



## Addendum No. 2

DATE: March 5, 2024

Reference:	RFP# 1-005-24-0001
Description:	60% Engineering Design and related deliverables/New River Valley Passenger Rail Project
RFP Issue Date:	02/05/2024
Proposal Due:	<b><u>03/22/2024 (by 2:00 PM EST)</u></b>

TO ALL OFFERORS:

This Addendum No. 2 inserts cover pages for the various RFP exhibits and amends the following RFP Documents:

1. Exhibit 1 (Scope of Work).

Redline versions of the documents listed above indicate the changes that have been made.

**NOTE: Offerors must acknowledge receipt of this Addendum in writing using Form A (VPRA Procurement Form PD 02) at time of proposal submittal.**

Very truly yours,

DocuSigned by:  
*Slade Greenway*  
107DE7856E8A41B...  
Slade Greenway  
Buyer

**EXHIBIT 1**  
**SCOPE OF WORK**

**[attached]**



# Scope of Work

NEW RIVER VALLEY PASSENGER RAIL PROJECT

60% ENGINEERING DESIGN CONSULTANT  
SUPPORT WITH OPTION FOR FINAL DESIGN

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# Section I. Overview

## Project Name

The project title determined by Virginia Passenger Rail Authority (VPR) is "New River Valley Passenger Rail Project" whereby the contract, including its scope, will be referred to as the "Contract" and the full project, including construction, is referred to throughout as the "New River Valley Passenger Rail Project" or "Project." The Contract for the Project will consist of the preparation of 60% Engineering Design plans and related documents for the construction of tunnel modifications, passenger platforms, passenger station infrastructures, and layover facilities located within the Project limits.

## Project Location

The Project limits will include multiple locations as seen in Figure 1 and Figure 2, and as listed in the Project Description below.

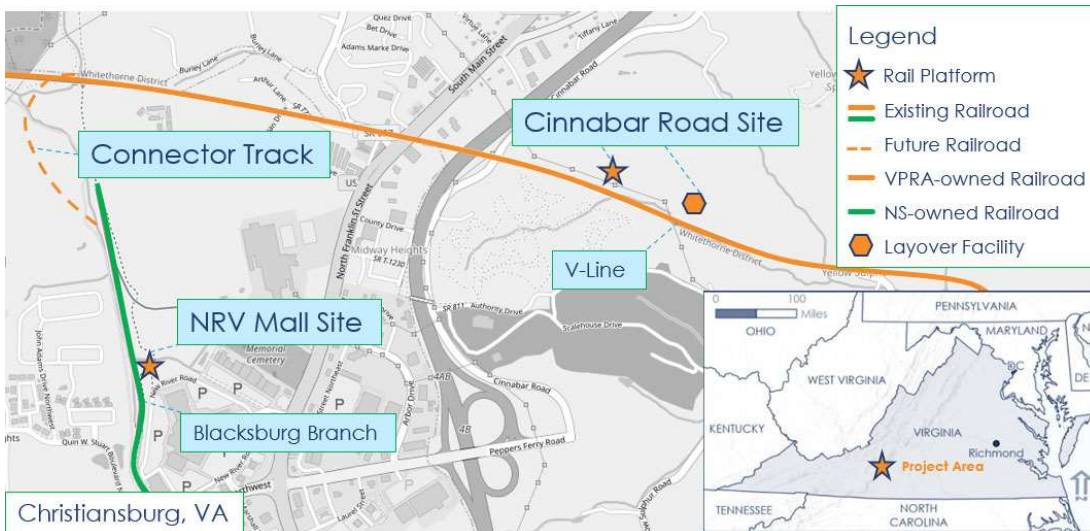


FIGURE 1: PROJECT LOCATION MAP

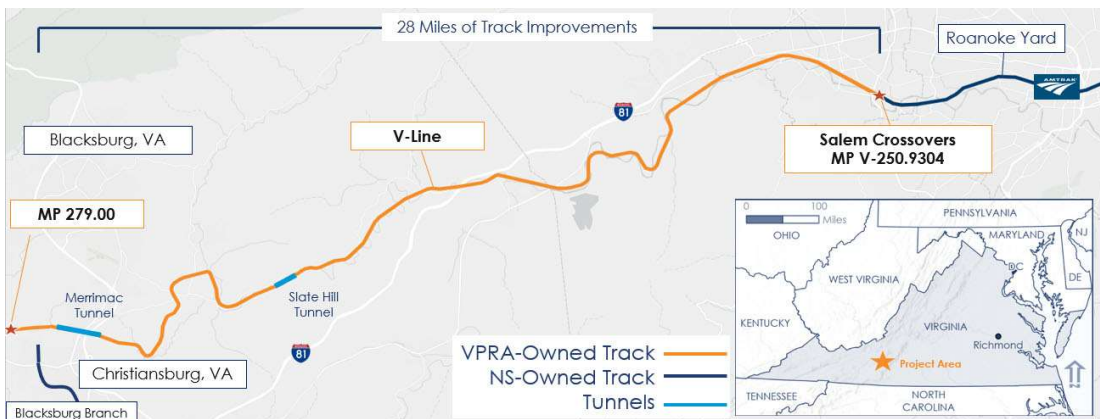


FIGURE 2: V-LINE MAP

## Project Description

Amtrak passenger service will be extended from Roanoke to the New River Valley (“NRV”) utilizing the VPRA-owned Virginian Line. The Project includes key infrastructure needed to begin passenger rail service. The Project proposes the following improvements:

- Slate Hill Tunnel Modifications
  - Tunnel Safety Improvements
  - Fire and Life Safety
  - Tunnel Support Building and Building Infrastructure
- Merrimac Tunnel Modifications
  - Tunnel Safety Improvements
  - Fire and Life Safety
  - Tunnel Support Building and Building Infrastructure
- Cinnabar Road Layover Facility
  - Access Road
  - Amtrak Layover Facility and Infrastructure
- Cinnabar Road Station Platform and Station Infrastructure
  - Access Road
  - 1,000’ length **high**-level Passenger Platform
  - Cinnabar Road Station Infrastructure
- New River Valley Station (NRV Mall Site) and Connector Track
  - 1,000’ length **high**-level Passenger Platform
  - NRV Mall Site Station Infrastructure
  - Virginian Line to Blacksburg Branch Connector Track

Other infrastructure improvements are needed to bring passenger rail service to NRV. However, these improvements are not included in the Contract and will be procured separately from this Request for Proposal.

## Section 2. Description of Work

The 30% Preliminary Engineering plans and details have already been developed and reviewed by VPRA, and the work efforts outlined in this Scope of Work (“SOW”) include the continued development of the proposed Project to a 60% Engineering Design set of plans and details together with other deliverables described herein. This section describes expectations of the Consultant for management, controls, stakeholder coordination, and 60% Engineering Design responsibilities. Successful completion of the work in this task order includes on-time, formal submittals of 60% Engineering Plans for VPRA and stakeholder review. In addition, these activities will be used to advance permitting and approvals necessary for project delivery. At VPRA’s sole discretion, the Consultant may be awarded the optional task of carrying the Project through final design under a separate scope of work and amendment to the Contract.

Each task and subtask have additional details on the required submittals and other deliverables.

### Task 1: Project Management and Coordination

This task’s objective is to support VPRA in the oversight and execution of technical and administrative functions needed to keep the Project on schedule and within budget and



maintain compliance with all applicable requirements. The Consultant will use the VPRA Brand Standards for all applicable deliverables. All management, administrative, financial, accounting, and reporting procedures will be in accordance with Virginia law and VPRA policies and procedures.

## 1.1 PROJECT WORK PLAN

VPRA is developing a Program Management Plan ("PMP") that establishes the overall management strategies and action plan for implementing the Transforming Rail in Virginia program of projects, including managing the program scope, cost, schedule, quality, and associated risks.

A project-level Project Work Plan (PWP) will be provided by VPRA for the Project in accordance with the guidance set forth by the Federal Railroad Administration's ("FRA") Monitoring Procedure 20 – Project Management Plan Review available here: (<https://www.fra.dot.gov/eLib/Details/L16051>).

VPRA will coordinate input from project partners to include in this Plan. The PWP will be amended and revised as needed over the life of the Project and will be maintained by VPRA with support from the Consultant. VPRA will share the current PWP with the Consultant, who will be responsible for updating the 60% Engineering Design sections of the document once during this Contract.

The PWP prepared during 30% Preliminary Engineering is provided in Appendix M.

### Project Work Plan Deliverables

- Project Work Plan Sections at each submission

## 1.2 QUALITY ASSURANCE/QUALITY CONTROL PLAN

VPRA has developed a program-level Quality Management Plan ("QMP") that establishes the overall quality management framework for professional services and associated deliverables related to design and construction contract documents within the Transforming Rail in Virginia program of projects.

The Consultant shall develop a project-level quality assurance/quality control plan ("QA/QC Plan"), including detailed QA/QC procedures consistent with or equal to the framework outlined in the QMP. The QA/QC Plan shall define the procedures for providing QC reviews of all deliverables, providing QA throughout the life of the Project, and maintaining quality records. The QA/QC Plan shall ensure conformance with all applicable design criteria, standards, and requirements. A process shall be established to ensure nonconforming work, information, and documents are not used. QA/QC Plan procedures also shall apply to all subconsultants or subcontractors.

It is assumed that work under Section 1.2 will consist of the following:

- Preparation and submission of the project QA/QC Plan to be delivered within 60 days of issuance of the Notice to Proceed ("NTP"), as described above, for approval, including updates as required throughout the Contract
- QA reviews of project deliverables by the project QC Administrator, for adherence to QA/QC Plan procedures

## Quality Assurance/Quality Control Plan Deliverables

- Quality Assurance/Quality Control Plan

### 1.3 RISK MANAGEMENT

On or about issuance of the NTP, VPRA will provide the Consultant with a project Risk and Contingency Management Plan ("RCMP") and a prepopulated draft Risk Register for the project. The RCMP and Risk Register provided are based on the general procedures outlined in the FRA's Monitoring Procedure 40a – Risk and Contingency Review available here: (<https://railroads.dot.gov/elibrary/mp-40a-risk-and-contingency-review-sponsor-led>)

The Risk Register will identify any new risks and evaluate each risk based on probability and severity levels included in the register. The Risk Register also will provide the following:

- The entity responsible for each risk
- Parties other than the risk owner that are affected by each risk
- Description of mitigations and control activities that are either in process or planned

The Consultant shall provide updates at each design submission to the Risk Register and will submit to VPRA for review at each update. If there are "Significant" or "Very High" risks associated with the project, the Consultant will report those risks to VPRA immediately upon completion of the risk assessments and updates for inclusion in the programmatic Risk Register. The Consultant shall issue a final Risk Register, including a narrative of major costs and schedule of risks.

The Risk Register Matrix prepared during 30% Preliminary Engineering is provided in Appendix N.

### Risk Management Deliverables

- Updates to Risk Register at each submission

### 1.4 COORDINATION MEETINGS

This task includes the following meetings throughout the length of the Project:

- One (1) kick-off meeting with VPRA within two (2) weeks of issuance of the NTP
- Weekly project management coordination meetings with VPRA; these meetings will be a combination of in-person meetings and/or conference calls.
  - To minimize the number of submittals, help advance the design quickly, and reduce the number of comments, it is anticipated that the Consultant will present the design and other deliverables for interim over-the-shoulder reviews and discussion during the standing project management coordination meetings.
- Design coordination meetings – discipline-specific meetings with VPRA and other stakeholders as directed by VPRA

The Consultant shall develop a coordination meeting schedule for inclusion in the design schedule described in **Task 1.5**. The Consultant shall provide agendas for each meeting (at least one [1] business day in advance of the scheduled meeting), shall facilitate the discussion during the meetings, and shall submit a meeting summary documenting each meeting within three (3) business days after the meeting.

