWaM Success publication for distribution in early 2022. The publication will highlight firms that have achieved tremendous success on the Project.
- VDOT, HRCP, and the USDOT Small Business Transportation Resource Center (SBTRC) are making plans for the 2022 Bonding Education Program (BEP) for businesses interested in transportation construction opportunities and learning about resources available for accessing and expanding bonding capacities.

## 10. Public Outreach & Media

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

### Public Outreach:

- December 2, 2021 - HRBT Expansion Project Director presented at the Governor's Transportation Conference



### Media:

- December 1, 2021 - WAVY-TV and wavy.com – story titled [Stoppages, slow rolls to be expected on I-64 as crews remove girders for Mallory Street Bridge demolition in Hampton](#)
- December 2, 2021 - Virginian-Pilot and Daily Press – article titled [Expect overnight delays on I-64 in Hampton as crews work on Mallory Street Bridge](#)
- December 5, 2021 - WYDaily.com – article titled [VDOT prepares to receive tunnel boring machine for HRBT Expansion Project](#)
- December 9, 2021 - Wavy.com – story titled [Mary the Tunnel Boring Machine debuts at tunnel expansion ceremony](#)

**Visit our website to view more information:**  
**[www.hrbtexpansion.org](http://www.hrbtexpansion.org)**