The Consultant shall be responsible for supporting meetings for **Task 2 – Task 8**.

See **Task 8.0, Public Outreach**, for additional meeting requirements.

## Coordination Meetings Deliverables

- Coordination Meeting Schedule
- Meeting Attendance, Agendas, and Materials
- Meeting Minutes

## 1.5 PROJECT ADMINISTRATION AND MANAGEMENT

The Consultant shall submit a detailed design schedule within 30 calendar days from issuance of the NTP. The design schedule shall contain all the activities, tasks, events, meetings, reviews, and deliverables for the duration of the Project to the 60% Engineering Design Submittal. Within the schedule, the Consultant shall provide a clear timeline for completion of deliverables and adhere to the proposed schedule. The Consultant shall complete all Work for the Contract within **228** calendar days from issuance of the NTP. The proposed design schedule shall be reviewed by VPRA. The Consultant shall address the review comments, update the design schedule, and resubmit to VPRA. It is the responsibility of the Consultant to propose recovery measures, mitigate delays, and update the sequence and logic of activities to avoid delays to the critical path and maintain the schedule. VPRA will provide the Consultant invoicing procedures and progress reports for use on this project.

In addition, this task will include:

- Overall technical direction and oversight of the Consultant's team
- Monthly progress reports and invoicing
- Electronic and paper record keeping for the purposes of maintaining an administrative record, which includes, but is not limited to, electronic copies of all deliverables in native (Word, Excel, CAD, etc.) and PDF format

## Project Administration and Management Deliverables

- Engineering Design Schedule
- Monthly Progress Reports and Invoices
- Electronic Records of all Deliverables – Native and PDF

## Task 2: Slate Hill Tunnel Modifications

This task includes advancing the existing 30% Preliminary Engineering plans (Appendix A) of four (4) project components: Slate Hill Tunnel Modifications, Tunnel safety Improvements, Tunnel Support Building, and Tunnel Support building infrastructure to a 60% Engineering Design set for all elements of the Project. All four (4) components will be designed to 60% Engineering Design unless VPRA decides to end the Project work early for certain or all components in this SOW.

In addition to advancing the above project components, VPRA will provide deferred comments from the 30% Preliminary Engineering design submittal, which shall be incorporated in the 60% Engineering Design plans.

### Submittal Process:

The Consultant shall provide two (2) design submissions: draft 60% Engineering Design and Final 60% Engineering Design.

At VPRA's discretion, the Consultant shall advance to Final Design (optional). Should the design progress to final construction documents, submittals at 90%, 100%, and final design are expected and will follow this same process.

All plan submittals must go through the Project's previously established QA/QC process prior to submission. The following process, a similar process using Bluebeam, or a Consultant-proposed electronic comment-resolution process shall be followed for the Engineering Plans:

- VPRA will compile all comments from stakeholders and provide a comment matrix to the Consultant after each review has been completed.
- The Consultant shall respond to the comments using the VPRA-provided comment matrix and submit to VPRA for use during the comment-resolution meeting.
- If needed the Consultant shall conduct a comment-resolution meeting with VPRA and project stakeholders to discuss comments and responses, gather additional background to better understand comments, and provide backup to responses as necessary to reach agreement on the path forward for the submittal comments.
- The Consultant shall submit the updated comment-resolution matrix to document all agreed-to comment responses.
- The agreed-to comments shall be incorporated into the subsequent submittal.

The Final 60% Engineering Design plans shall incorporate all agreed-to comments developed from the reviewers and stakeholders of the Project. VPRA will confirm that all comments were properly incorporated as agreed to during the comment-resolution meeting and documented in the updated comment-resolution matrix. The Consultant is responsible for updating the Final 60% Engineering Design Plans to incorporate any previous comments that were not incorporated, but no new comments will be issued during the check of the Final 60% Engineering Design Plans.

#### Submittal Quantities:

The Consultant shall provide VPRA with one (1) electronic PDF copy of the plans, cost estimate, schedule, and specification deliverables at each submission. The Consultant shall provide all CADD and other native files with each submission.

## **2.1 TUNNEL MODIFICATIONS**

The structural design scope advances the comprehensive structural design of the modifications and improvements listed below for the Slate Hill Tunnel in accordance with the code requirements listed under the 30% Preliminary Engineering documents. The Consultant shall perform detailed structural analysis and design using loading conditions for the new structures and modifications to the existing tunnels. The structural design shall conform with the requirements of the 2018 IBC, ACI 318-19, ASCE 7-22, American Railway Engineering and Maintenance-of-Way Association ("AREMA"), and state guidelines. The Consultant shall also develop the design documents, including design drawings and specifications for the tunnel components listed below.

The Slate Hill Tunnel is a single-bore, cast-in-place concrete-lined tunnel constructed in 1912. Originally constructed for freight services, the modifications listed below are intended to upgrade the existing tunnel to allow for safe passenger rail service through the tunnel. This 881-foot-long tunnel is in Montgomery County, Virginia.

Modifications to the tunnel include the following:

- Modifications to existing tunnel concrete lining for the two (2) - 100' Long Jet Fan Niches
- Modification to existing tunnel concrete lining for Emergency Egress Walkway
- Emergency Egress Walkway
- Jet Fans and Jet Fan Supports

See [Appendix F](#) for Recommendations for Final Design, [Appendix G](#) for Geotechnical Report, and [Appendix P](#) for Tunnel Safety Improvements (TSI) Report.

## Tunnel Niche

The existing tunnel liner is to be modified to accommodate two (2) -100' Long Jet Fan Niches. The Consultant shall expand the details developed during the 30% preliminary design phase. Detailed design calculations and structural drawings shall be performed for all conditions of the tunnel, including preliminary, temporary, and final conditions. Additionally, calculations and details shall be developed for the removal of existing tunnel crown, structural ribbing, ribbing connection to the existing tunnel, rock bolts, grouted ground supports, emergency egress walkways, adits, and temporary support conditions. Structural ribbing in addition to traditional loading shall be designed to accommodate additional fan loadings, including dead load of fans, ancillary equipment, torsional loadings at startup, and impact loading.

## Emergency Egress Walkway

Consultant shall expand the details for the emergency egress walkway developed during the 30% Preliminary Engineering design phase. Egress walkway shall be provided between the tunnel portals and connect to emergency access paths. The egress walkway within the tunnel will be designed to be removable and should attach to the existing tunnel. The Consultant shall provide calculations supporting the detail for the emergency egress walkway.

The existing concrete liner has sections that have increased thickness from previous repairs. The liner shall be minimally removed to allow for egress past these sections. Supporting details and calculations that verify capacity or reinforcement of these sections shall be provided.

## Construction Monitoring Plan

Consultant shall provide a plan to monitor settlement, horizontal movement, and vibration due to the ongoing tunnel modifications. Plan shall establish acceptable levels of settlement and/or movement and procedures when excessive settlement and/or movement are encountered during construction.

## Tunnel Modification Deliverables

- Updated Basis of Design for Tunnel Modification Design Elements.
- Updated structural drawings for the structures indicated above, including but not limited to:
  - Detailed rock bolt layout drawings, sections, and details
  - Detailed grouting plans, sections, and details
  - Detailed concrete removal/demolition plans
  - Detailed proposed reinforced concrete details and existing reinforced concrete modification details

- Detailed precast panel/ steel framing plans for egress walkway
- Proposed construction sequence and temporary support details
- DRAFT Technical Specifications for all structural work related to modifications and improvements to the tunnels, including but not limited to:
  - Rock support
  - Grouting
  - Concrete removal
  - Structural steel
  - Shotcrete
  - Excavation support
  - Geotechnical instrumentation
- Construction Monitoring Plan
- Updated Construction Cost Estimate, including:
  - Each construction task developed utilizing actual work crew sizes, labor progress rates, current construction material and equipment rental costs.
- Updated Construction Schedule
  - Schedule detailed by each construction task based on actual shifts to complete each task with defined working hours during tunnel shutdown windows.

## Coordination

The Consultant shall coordinate with the following:

- The Owner for allowable tunnel closures and working hours for construction.
- Geotechnical Investigation

## Assumptions and Exclusions

- ~~Geotechnical information is adequate to provide soil/rock properties to accurately advance the design.~~

## 2.2 TUNNEL SAFETY IMPROVEMENTS

The existing tunnels were constructed prior to 1914 and were primarily utilized for freight rail traffic. These tunnels need to be upgraded to provide safe passage for passenger rail service. The plans and details developed during the 30% Preliminary Engineering design phase are to be advanced to include the items listed under the trailing sections:

### 2.2.1 INSTRUMENTATION, CONTROLS, AND AUTOMATION (ICA) DESIGN

The Consultant shall develop and advance the following ICA design elements:

- Tunnel SCADA system
- Tunnel ventilation system
- Linear Heat Detection System
- Radio communications
- Call boxes/Blue Light stations/Telephone systems
- CCTV cameras
- Fire Alarm System

- Communications architecture, networking and interfaces between systems, sub-systems and equipment in the tunnel, support buildings and ancillary areas for communication to Operation Control Center (OCC) and Back-up OCC (BOCC)
  - All references to OCC in this document include the BOCC unless specified otherwise.
- Implementation of Cybersecurity system

Systems and communications design shall consider tunnels, tunnel portals, support buildings, ancillary spaces, equipment rooms, communication rooms, egress paths, areas of refuge and other spaces as determined by the Authority Having Jurisdiction ("AHJ"). Systems, interfaces communications architecture and network designs shall provide safe operation of tunnels per NFPA 130 requirements and in accordance with Basis of Design Report ("BODR") and 30% Preliminary Engineering drawings. The intent is to provide capability to perform normal and emergency tunnel operations per NFPA 130 requirements:

- Normal tunnel operations from existing Operations Control Center and a Back-up OCC
- Emergency operations from the new local control center which shall also be the local command post during emergency situations

The OCC may be one location or multiple locations, to be determined by coordination with Owner.

The Consultant shall hire the services of a Control System Integrator ("CSI") or perform the role of the CSI for the project. The CSI shall also be referred to as the Consultant or Integrator in this section of the document.

Systems and communications design shall be compatible with existing servers and network equipment at existing OCC/BOCC for communications interface. Systems designs shall be in accordance with Owner's requirements and design criteria. Tunnel SCADA system shall include redundant Programmable Logic Controllers ("PLCs"), control panels, and Remote Input/Output (RIO) panels in the tunnel. The RIO panels shall interface with field devices. Tunnel SCADA PLCs shall be programmed to:

- Control and monitor tunnel ventilation system
- Monitor trouble alarms and failures of other systems and sub-systems
- Interface with network equipment for communication to OCC and BOCC

The Consultant shall develop design documents including drawings, technical specifications:

- To clearly describe functionality, programming and system integration requirements for each ICA design element mentioned above. For networking and hardwired interfaces with other systems and sub-systems such as:
  - Mechanical systems
  - Electrical systems
  - Fire Alarm system
  - Lighting control system
- To interface with Owner's existing backbone network for communication to OCC and BOCC.

- Additional coordination and discussions with Owner and passenger rail operating entities are required to clarify location of existing OCC/BOCC and communications interfaces to backbone network.
- To implement:
  - A complete and reliable cybersecurity system based on listed standards and codes in the document
  - Passive cybersecurity software or hardware solution

## Coordination

The Consultant shall coordinate with the following:

- The Owner and passenger rail operating entities for existing OCC/BOCC and locations to interface with existing backbone network.
- Design development of other trades for programming and interface requirements for monitoring and control operations.

## Assumptions and Exclusions

- OCC and backbone network are existing and available for interfaces with Tunnel systems to perform normal operations as per NFPA 130 requirements.
- SCADA systems and communication systems equipment at OCC has availability of spares and scalability to integrate tunnel systems for remote monitoring and control operations.
- The signaling system and Automatic Train Control ("ATC") system design and interfaces with Tunnel SCADA system are beyond the scope of this project.

## ICA Deliverables

- Updated Basis of Design for ICA Design Elements
- Concept of Operations ("ConOps")
- ICA drawings
- Tunnel ventilation control system – Plan
- Tunnel ventilation control panels layout & BOM
- Fire detection plan
- Fire detection system network
- Communication Rooms - Plan and Layout
- Local Command Post - Plan and Layout
- Control systems block diagram.
- Communication network architecture
- Communication Node Cabinet layout & BOM
- RIO panel layout & BOM
- Control schematic wiring diagrams
- DRAFT Technical Specifications
- As-builts review

## 2.2.2 FIRE AND LIFE SAFETY

The scope advances Fire and Life Safety component design for tunnel systems as per NFPA 130, NFPA 14, and NFPA 22 requirements.



The scope of work includes:

- Tunnel Ventilation
- Egress
- Tunnel Fire Protection
- Tunnel Support Building HVAC
- Tunnel Support Building Fire Protection
- Coordination with other disciplines
- Quality Assurance and Quality Control
- System control measures and integration into a broader response shall be demonstrated.

## Tunnel Ventilation

The tunnel ventilation system shall be designed in accordance with the design calculations performed during the 30% Preliminary Engineering design development. Additional performance design calculations are not necessary except for structural support calculations.

Tunnel ventilation jet fans shall meet the following:

- The jet fan horsepower requirement shall not exceed the nameplate rating of the jet fan at the ASHRAE 99.6% winter temperature for heating loads. The service factor shall not be used for jet fan power exceedances.
- Forward flow from fan shall move air through impeller then over the motor.
- Fan shall be “fully reversible” with reverse airflow greater than 97% of forward airflow.
- Jet Fans shall be painted carbon steel with aluminum hubs and rotors. Silencers shall be sized to attenuate noise at 5 ft above the walkway at any point along the length of the tunnel in accordance with NFPA 130.
- Motors shall have a 25-year life span, with a service factor of 1.15.
- Bearings shall have a design life of 40,000 hours on a 90-percentile average. The motor shall have grease fittings that are readily accessible for annual changes in order to grease the motor bearings.
- Power and control connection for the fan shall be housed in a NEMA 4x316 stainless box on the exterior of the jet fan, and the power factor shall be in accordance with NEMA MG-1.
- Jet fans shall be inspectable and maintainable. A 30-inch elevated bucket shall be able to rise between the two jet fans such that the structural supports may be inspected, and the power connections may be disconnected. A maintenance manual shall be provided that provides a maintenance regime for the equipment.
- Heaters for the jet fans shall be 120V and can heat the fan motor when the motor is not active.
- Fans shall be capable of being controlled remotely.
- Specified fan specifications shall be able to be sourced from multiple manufacturers.
- Quantity: Four (4) jet fans + one (1) spare jet fan

## Egress

The means of Egress shall include the following items:

- Egress signage shall be provided throughout the tunnel at required intervals with exit points clearly identified. The tunnel support building shall also have signage in

accordance with the VAUSBC. Additional signage shall be provided as necessary at locations such as areas of refuge. Evacuation destinations shall be clearly indicated and identified.

- The ConOps shall establish when and how a train evacuation is directed after receipt of alarm.
- The ConOps document shall document the anticipated egress strategy.
- Fire department access and equipment locations shall be coordinated such that tunnel evacuees are not impeded by the presence of this equipment.
- Egress doors adjacent to the trackway shall be rated for repeated pressure swings of +10 in.w.g. to -10 in.w.g.

## Tunnel Fire Protection

Tunnel Fire Protection System shall meet the following requirements:

- Utilize a dry standpipe system in accordance with the Basis of Design and the 30% Preliminary Engineering drawings.
- The dry standpipe shall be constructed of ductile iron with mechanical Victaulic type couplings.
- Remote air relief valves shall be provided at appropriate locations and the dry pipe shall be drainable after use.
- Minimum water supply shall be capable of proving 1-hour of water with 2-hose streams active. Freeze protection shall be provided in the water storage tank and any wet lines to the fire pump room.
- Fire department connections and fire hose valves 4" and less shall be bronze or brass construction.
- Hose connections shall have 2-1/2-inch valves and shall be of the pressure-reducing type.
- Fire pumps shall be provided with normal and emergency backup power.
- Fire department connections shall be provided at the tunnel support building such that the fire department may pressurize the standpipe system.

## Tunnel Drainage

Existing tunnel structures contain weep holes and allow for entrapped water to pass through the tunnel liner and exit through the tunnel portals. Ability to process drainage shall not be hindered by the proposed tunnel modifications. The tunnel drainage shall be designed to accommodate expected additional water flows during a fire emergency, as fire flows from two (2) fire hoses (500 gpm) must be drained. Tunnel water flows shall be designed to not exceed the height of the bottom of rail in the tunnel.

## Tunnel Support Building HVAC and Fire Protection

The ambient outdoor design conditions documented in the ASHRAE Fundamentals Handbook shall be used based upon the 0.4% summer and 99.6% winter annual frequency of occurrence.

The following table provides a guide for the application of HVAC and Fire Protection. The HVAC systems shall be designed in accordance with the following criteria:

Rooms	Heating (Min Temp. in deg F dry bulb)	Cooling (Max Temp. in deg F dry bulb)	Ventilation	Fire Protection
Electrical Room	40	104	Positively pressurized	Fire detection only
Emergency Electrical Room	40	104	Positively pressurized	Fire detection only
UPS Room	60	Note 1	Negatively pressurized	Note 2
Communications Room	60	80	Positively pressurized	Note 2
Storage Room	40	104		Sprinklered
Fire Pump Room	40	104		Sprinklered
Air compressor room	40	104		Sprinklered
Clean Agent Room	40	104		Sprinklered
Fire Command Center	60	80		Sprinklered

1. As required by Manufacturer to maintain maximum service life of the batteries.
2. Fire protection shall be in accordance with applicable codes and standards.

Due to the potentially infrequent nature of the electrical equipment operating, heat loads from electrical equipment shall not be part of the heating calculations.

Sheet metal ducts shall be constructed of lock formed, quality galvanized steel with joints that are airtight. Ducts shall be sized such that the pressure drop does not exceed 0.1 in.w.g. per 100 ft of duct.

Portable fire extinguishers shall be provided for each space in accordance with the requirements of NFPA 10, the Virginia Statewide Fire Prevention Code ("SFPC"), and Virginia Uniform Statewide Building Code ("USBC").

HVAC calculations shall be submitted supporting the cooling and heating loads for the ancillary support building.

## FIRE AND LIFE SAFETY DELIVERABLES

- Updated Basis of Design for the Fire and Life Safety Design elements
- Provide 60% Engineering Design drawings and specifications, including the following:
  - Calculations
  - Design Reports
  - Updated BODR
  - Full Technical Specifications
  - ConOps
  - QA/QC Documentation

## 2.2.2 TUNNEL SUPPORT BUILDING AND BUILDING INFRASTRUCTURE

The Consultant shall continue development of the 60% Engineering Design plans for the Project based on 30% Preliminary Engineering plans. Plans for the Tunnel Support Building include civil, architectural, structural, electrical, lighting, communications, public address, CCTV, plumbing, landscape architecture, mechanical, and fire protection plans.

### TUNNEL SUPPORT BUILDING AND BUILDING INFRASTRUCTURE DELIVERABLES

- Updated Engineering Basis of Design for the Building and Building Infrastructure design elements.
- Civil Plans for the Support Building, including access roadways.
- Grading Plans and Proposed locations for drainage solutions
- Hydrology and Hydraulics Report
- Hydraulic Structures Plans and details
- E&S Plans
- Plans and details for retaining walls (if required)
- Quantities will be developed to support the cost estimate based on the level of detail included in the design plans, but these will not be presented on plan sheets.

## 2.3 ROW ACQUISITION DOCUMENTATION

The Consultant must follow VPRA process to notify abutting landowners of entry onto their property for the purpose of performing studies related to the Project. VPRA must approve all notice letters prior to the Consultant sending to the landowners.

The Consultant shall identify Right-of-Way (ROW) impacts to adjacent landowners based on the 60% Engineering Design and shall prepare the ROW Acquisition Plans for all additional properties with a ROW impact. The ROW Acquisition Plans will be based on field survey work and will be used to acquire ROW. A ROW impact is described as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements shall include utility, drainage, right of way and line of sight easements as well as access, construction, and maintenance easements. Temporary easements shall include construction, staging and laydown area easements. The Consultant shall identify temporary easements as part of the 60% Engineering Design and make every effort to minimize all property easements, including temporary construction easements. The Consultant shall present all impacts in a ROW Impacts Matrix.

The ROW Matrix prepared during 30% Preliminary Engineering is provided in Appendix O.

### ROW Acquisition Documentation Deliverables

- Updated ROW Impacts Matrix

## Task 3: Merrimac Tunnel Modifications

This task includes advancing the existing 30% Preliminary Engineering plans (Appendix B) of four (4) project components: Merrimac Tunnel Modifications, Tunnel safety Improvements, Tunnel Support Buildings, and Tunnel Support building infrastructure to a 60% Engineering Design set for all elements of the Project. All four (4) components will be designed to 60% Engineering Design

unless VPRA decides to end project development for certain or all components in this SOW prior to 60% Engineering Design.

In addition to advancing the above project components, VPRA will provide deferred comments from the 30% Preliminary Engineering design submittal, which shall be incorporated in the 60% Engineering Design plans.

#### Submittal Process:

The Consultant shall provide two (2) design submissions: draft 60% Engineering Design and final 60% Engineering Design.

At VPRA's discretion, the Consultant shall advance to Final Design (Optional). Should the design progress to final construction documents, submittals at 90%, 100%, and final are expected and will follow this same process.

All plan submittals must go through the Project's previously established QA/QC process prior to submission. The following process, a similar process using Bluebeam, or a Consultant-proposed electronic comment-resolution process shall be followed for the Engineering Plans:

- VPRA will compile all comments from stakeholders and provide a comment matrix to the Consultant after each review has been completed.
- The Consultant shall respond to the comments using the VPRA-provided comment matrix and submit to VPRA for use during the comment-resolution meeting.
- If needed, the Consultant shall conduct a comment-resolution meeting with VPRA and project stakeholders to discuss comments and responses, gather additional background to better understand comments, and provide backup to responses as necessary to reach agreement on the path forward for the submittal comments.
- The Consultant shall submit the updated comment-resolution matrix to document all agreed-to comment responses.
- The agreed-to comments shall be incorporated into the subsequent submittal.

The final 60% Engineering Design plans shall incorporate all agreed-to comments developed from the reviewers and stakeholders of the project. VPRA will confirm that all comments were properly incorporated as agreed during the comment-resolution meeting and documented in the updated comment-resolution matrix. The Consultant is responsible for updating the Final 60% Engineering Design Plans to incorporate any previous comments that were not incorporated, but no new comments will be issued during the check of the Final 60% Engineering Design plans.

#### Submittal Quantities:

The Consultant shall provide VPRA with one (1) electronic PDF copy of the plans, cost estimate, schedule, and specification deliverables at each submission. The Consultant shall provide all CADD and other native files with each submission.

### **3.1 TUNNEL MODIFICATIONS**

The structural design scope advances the comprehensive structural design of the modifications and improvements listed below for the Merrimac Tunnel in accordance with the code

requirements listed under the 30% Preliminary Engineering documents. The Consultant shall perform detailed structural analysis and design using loading conditions for the new structures and modifications to the existing tunnels. The Structural Design shall conform with the requirements of the 2018 IBC, ACI 318-19, ASCE 7-22, AREMA, and state guidelines. The Consultant shall also develop the design documents, including design drawings and specifications for the tunnel components listed below.

The Merrimac Tunnel is a single-bore, cast-in-place concrete-lined tunnel that was completed (and in-service) in 1908, and subsequently, modified with the present concrete-liner in 1914. Originally constructed for freight services, the modifications listed below are intended to upgrade the existing tunnel to allow for safe passenger rail service through the tunnel. This 5,175' foot long tunnel is in Montgomery County, Virginia.

Modifications to the tunnel include the following:

- Modifications to existing tunnel concrete lining for three (3) - 100' Long Jet Fan Niches
- Modification to existing tunnel concrete lining for emergency egress walkway
- Emergency Egress Walkway
- East and West Emergency Egress Shaft excavation and break through at the adit location to egress shaft.
- East and West Stair Headhouses
- Jet Fans and Jet Fan Supports

See [Appendix F](#) for Recommendations for Final Design, [Appendix H](#) for Geotechnical Report, and [Appendix Q](#) for Tunnel Safety Improvements (TSI) Report

## Tunnel Niche

The existing tunnel liner is to be modified to accommodate (3) -100'Long Jet Fan Niches. The Consultant shall expand the details developed during the 30% Preliminary Engineering design phase. Detailed design calculations and structural drawings shall be performed for all conditions of the tunnel, including: preliminary, temporary and final conditions. Additionally, calculations and details shall be developed for the removal of existing tunnel crown, structural ribbing, ribbing connection to the existing tunnel, rock bolts, grouted ground supports, emergency egress walkways, emergency egress shaft, adits, and temporary support conditions. Structural ribbing in addition to traditional loading shall be designed to accommodate additional fan loadings, including: dead load of fans, ancillary equipment, torsional loadings at startup, and impact loading.

## Emergency Egress Walkway

Consultant shall expand the details for the emergency egress walkway developed during the 30% Preliminary Engineering design phase. Egress walkway shall be provided between the tunnel portals and connect to emergency access paths. The egress walkway within the tunnel will be designed to be removable and should attach to the existing tunnel. The Consultant shall provide calculations supporting the detail for the emergency egress walkway.

The existing concrete liner has sections of the liner that have increased thickness at locations of likely previous repairs. The liner shall be minimally removed to allow for egress past these sections. Supporting details and calculations verify capacity proposed condition or of required reinforcement of these sections shall be provided.

## Emergency Egress Escape Shafts

Consultant shall expand the details for the emergency egress escape shafts developed during the 30% Preliminary Engineering design phase. Two escape shafts and stair headhouses, east and west, shall be developed to include the following details and necessary supporting calculations:

- Adit framing
- Adit breakthrough
- Escape shaft stairs and supports
- Emergency Escape Shaft
- Shaft excavation details
- Headhouse structural framing and connection to shaft foundation

## Construction Monitoring Plan

Consultant shall provide a plan to monitor settlement, horizontal movement, and vibration because of the ongoing tunnel modifications. Plan shall establish acceptable threshold levels of settlement and/or movement, duration of monitoring prior to, during and after modification work in tunnel and egress shaft/adit construction. Procedures when excessive settlement and/or movement are encountered during construction should be established to control impact to existing structure and limits to determine work stoppages.

## Tunnel Modification Deliverables

- Updated Basis of Design for Tunnel Modification Design Elements.
- Updated Structural drawings for the structures indicated above, including but not limited to:
  - Detailed rock bolt layout drawings, sections, and details
  - Detailed grouting plans, sections, and details.
  - Detailed concrete removal/demolition plans.
  - Adit Breakthrough and framing details
  - Emergency Egress Escape Shaft details
  - Detailed proposed reinforced concrete details and existing reinforced concrete modification details.
  - Detailed precast panel/ steel framing plans for egress walkway
  - Proposed construction sequence and temporary support details.
  - Stair structure support in shaft
  - Stair Headhouse structure and connection to shaft foundation
- DRAFT Technical Specifications for all structural work related to modifications and improvements to the tunnels, including but not limited to:
  - Rock support
  - Grouting
  - Concrete removal
  - Structural steel
  - Shotcrete
  - Excavation support
  - Geotechnical instrumentation
  - Reinforced concrete
  - Concrete formwork

- Construction Monitoring Plan
- Updated Construction Cost Estimate, including:
  - Each construction task developed utilizing actual work crew sizes, labor progress rates, current construction material and equipment rental costs.
- Updated Construction Schedule
  - Schedule detailed by each construction task based on actual shifts to complete each task with defined working hours during tunnel shutdown windows.

## Coordination

The Consultant shall coordinate with:

- The Owner for allowable tunnel closures and working hours for construction.
- Geotechnical Investigation

## Assumptions and Exclusions

- ~~Geotechnical information is adequate to provide soil/rock properties to accurately advance the design.~~

## 3.2 TUNNEL SAFETY IMPROVEMENTS

The existing tunnels were constructed prior to 1914 and were primarily utilized for freight rail traffic. These tunnels need to be upgraded to provide safe passage for passenger rail service. The plans and details developed during the 30% Preliminary Engineering Design phase are to be advanced to include the items listed under the trailing sections:

### 3.2.1 INSTRUMENTATION, CONTROLS, AND AUTOMATION (ICA) DESIGN

The Consultant shall design and advance the following ICA design elements:

- Tunnel SCADA system
- Tunnel ventilation system
- Linear Heat Detection System
- Radio communications
- Call boxes/Blue Light stations/Telephone systems
- CCTV cameras
- Fire Alarm System
- Communications architecture, networking and interfaces between systems, sub-systems and equipment in the tunnel, support buildings and ancillary areas for communication to Operation Control Center (OCC) and Back-up OCC (BOCC)
  - All references to the OCC in this document include references to the BOCC unless specified otherwise.
- Implementation of Cybersecurity System

Systems and communications design shall consider tunnels, tunnel portals, support buildings, ancillary spaces, equipment rooms, communication rooms, egress shafts, egress paths, areas of refuge and other spaces as determined by the AHJ. Systems, interfaces, communications network, and architecture and network designs shall provide safe operation of tunnels per NFPA 130 requirements and in accordance with BODR and 30% Preliminary Engineering drawings. The



intent is to provide capability to perform normal and emergency tunnel operations pursuant to NFPA 130 requirements:

- Normal tunnel operations from existing OCC and a BOCC
- Emergency operations from the new local control center which shall also be the local command post during emergency situations.

The OCC may be one location or multiple locations, to be determined by coordination with Owner.

The Consultant shall hire the services of a CSI or perform the role of the CSI for the project. The CSI shall also be referred to as the Consultant or Integrator in this section of the document.

Systems and communications design shall be compatible with existing servers and network equipment at existing OCC/BOCC for communications interface. Systems designs shall be as per Owner's requirements and design criteria. Tunnel SCADA system shall include redundant Programmable Logic Controllers (PLCs), control panels, and Remote Input/Output (RIO) panels in the tunnel. RIO panels shall interface with field devices. Tunnel SCADA PLCs shall be programmed to:

- Control and monitor tunnel ventilation system
- Monitor trouble alarms and failures of other systems and sub-systems
- Interface with network equipment for communication to OCC and BOCC

The Consultant shall develop design documents including drawings, technical specifications:

- To clearly describe functionality, programming and system integration requirements for each ICA design element mentioned above. For networking and hardwired interfaces with other systems and sub-systems such as:
  - Mechanical systems
  - Electrical systems
  - Fire Alarm system
  - Lighting control system
- To interface with Owner's existing backbone network for communication to OCC and BOCC.
- To implement:
  - A complete and reliable cybersecurity system based on listed standards and codes in the document
  - Passive Cybersecurity software or hardware solution

## Coordination

The Consultant shall coordinate with the following:

- The Owner for OCC locations and to interface with existing backbone for communication to OCC.
- Design development of other trades for programming and interface requirements for monitoring and control operations.

## Assumptions and Exclusions

- OCC and backbone network are existing and available for interfaces with Tunnel systems to perform normal operations as per NFPA 130 requirements.
- SCADA systems and communication systems equipment at OCC has availability of spares and scalability to integrate tunnel systems for remote monitoring and control operations.
- The signaling system and ATC system design and interfaces with Tunnel SCADA system are beyond the scope of this project.

## ICA Deliverables

- Updated Basis of Design for ICA Design Elements
- ConOps
- ICA drawings
- Tunnel ventilation control system – Plan
- Tunnel Ventilation control panels layout & BOM
- Fire Detection plan
- Fire detection system network
- Communication Rooms - Plan and Layout
- Local Command Post - Plan and Layout
- Control systems block diagram.
- Communication network architecture
- Communication Node Cabinet layout & BOM
- RIO panel layout & BOM
- Control schematic wiring diagrams
- DRAFT Technical Specifications
- As-builts Review

### 3.2.2 FIRE AND LIFE SAFETY

The scope advances Fire and Life Safety component design for tunnel systems as per NFPA 130, NFPA 14 and NFPA 22 requirements.

The scope of work includes the following:

- Tunnel Ventilation
- Egress
- Emergency Egress Shafts/Headhouses
- Tunnel Fire Protection
- Tunnel Support Building and Headhouses HVAC
- Tunnel Support Building and Headhouses Fire Protection
- Coordination with other disciplines
- Quality Assurance and Quality Control
- System control measures, including the area of refuge and integration into a broader response shall be demonstrated.

## Tunnel Ventilation

The tunnel ventilation system shall be designed in accordance with the design calculations performed during the 30% Preliminary Engineering design development. Additional performance design calculations are not necessary except for structural support calculations.

Tunnel ventilation jet fans shall meet the following:

- The jet fan horsepower requirement shall not exceed the nameplate rating of the jet fan at the ASHRAE 99.6% winter temperature for heating loads. The service factor shall not be used for jet fan power exceedances.
- Forward flow from fan shall move air through impeller then over the motor.
- Fan shall be “fully reversible” with reverse airflow greater than 97% of forward airflow.
- Jet Fans shall be painted carbon steel with aluminum hubs and rotors. Silencers shall be sized to attenuate noise at 5 ft above the walkway at any point along the length of the tunnel in accordance with NFPA 130.
- Motors shall have a 25-year life span, with a service factor of 1.15.
- Bearings shall have a design live of 40,000 hours on a 90-percentile average. The motor shall have grease fittings that are readily accessible for annual changes in order to grease the motor bearings.
- Power and control connection for the fan shall be housed in a NEMA 4x316 stainless box on the exterior of the jet fan, and the power factor shall be in accordance with NEMA MG-1.
- Jet fans shall be inspectable and maintainable. A 30-inch elevated bucket shall be able to rise between the two jet fans such that the structural supports may be inspected, and the power connections may be disconnected. A maintenance manual shall be provided that provides a maintenance regime for the equipment.
- Heaters for the jet fans shall be 120V, that can heat the fan motor when the motor is not active.
- Fans shall be capable of being controlled remotely.
- Specified fan specification shall be able to be sourced from multiple manufacturers.
- Quantity: Six (6) jet fans + one (1) spare jet fan

## Egress

The means of Egress shall include the following:

- Egress signage shall be provided throughout the tunnel at required intervals, the emergency escape shaft, headhouses and tunnel support building. Emergency signage shall be in accordance with NFPA 130 and the USBC. Additional signage shall be provided as necessary at locations such as areas of refuge. Evacuation destinations shall be clearly indicated and identified.
- The ConOps shall establish when and how a train evacuation is directed after receipt of alarm.
- The ConOps document shall document the anticipated egress strategy.
- Fire department access and equipment locations shall be coordinated such that tunnel evacuees are not impeded by the presence of this equipment.
- Egress doors adjacent to the trackway shall be rated for repeated pressure swings of +10 in.w.g. to -10 in.w.g.

## Tunnel Fire Protection

Tunnel Fire Protection System shall meet the following requirements:

- Utilize a dry standpipe system in accordance with the Basis of Design and the preliminary 30% Preliminary Engineering drawings.
- The dry standpipe shall be constructed of ductile iron with mechanical Victaulic type couplings.
- Remote air relief valves shall be provided at appropriate locations and the dry pipe shall be drainable after use.
- Minimum water supply shall be capable of providing 1-hour of water with 2-hose streams active. Freeze protection shall be provided in the water storage tank and any wet lines to the fire pump room.
- Fire department connections and fire hose valves 4" and less shall be bronze or brass construction.
- Hose connections shall have 2-1/2-inch valves and shall be of the pressure-reducing type.
- Fire pumps shall be provided with normal and emergency backup power.
- Fire department connections shall be provided at the tunnel support building such that the fire department may pressurize the standpipe system.

## Tunnel Drainage

Existing tunnel structures contain weep holes and allow for entrapped water to pass through the tunnel liner and exist through the tunnel portals. Ability to process drainage shall not be hindered from the proposed tunnel modifications. The Tunnel drainage shall be designed to accommodate expected additional water flows during a fire emergency, fire flows from 2 fire hoses (500 gpm) must be drained. Tunnel water flows shall be designed to not exceed the height of the bottom of rail in the tunnel.

## Tunnel Support Building and Headhouse HVAC and Fire Protection

The ambient outdoor design conditions documented in the ASHRAE Fundamentals Handbook shall be used based upon the 0.4% summer and 99.6% winter annual frequency of occurrence.

The following table provides a guide for the application of HVAC and Fire Protection. The HVAC systems shall be designed in accordance with the following criteria:

Rooms	Heating (Min Temp. in deg F dry bulb)	Cooling (Max Temp. in deg F dry bulb)	Ventilation	Fire Protection
Electrical Room	40	104	Positively pressurized	Fire detection only
Emergency Electrical Room	40	104	Positively pressurized	Fire detection only
UPS Room	60	Note 1	Negatively pressurized	Note 2
Communications Room	60	80	Positively pressurized	Note 2
Storage Room	40	104		Sprinklered
Fire Pump Room	40	104		Sprinklered
Air compressor room	40	104		Sprinklered
Clean Agent Room	40	104		Sprinklered

Fire Command Center	60	80		Sprinklered
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1. As required by Manufacturer to maintain maximum service life of the batteries.
2. Fire protection shall be in accordance with applicable codes and standards.

Due to the potentially infrequent nature of the electrical equipment operating, heat loads from electrical equipment shall not be part of the heating calculations.

Sheet metal ducts shall be constructed of lock formed, quality galvanized steel with joints that are airtight. Ducts shall be sized such that the pressure drop does not exceed 0.1 in.w.g. per 100 ft of duct.

Portable fire extinguishers shall be provided for each space in accordance with the requirements of NFPA 10, the SFPC, and the USBC.

HVAC calculations shall be submitted supporting the cooling and heating loads for the ancillary support building.

## FIRE AND LIFE SAFETY DELIVERABLES

- Updated Basis of Design for the Fire and Life Safety Design elements
- Provide 60% Engineering Design drawings and specifications, including the following:
  - Calculations
  - Design Reports
  - Updated BODR
  - Full Technical Specifications
  - ConOps
  - QA/QC Documentation

### 3.2.3 TUNNEL SUPPORT BUILDING, HEADHOUSES, AND BUILDING INFRASTRUCTURE

The Consultant shall continue development of the 60% Engineering Design Plans for the Project based on 30% Preliminary Engineering plans. Plans for the Tunnel Support Building and headhouse buildings include: civil, architectural, structural, electrical, lighting, communications, public address, CCTV, Plumbing, landscape architecture, mechanical, and fire protection plans.

## TUNNEL SUPPORT BUILDING, HEADHOUSES, AND BUILDING INFRASTRUCTURE DELIVERABLES

- Updated Engineering Basis of Design for the Tunnel Support Building, Headhouse buildings, and Building Infrastructures design elements.
- Civil Plans for the Tunnel Support Building, Headhouse Buildings, including access roadways.
- Grading Plans and Proposed locations for drainage solutions
- Hydrology and Hydraulics Report
- Hydraulic Structures Plans and details
- E&S Plans
- Plans and details for retaining walls (if required)

- Quantities will be developed to support the cost estimate based on the level of detail included in the design plans, but these will not be presented on plan sheets.

### 3.3 ROW ACQUISITION DOCUMENTATION

The Consultant must follow VPRA process to notify abutting landowners of entry onto their property for the purpose of performing studies related to the project. VPRA must approve all notice letters prior to the Consultant sending to the landowners.

The Consultant shall identify ROW impacts to adjacent landowners based on the 60% Engineering Design and shall prepare the ROW Acquisition Plans for all additional properties with a ROW impact. The ROW Acquisition Plans will be based on field survey work and will be used to acquire ROW. A ROW impact is described as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements shall include utility, drainage, right of way and line of sight easements as well as access, construction, and maintenance easements. Temporary easements shall include construction, staging and laydown area easements. The Consultant shall identify temporary easements as part of the 60% Engineering Design and make every effort to minimize all property easements, including temporary construction easements. The Consultant shall present all impacts in a ROW Impacts Matrix.

The ROW Matrix prepared during 30% Preliminary Engineering is provided in Appendix O.

### ROW Acquisition Documentation Deliverables

- Updated ROW Impacts Matrix

## Task 4: Cinnabar Road Layover Facility

This task includes advancing the existing 30% Preliminary Engineering plans (Appendix C) of two (2) project components: Cinnabar Road Layover Access Road and Amtrak Layover Facility to a 60% Engineering Design plan set for all elements of the Project. The two (2) project components will be designed to 60% Engineering Design unless VPRA decides to end project development for certain or all components in this SOW. Note, this scope does not include the station building itself, but all improvements needed for the station building construction are included.

[Appendix S contains geotechnical information relevant to Task 4 that was obtained as part of the 30% Preliminary Engineering phase.](#)

#### Submittal Process:

The Consultant shall provide two (2) design submissions: draft 60% Engineering Design and final 60% Engineering Design.

At VPRA's discretion, the Consultant shall advance to Final Design (Optional). Should the design progress to final construction documents, submittals at 90%, 100%, and final are expected and will follow this same process.

All plan submittals must go through the Project's previously established QA/QC process prior to submission. The following process, a similar process using Bluebeam, or a Consultant-proposed electronic comment-resolution process shall be followed for the Engineering Plans:

- VPRA will compile all comments from stakeholders and provide a comment matrix to the Consultant after each review has been completed.
- The Consultant shall respond to the comments using the VPRA-provided comment matrix and submit to VPRA for use during the comment-resolution meeting.
- If needed the Consultant shall conduct a comment-resolution meeting with VPRA and project stakeholders to discuss comments and responses, gather additional background to better understand comments, and provide backup to responses as necessary to reach agreement on the path forward for the submittal comments.
- The Consultant shall submit the updated comment-resolution matrix to document all agreed-to comment responses.
- The agreed-to comments shall be incorporated into the subsequent submittal.

The final 60% Engineering Design plans shall incorporate all agreed-to comments developed from the reviewers and stakeholders of the project. VPRA will confirm that all comments were properly incorporated as agreed to during the comment-resolution meeting and documented in the updated comment-resolution matrix. The Consultant is responsible for updating the Final 60% Engineering Design Plans to incorporate any previous comments that were not incorporated, but no new comments will be issued during the check of the Final 60% Engineering Design Plans.

#### Submittal Quantities:

The Consultant shall provide VPRA with one (1) electronic PDF copy of the plans, cost estimate, schedule, and specification deliverables at each submission. The Consultant shall provide all CAD and other native files with each submission.

## 4.1 SURVEY, SUE, AND GEOTECHNICAL

A survey and preliminary Geotech exploration were performed under the 30% Preliminary Engineering development phase. VPRA will provide Consultant with all available data and findings. A list of recommendations for additional survey, SUE, and geotechnical work that was developed by the Preliminary Engineering Firm is attached as [Appendix F](#). The Consultant shall follow the [VDOT Survey Manual](#) to perform a survey denoting the existing field conditions to adequately support the design of the project. VPRA will provide the Consultant with available rail corridor information from Norfolk Southern.

Geotechnical exploration plans, borings, and lab testing of existing soils were performed under the 30% Preliminary Engineering development phase. During this phase of the Project, the Consultant shall develop loadings and provide them to the geotechnical engineer. The Consultant shall develop a final geotechnical report outlining the foundation recommendations for the project. This report should include but is not limited to bridge and retaining wall foundations, platform foundations, pavement design, slope stability, and slope protection. This detailed report shall be submitted to VPRA for review and approval with the 60% Engineering Design plan set.

SUE investigation (Level C) was performed as a deliverable of the 30% Preliminary Engineering plans. This ~~optional~~ task will include advancing SUE to Level B.

60% Engineering Design plans shall include plan view outline for the locations of all performed borings and include boring findings on the plans.

## Survey, SUE, and Geotechnical Deliverables

- Survey, SUE, and Geotechnical Deliverables
- Additional Topographic Existing survey and aerial features (CADD)
- Level B SUE investigation (Field locate logs and CADD)
- Final PE Geotechnical Engineering Report

## 4.2 ROW ACQUISITION DOCUMENTATION

The Consultant must follow the VPRA process to notify abutting landowners of entry onto their property for the purpose of performing studies related to the Project. VPRA must approve all notice letters prior to the Consultant sending to the landowners.

The Consultant shall identify ROW impacts to adjacent landowners based on the 60% Engineering Design and shall prepare the ROW Acquisition Plans for all additional properties with a ROW impact. The ROW Acquisition Plans will be based on field survey work and will be used to acquire ROW. A ROW impact is described as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements shall include utility, drainage, right of way and line of sight easements as well as access, construction, and maintenance easements. Temporary easements shall include construction, staging and laydown area easements. The Consultant shall identify temporary easements as part of the 60% Engineering Design and make every effort to minimize all property easements, including temporary construction easements. The Consultant shall present all impacts in a ROW Impacts Matrix.

The ROW Matrix prepared during 30% Preliminary Engineering is provided in Appendix O.

## ROW Acquisition Documentation Deliverables

- Updated ROW Impacts Matrix

## 4.3 RAILROAD DESIGN

Railroad design work shall include horizontal and vertical track alignments for the purpose of providing a safe, low-maintenance track infrastructure to support passenger service, station operations, and access to the layover facility. The Consultant shall review 30% Preliminary Engineering plans, conduct analysis, and continue the development of the track plans. Design will include general layout of signals and consider the access for maintenance of signal and positive train control facilities to ensure accommodation and consideration of the required signal system that has been incorporated into the design.

The design shall follow Amtrak Design Criteria, Amtrak Platform Guidelines, Amtrak Track Design Specification Manual, NS Standards and Public Projects Manual (current version), and the most current version of AREMA's recommended practices. The design shall comply with all FRA regulations. If applicable, the Consultant shall incorporate the survey information developed as a part of the previously completed 30% Preliminary Engineering design.

The railroad design shall include, but not be limited to, the following elements:

- Horizontal alignments
- Vertical profiles
- Track geometry



- Horizontal and vertical clearances to obstructions
- Typical sections
- Cross sections (for verification of drainage, earthwork, right-of-way impacts, and constructability)
- Grading and Drainage
- Utility Impacts
- Retaining wall locations
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- ROW impacts
- Construction limits

### Railroad Design Deliverables

- Updated Engineering Basis of Design for the Railroad Design Elements.
- Track Geometry Data Sheets
- Railroad Plan and Profile Sheets (50' horizontal/10' vertical scale)
- Alignments with stations, tangent bearings, and curve data (chord definition)
- Profiles with stations, proposed grades, and curve data
- Horizontal and vertical clearances
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- Survey and aerial feature lines gathered as part of this scope and previously gathered gray-scaled in the background on the plan view
- ROW impacts on adjacent properties
- Updated Utility Impacts
- Fencing to enclose VPRA and Amtrak facilities
- Typical Sections Plan Sheets
- Cross-Sections at 50' intervals

## 4.4 CIVIL ENGINEERING

Proper drainage from railroads is critical to providing safe conditions and maintaining transportation infrastructure. The Consultant shall adequately design drainage and stormwater management structures to adequately convey design flows. All designs shall consider environmental concerns including considerations for water oil separators, floodplain impacts, erosion and sediment control measures, and the protection of structures.

All current federal and Commonwealth of Virginia regulations pertinent to the design of drainage and stormwater management shall be followed, which may include Best Management Practices (BMPs) from the Virginia Stormwater BMP Clearinghouse. Additionally, within the railroad corridor, special attention shall be paid to the surface drainage, grading, and stormwater management best practices and standards found within the latest editions of the *AREMA Manual for Railway Engineering*, NS Standards and Public Projects Manual, and the *Virginia Stormwater Management Handbook*. If differences exist between the above-stated regulations, the more stringent of the regulations shall apply. Outside the immediate railroad footprint, i.e., for access roads, parking lots, other site work, etc., drainage design shall be in accordance with VDOT's *Drainage Manual*, revised January 2021.

In conjunction with the development of the track plans, grading plans shall be prepared. The Consultant shall document hydrologic and hydraulic analysis illustrating the existing and proposed capacity of hydraulic structures and establishing the need for improvements, if any, in a Hydrology

and Hydraulics Report. The Consultant shall design and provide plans for the proposed hydraulic structures. If a bridge structure is required, the Consultant shall bring it to the attention of VPRA prior to starting design. The Consultant also shall prepare a Soil Erosion and Sediment Control (E&S) Plan showing the site's existing topography, indicating how it will be altered, identifying the control measures that will be installed, and describing how and when these controls will be implemented and maintained. All erosion and sediment control measures shall follow VDOT's *Drainage Manual*, revised January 2021 and VDOT's *Road and Bridge Standards*, revised September 2022, and shall be supplemented if required by the current *Virginia Department of Environmental Quality Erosion and Sediment Control Handbook*.

The Consultant shall continue development of the 60% Engineering Design plans for the Project based on 30% Preliminary Engineering plans. Plans for the Cinnabar Road layover facility include civil, architectural, structural, electrical, lighting, communications, public address, CCTV, Plumbing, landscape architecture, mechanical, and fire protection plans.

### Civil Engineering Deliverables

- Updated Engineering Basis of Design for the Civil Engineering design elements.
- Civil Plans for the Cinnabar layover facility, Cinnabar Layover Facility Infrastructure, including access roadways.
- Grading Plans and Proposed locations for drainage solutions
- Hydrology and Hydraulics Report
- Hydraulic Structures Plans and details
- E&S Plans
- Plans and details for retaining walls
- Quantities will be developed to support the cost estimate based on the level of detail included in the design plans, but these will not be presented on plan sheets.

## 4.5 UTILITY COORDINATION AND DESIGN

The Consultant shall be responsible for the identification of conflicts and design for the utility relocations required for the Project.

The Consultant shall be responsible for the design of water and sanitary sewer utility relocations and new service lines required by the Project and the preparation of Utility Relocation Plans. Proposed lines including relocations of water and/or sanitary sewer facilities shall be designed in accordance with the Utility Owner's requirements and standards. The approximate location of proposed electrical, water and sanitary sewer lines shall be coordinated with the Utility Owner during the PE phase. Approximate easements required and horizontal alignments for water or sanitary sewer and electrical shall be shown on the Utility Relocation Plans. All utility information provided by VPRA shall be shown on the Utility Relocation Plans.

The Consultant shall finalize the matrix of potential impacts to all utilities to determine the cost and impacts to construction schedule.

### Utility Relocation Design Deliverables

- Utility Plans
- Utility Relocation Plans
- Utility Coordination
- Updated Utility Impact Matrix

## 4.6 PERMIT COORDINATION (OPTIONAL)

The Consultant may review the list of environmental permits and commitments identified by VPRA and will provide comments and additional activities needed following completion of early design activities. Environmental permits and commitments include permitting requirements, as well as other environmental approvals, tasks, and plans related to the Project that were committed as part of the National Environmental Policy Act (NEPA) document as minimization, avoidance, or mitigation for the proposed action or that will be required by local, state, or federal agencies.

The Consultant shall prepare permits and thus also be responsible for providing design files, exhibits and cross sections, impact calculations, and material reviews for environmental permits and commitments related to the Project. The Consultant will collaborate with VPRA to gather applicable information and for reviews of the permit applications. VPRA will lead agency coordination, and the Consultant will participate and provide materials for meetings. VPRA will develop any NEPA re-evaluation work, if needed.

### Permit Coordination Deliverables

- Permit and environmental commitment support documentation

## Task 5: Cinnabar Station Platform and Station Infrastructure

This task includes advancing the existing 30% Preliminary Engineering plans (Appendix D of three (3) project components: Cinnabar Platform, Cinnabar Road Station Infrastructure, and Cinnabar Road Station Access Road to a 60% Engineering Design set for all elements of the Project. All three (3) components will be designed to 60% Engineering Design unless VPRA decides to end project development for certain or all components in this RFP early. Please note that this scope does not include the station building itself, but all improvements needed for the station building construction are included.

[Appendix S contains geotechnical information relevant to Task 5 that was obtained as part of the 30% Preliminary Engineering phase.](#)

### Submittal Process:

The Consultant shall provide two (2) design submissions: draft 60% Engineering Design and final 60% Engineering Design.

At VPRA's discretion, the Consultant shall advance to Final Design (Optional). Should the design progress to final construction documents, submittals at 90%, 100%, and final are expected and will follow this same process.

All plan submittals must go through the Project's previously established QA/QC process prior to submission. The following process, a similar process using Bluebeam, or a Consultant-proposed electronic comment-resolution process shall be followed for the Engineering Plans:

- VPRA will compile all comments from stakeholders and provide a comment matrix to the Consultant after each review has been completed.

- The Consultant shall respond to the comments using the VPRA-provided comment matrix and submit to VPRA for use during the comment-resolution meeting.
- If needed the Consultant shall conduct a comment-resolution meeting with VPRA and project stakeholders to discuss comments and responses, gather additional background to better understand comments, and provide backup to responses as necessary to reach agreement on the path forward for the submittal comments.
- The Consultant shall submit the updated comment-resolution matrix to document all agreed-to comment responses.
- The agreed-to comments shall be incorporated into the subsequent submittal.

The final 60% Engineering Design plans shall incorporate all agreed-to comments developed from the reviewers and stakeholders of the project. VPRA will confirm that all comments were properly incorporated as agreed to during the comment-resolution meeting and documented in the updated comment-resolution matrix. The Consultant is responsible for updates to the Final 60% Engineering Design Plans to incorporate any previous comments that were not incorporated but no new comments will be issued during the check of the Final 60% Engineering Design plans.

#### Submittal Quantities:

The Consultant shall provide VPRA with one (1) electronic PDF copy of the plans, cost estimate, schedule, and specification deliverables at each submission. The Consultant shall provide all CAD and other native files with each submission.

## **5.1 SURVEY, SUE, AND GEOTECHNICAL-(OPTIONAL)**

A survey and preliminary Geotech exploration were performed under the 30% Preliminary Engineering development phase. VPRA will provide Consultant with all available data and findings. A list of recommendations for additional survey, SUE and geotechnical work was developed by the Preliminary Engineering Firm and is attached as Appendix F. The Consultant shall follow the VDOT Survey Manual to perform a survey denoting the existing field conditions to adequately support the design of the project. VPRA will provide the Consultant with available rail corridor information from Norfolk Southern.

Geotechnical exploration plans, borings, and lab testing of existing soils were performed under the 30% Preliminary Engineering development phase. During this phase of the Project, the Consultant shall develop loadings and provide them to the geotechnical engineer. The Consultant shall develop a final geotechnical report outlining the foundation recommendations for the project. This report should include but is not limited to: bridge and retaining wall foundations, platform foundations, pavement design, slope stability, and slope protection. This detailed report shall be submitted to VPRA for review and approval with the 60% Engineering Design plan set.

Subsurface Utility Engineering (SUE) investigation (Level C) was performed as a deliverable of the 30% Preliminary Engineering plans. This ~~optional~~ task will include advancing SUE to Level B.

60% Engineering Design plans shall include plan view and outline the locations of all performed borings and include boring findings on the plans.

## **Survey, SUE, and Geotechnical Deliverables**

- Survey, SUE, and Geotechnical Deliverables
- Additional Topographic Existing survey and aerial features (CADD)
- Level B SUE investigation (Field locate logs and CADD)
- Final PE Geotechnical Engineering Report

## 5.2 ROW ACQUISITION DOCUMENTATION

The Consultant must follow the VPRA process to notify abutting landowners of entry onto their property for the purpose of performing studies related to the Project. VPRA must approve all notice letters prior to the Consultant sending them to the landowners.

The Consultant shall identify ROW impacts to adjacent landowners based on the 60% Engineering Design and shall prepare the ROW Acquisition Plans for all additional properties with a ROW impact. The ROW Acquisition Plans will be based on field survey work and will be used to acquire ROW. A ROW impact is described as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements shall include utility, drainage, right of way and line of sight easements as well as access, construction, and maintenance easements. Temporary easements shall include construction, staging and laydown area easements. The Consultant shall identify temporary easements as part of the 60% Engineering Design and make every effort to minimize all property easements, including temporary construction easements. The Consultant shall present all impacts in a ROW Impacts Matrix.

The ROW Matrix prepared during 30% Preliminary Engineering is provided in Appendix O.

### ROW Acquisition Documentation Deliverables

- Updated ROW Impacts Matrix

## 5.3 RAILROAD DESIGN

Railroad design work shall include horizontal and vertical track alignments for the purpose of providing a safe, low-maintenance track infrastructure to support passenger service, station operations, and potential access to the layover facility. The Consultant shall review 30% Preliminary Engineering plans, conduct analysis, and continue the development of the track plans. Design will include general layout of signals and consider the access for maintenance of signal and positive train control facilities to ensure accommodation and consideration of the required signal system has been incorporated into the design.

The design shall follow Amtrak Design Criteria, Amtrak Platform Guidelines, Amtrak Track Design Specification Manual, NS Standards and Public Projects Manual (current version), and the most current version of the American Railway Engineering and Maintenance-of-Way Association's (AREMA) recommended practices. The design shall comply with all FRA regulations. The Consultant shall incorporate the survey information developed as a part of the current contract if applicable.

The railroad design shall include, but not be limited to, the following elements:

- Horizontal alignments
- Vertical profiles
- Track geometry
- Horizontal and vertical clearances to obstructions
- Typical sections

- Cross sections (for verification of drainage, earthwork, right-of-way impacts, and constructability)
- Grading and drainage
- Utility impacts
- Retaining wall locations
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- ROW impacts
- Construction limits

## Railroad Design Deliverables

- Updated Engineering Basis of Design for the Railroad Design Elements.
- Track Geometry Data Sheets
- Railroad Plan and Profile Sheets (50' horizontal/10' vertical scale)
- Alignments with stations, tangent bearings, and curve data (chord definition)
- Profiles with stations, proposed grades, and curve data
- Horizontal and vertical clearances
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- Survey and aerial feature lines gathered as part of this scope and previously gathered gray-scaled in the background on the plan view
- ROW impacts on adjacent properties
- Updated Utility Impacts
- Fencing to enclose VPRA and Amtrak facilities
- High-level passenger platform and connection to site facilities
- Typical Sections Plan Sheets
- Cross-Sections at 50' intervals

## 5.4 CIVIL ENGINEERING

Proper drainage from railroads is critical to providing safe conditions and maintaining transportation infrastructure. The Consultant shall adequately design drainage and stormwater management structures to adequately convey design flows. All designs shall consider environmental concerns including considerations for water oil separators, floodplain impacts, erosion and sediment control measures, and the protection of structures.

All current federal and Commonwealth of Virginia regulations pertinent to the design of drainage and stormwater management shall be adhered to, which may include best management practices (BMPs) from the Virginia Stormwater BMP Clearinghouse. Additionally, within the railroad corridor, special attention shall be paid to the surface drainage, grading, and stormwater management best practices and standards found within the latest editions of the *AREMA Manual for Railway Engineering*, NS Standards and Public Projects Manual, and the *Virginia Stormwater Management Handbook*. If differences exist between the above-stated regulations, the more stringent of the regulations shall apply. Outside the immediate railroad footprint, i.e., for access roads, parking lots, other site work, etc., drainage design shall be in accordance with VDOT's *Drainage Manual*, revised January 2021.

In conjunction with the development of the track plans, grading plans shall be prepared. The Consultant shall document hydrologic and hydraulic analysis illustrating the existing and proposed capacity of hydraulic structures and establishing the need for improvements, if any, in a Hydrology and Hydraulics Report. The Consultant shall design and provide plans for the proposed hydraulic

structures. If a bridge structure is required, the Consultant shall bring it to the attention of VPRA prior to starting design. The Consultant also shall prepare a Soil Erosion and Sediment Control (E&S) Plan showing the site's existing topography, indicating how it will be altered, identifying the control measures that will be installed, and describing how and when these controls will be implemented and maintained. All erosion and sediment control measures shall follow VDOT's *Drainage Manual*, revised January 2021 and VDOT's *Road and Bridge Standards*, revised September 2022, and shall be supplemented if required by the current *Virginia Department of Environmental Quality Erosion and Sediment Control Handbook*.

The Consultant shall continue development of the 60% Engineering Design plans for the Project based on 30% Preliminary Engineering plans. The platform shall be designed as a high-level platform with a minimum of 1,000 feet long. Canopy shall be provided on approximately two-thirds of the length of the platform.

## Civil Engineering Deliverables

- Plans for the Cinnabar Road Station; including, civil, architectural, structural, electrical, lighting, communications, public address, CCTV, Plumbing, landscape architecture, mechanical, and fire protection plans.
- Updated Engineering Basis of Design for the Civil Engineering design elements.
- Civil Plans for the Cinnabar Road Platform, Cinnabar Road Station Infrastructure, including access roadways.
- Grading Plans and Proposed locations for drainage solutions
- Hydrology and Hydraulics Report
- Hydraulic Structures Plans and details
- E&S Plans
- Plans and details for retaining walls at the Cinnabar Road Station
- Quantities will be developed to support the cost estimate based on the level of detail included in the design plans, but these will not be presented on plan sheets.

## 5.5 UTILITY COORDINATION AND DESIGN

The Consultant shall be responsible for the identification of conflicts and design for the utility relocations required for the Project.

The Consultant shall be responsible for the design of water and sanitary sewer utility relocations and new service lines required by the Project and the preparation of Utility Relocation Plans. Proposed lines including relocations of water and/or sanitary sewer facilities shall be designed in accordance with the Utility Owner's requirements and standards. The approximate location of proposed electrical, water and sanitary sewer lines shall be coordinated with the Utility Owner during the PE phase. Approximate easements required and horizontal alignments for water or sanitary sewer and electrical shall be shown on the Utility Relocation Plans. All utility information provided by VPRA shall be shown on the Utility Relocation Plans.

The Consultant shall finalize the matrix of potential impacts to all utilities to determine the cost and impacts to construction schedule.

## Utility Relocation Design Deliverables

- Utility Plans
- Utility Relocation Plans

- Utility Coordination
- Updated Utility Impact Matrix

## 5.6 PERMIT COORDINATION (OPTIONAL)

The Consultant will review the list of environmental permits and commitments identified by VPRA and will provide comments and additional activities needed following completion of early design activities. Environmental permits and commitments include permitting requirements as well as other environmental approvals, tasks, and plans related to the Project that were committed as part of the NEPA document as minimization, avoidance, or mitigation for the proposed action or that will be required by local, state, or federal agencies.

The Consultant shall prepare permits and thus also be responsible for providing design files, exhibits and cross sections, impact calculations, and material reviews for environmental permits and commitments related to the Project. The Consultant will collaborate with VPRA to gather applicable information and for reviews of the permit applications. VPRA will lead agency coordination, and the Consultant will participate and provide materials for meetings. VPRA will develop any NEPA re-evaluation work, if needed.

### Permit Coordination Deliverables

- Permit and environmental commitment support documentation

## Task 6: New River Valley Station and Connector Track

This task includes advancing the existing preliminary 30% Preliminary Engineering plans (Appendix E) of three (3) project components: New River Valley Mall Platform, Connector Track and Station Infrastructure to a 60% Engineering Design set for all elements of the Project. All three (3) components will be designed to 60% Engineering Design unless VPRA decides to end project development for certain or all components in this statement of work early. Please note that this scope does not include the station building itself, but all improvements needed for the station building construction are included.

[Appendix T contains geotechnical information relevant to Task 6 that was obtained as part of the 30% Preliminary Engineering phase.](#)

### Submittal Process:

The Consultant shall provide two (2) design submissions: draft 60% Engineering Design and final 60% Engineering Design.

At VPRA discretion, the Consultant shall advance to Final Design (Optional). Should the design progress to final construction documents, submittals at 90%, 100%, and final are expected and will follow this same process.

All plan submittals must go through the Project's previously established QA/QC process prior to submission. The following process, a similar process using Bluebeam, or a Consultant-proposed electronic comment-resolution process shall be followed for the Engineering Plans:



- VPRA will compile all comments from stakeholders and provide a comment matrix to the Consultant after each review has been completed.
- The Consultant shall respond to the comments using the VPRA-provided comment matrix and submit to VPRA for use during the comment-resolution meeting.
- If needed the Consultant shall conduct a comment-resolution meeting with VPRA and project stakeholders to discuss comments and responses, gather additional background to better understand comments, and provide backup to responses as necessary to reach agreement on the path forward for the submittal comments.
- The Consultant shall submit the updated comment-resolution matrix to document all agreed-to comment responses.
- The agreed-to comments shall be incorporated into the subsequent submittal.

The final 60% Engineering Design plans shall incorporate all agreed-to comments developed from the reviewers and stakeholders of the project. VPRA will confirm that all comments were properly incorporated as agreed to during the comment-resolution meeting and documented in the updated comment-resolution matrix. The Consultant is responsible for updates to the final 60% Engineering Design plans to incorporate any previous comments that were not incorporated but no new comments will be issued during the check of the final 60% Engineering Design plans.

#### Submittal Quantities:

The Consultant shall provide VPRA with one (1) electronic PDF copy of the plans, cost estimate, schedule, and specification deliverables at each submission. The Consultant shall provide all CAD and other native files with each submission.

## 6.1 SURVEY, SUE, AND GEOTECHNICAL

A survey and preliminary Geotech exploration were performed under the 30% Preliminary Engineering development phase. The Consultant shall request all available data and findings from VPRA, a list of recommendations for additional survey, SUE, and geotechnical work that was developed by the Preliminary Engineering Firm and attached as [Appendix F](#). The Consultant shall follow the VDOT Survey Manual to perform a survey denoting the existing field conditions to adequately support the design of the project. VPRA will provide the Consultant with available rail corridor information from Norfolk Southern.

Geotechnical exploration plans, borings, and lab testing of existing soils were performed under the 30% Preliminary Engineering development phase. During this phase of the Project, the Consultant shall develop loadings and provide them to the geotechnical engineer. The Consultant shall develop a final geotechnical report outlining the foundation recommendations for the project. This report should include but is not limited to bridge and retaining wall foundations, platform foundations, pavement design, slope stability, and slope protection. This detailed report shall be submitted to VPRA for review and approval with the 60% Engineering Design plan set.

SUE investigation (Level C) was performed as a deliverable of the 30% Preliminary Engineering plans. This ~~optional~~ task will include advancing SUE to Level B.

60% Engineering Design plans shall include plan view outlines of the locations of all performed borings and include boring findings on the plans.

## Survey, SUE, And Geotechnical Deliverables

- Survey, SUE, and Geotechnical Recommendation Deliverables
- Additional Topographic Existing survey and aerial features (CADD)
- Level B SUE investigation (Field locate logs and CADD)
- Final PE Geotechnical Engineering Report

## 6.2 ROW ACQUISITION DOCUMENTATION

The Consultant must follow the VPRA process to notify abutting landowners of entry onto their property for the purpose of performing studies related to the Project. VPRA must approve all notice letters prior to the Consultant sending to the landowners.

The Consultant shall identify ROW impacts to adjacent landowners based on the 60% Engineering Design and shall prepare the ROW Acquisition Plans for all additional properties with a ROW impact. The ROW Acquisition Plans will be based on field survey work and will be used to acquire ROW. A ROW impact is described as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements shall include utility, drainage, right of way and line of sight easements as well as access, construction, and maintenance easements. Temporary easements shall include construction, staging and laydown area easements. The Consultant shall identify temporary easements as part of the 60% Engineering Design and make every effort to minimize all property easements, including temporary construction easements. The Consultant shall present all impacts in a ROW Impacts Matrix.

The ROW Matrix prepared during 30% Preliminary Engineering is provided in Appendix O.

## ROW Acquisition Documentation Deliverables

- Updated ROW Impacts Matrix

## 6.3 RAILROAD DESIGN

Railroad design work shall include horizontal and vertical track alignments for the purpose of providing a safe, low-maintenance track infrastructure to support passenger service and station operations. The Consultant shall review 30% Preliminary Engineering plans, conduct analysis, and continue the development of the track plans. Design will include general layout of signals and consider the access for maintenance of signal and positive train control facilities to ensure accommodation and consideration of the required signal system that has been incorporated into the design.

The design shall follow Amtrak Design Criteria, including Amtrak Platform Guidelines and the Amtrak Track Design Specification Manual, NS Standards and Public Projects Manual (current version), and the most current version of the American Railway Engineering and Maintenance-of-Way Association's (AREMA) recommended practices. The design shall comply with all FRA regulations. The Consultant shall incorporate the survey information developed as a part of the current contract if applicable.

The railroad design shall include, but not be limited to, the following elements:

- Horizontal alignments
- Vertical profiles
- Track geometry
- Horizontal and vertical clearances to obstructions

- Typical sections
- Cross sections (for verification of drainage, earthwork, right-of-way impacts, and constructability)
- Grading and drainage
- Utility impacts
- Retaining wall locations
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- ROW impacts
- Construction limits

## Railroad Design Deliverables

- Updated Engineering Basis of Design for the Railroad Design Elements.
- Track Geometry Data Sheets
- Railroad Plan and Profile Sheets (50' horizontal/10' vertical scale)
- Alignments with stations, tangent bearings, and curve data (chord definition)
- Profiles with stations, proposed grades, and curve data
- Horizontal and vertical clearances
- Special trackwork (such as turnouts, at-grade crossings, etc.)
- Survey and aerial feature lines gathered as part of this scope and previously gathered gray-scaled in the background on the plan view
- ROW impacts on adjacent properties
- Updated utility impacts
- Fencing to enclose VPRA and Amtrak facilities
- High-level passenger platform and connection to site facilities
- Typical Sections Plan Sheets
- Cross-Sections at 50' intervals

## 6.4 CIVIL ENGINEERING

Proper drainage from railroads is critical to providing safe conditions and maintaining transportation infrastructure. The Consultant shall adequately design drainage and stormwater management structures to adequately convey design flows. All designs shall consider environmental concerns including considerations for water oil separators, floodplain impacts, erosion and sediment control measures, and the protection of structures.

All current federal and Commonwealth of Virginia regulations pertinent to the design of drainage and stormwater management shall be adhered to, which may include best management practices (BMPs) from the Virginia Stormwater BMP Clearinghouse. Additionally, within the railroad corridor, special attention shall be paid to the surface drainage, grading, and stormwater management best practices and standards found within the latest editions of the *AREMA Manual for Railway Engineering*, NS Standards and Public Projects Manual, and the *Virginia Stormwater Management Handbook*. If differences exist between the above-stated regulations, the more stringent of the regulations shall apply. Outside the immediate railroad footprint, i.e., for access roads, parking lots, other site work, etc., drainage design shall be in accordance with VDOT's *Drainage Manual*, revised January 2021.

In conjunction with the development of the track plans, grading plans shall be prepared. The Consultant shall document hydrologic and hydraulic analysis illustrating the existing and proposed capacity of hydraulic structures and establishing the need for improvements, if any, in a Hydrology

and Hydraulics Report. The Consultant shall design and provide plans for the proposed hydraulic structures. If a bridge structure is required, the Consultant shall bring it to the attention of VPRA prior to starting design. The Consultant also shall prepare a Soil Erosion and Sediment Control (E&S) Plan showing the site's existing topography, indicating how it will be altered, identifying the control measures that will be installed, and describing how and when these controls will be implemented and maintained. All erosion and sediment control measures shall follow VDOT's *Drainage Manual*, revised January 2021 and VDOT's *Road and Bridge Standards*, revised September 2022, and shall be supplemented if required by the current *Virginia Department of Environmental Quality Erosion and Sediment Control Handbook*.

The Consultant shall continue development of the 60% Engineering Design plans for the Project based on 30% Preliminary Engineering platform plans. The platform shall be designed as a high-level platform with a minimum length of 1,000 feet. A canopy shall be provided on approximately two-thirds of the length of the platform.

### Civil Engineering Deliverables

- Plans for the New River Valley Mall Station Platform; including civil, architectural, structural, electrical, lighting, communications, public address, CCTV, plumbing, landscape architecture, mechanical, and fire protection plans.
- Updated Engineering Basis of Design for the New River Valley Mall Platform, Connector Track and Station Infrastructure
- Civil Plans for the New River Valley Mall Platform, Connector Track and Station Infrastructure, including access roadways
- Grading Plans and Proposed locations for drainage solutions
- Hydrology and Hydraulics Report
- Hydraulic Structures plans and details
- E&S Plans
- Plans and details for retaining walls at the New River Valley Mall Station and connector track
- Quantities will be developed to support the cost estimate based on the level of detail included in the design plans, but these will not be presented on plan sheets.

## 6.5 UTILITY COORDINATION AND DESIGN

The Consultant shall be responsible for the identification of conflicts and design for the utility relocations required for the Project.

The Consultant shall be responsible for the design of water and sanitary sewer utility relocations and new service lines required by the Project and the preparation of Utility Relocation Plans. Proposed lines including relocations of water and/or sanitary sewer facilities shall be designed in accordance with the Utility Owner's requirements and standards. The approximate location of proposed electrical, water and sanitary sewer lines shall be coordinated with the Utility Owner during the PE phase. Approximate easements required and horizontal alignments for water or sanitary sewer and electrical shall be shown on the Utility Relocation Plans. All utility information provided by VPRA shall be shown on the Utility Relocation Plans.

The Consultant shall finalize the matrix of potential impacts to all utilities to determine the cost and impacts to construction schedule.

## Utility Relocation Design Deliverables

- Utility Plans
- Utility Relocation Plans
- Utility Coordination
- Updated Utility Impact Matrix

## 6.6 PERMIT COORDINATION (OPTIONAL)

The Consultant may review the list of environmental permits and commitments identified by VPRA and will provide comments and additional activities needed following completion of early design activities. Environmental permits and commitments include permitting requirements as well as other environmental approvals, tasks, and plans related to the Project that were committed as part of the NEPA document as minimization, avoidance, or mitigation for the proposed action or that will be required by local, state, or federal agencies.

VPRA will lead the permitting activities. The Consultant will be responsible for providing design files, exhibits and cross sections, impact calculations, and material reviews for environmental permits and commitments related to the Project. VPRA will also lead development of a NEPA re-evaluation, if needed.

## Permit Coordination Deliverables

- Permit and environmental commitment support documentation

# Task 7: Cost Estimate, Schedule, & Technical Specifications

## 7.1 CONSTRUCTION COST ESTIMATE

The Consultant shall use the VPRA Cost Estimate Template to prepare a Construction Cost Estimate based on quantities from each milestone submittal. The cost estimate should be supplemented with estimated quantities for major categories not included in the 30% Preliminary Engineering design and percentage costs for quantity categories that are indeterminate based on the level of design. The cost estimate shall include, but is not limited to, all engineering, ROW acquisition, utility relocation, signals, construction, construction engineering support, construction inspection, agency oversight, other professional services, and contingency reserves. Emphasis should be placed on identifying any high-risk items and applying a contingency appropriate for the level of design at each submission. The construction cost should include, but not be limited to, major items such as railroad, retaining walls, major drainage, environmental mitigation, utilities, and hazardous waste remediation. The Construction Cost Estimate prepared during 30% Preliminary Engineering for the Project is provided in Appendix J.

Additionally, the Consultant shall consider costs commonly associated with railroad-specific work including flagmen, watchmen, force account reviews, prevailing wage, Buy America, and the impacts on productivity when working on an active railroad.

The Consultant shall coordinate with VPRA for guidance on and establishment of third-party costs (i.e., inspection, agency oversight, flagmen and watchmen rates, and utility force account review).

The cost estimate shall be presented in the Standard Cost Category (SCC) format as defined in FRA's Capital Cost Estimating Guidance, August 30, 2016 (<https://www.fra.dot.gov/eLib/Details/L17452>), and Monitoring Procedure 33, SCC Worksheets reference (<https://www.fra.dot.gov/eLib/details/L16055>). Using the VPRA Cost Estimate Template, the Consultant shall report the cost in year of expenditure dollars.

The Consultant shall develop a Cost Estimate and Unit Cost Methodology Memorandum documenting background for costing assumptions, unit costs, contingency, risk-based unit prices, etc. in accordance with FRA's Cost Estimating Guidance for Capital Projects.

The Consultant shall submit an updated Construction Cost Estimate and Cost Estimate and Unit Cost Methodology Memorandum with each milestone submittal.

The Consultant shall request from VPRA the construction cost index forecast for inflation percentages.

## Construction Cost Estimate Deliverables

- Opinion of Probable Cost (Engineer's Construction Cost Estimate) with the Draft 60% Engineering Design Plans and Final 60% Engineering Design Plans
- Estimated quantities provided for each task

## 7.2 CONSTRUCTION SCHEDULE

The Consultant shall develop a milestone Critical Path Method (CPM) schedule for construction of the Project. This schedule shall illustrate how each of the Project Components will be completed to achieve the full construction of the project with minimal impacts to railroad operations. The Consultant shall review the construction schedule developed during the 30% Preliminary Engineering design phase and transfer key milestone completion dates, including for adjacent projects, i.e., Slate Hill tunnel modifications, etc., to develop the most accurate construction schedule. The schedule shall exclude completion of the station building located at the Cinnabar Road Station. The Construction Schedules prepared during 30% Preliminary Engineering are provided in Appendix K.

The project-level construction schedule shall be coordinated with the master program schedule and VPRA's Work Breakdown Structure (WBS).

The Consultant shall submit an updated construction schedule with each milestone submittal.

## Construction Schedule Deliverables

- Milestone Critical Path Method Construction Schedule with the draft 60% Engineering Design plans, and final 60% Engineering Design plans

## 7.3 TECHNICAL SPECIFICATIONS

The design and construction work for the Project shall be performed in accordance with the applicable federal and state laws and VDOT standards, specifications and reference documents to include, but not limited to, the documents listed herein.

If during the design, a specific standard, specification, or reference document is required but is not listed herein, it is the responsibility of the Consultant to identify the pertinent standard, specification, or reference document and submit it for review and approval prior to inclusion in the Contract Documents.

As part of each design submission, the Consultant shall submit a matrix of all standard technical specifications and project-specific performance specifications that are proposed for the Project. The Consultant shall indicate each specification as invoke, delete, or modify to signify which specs are required for the Project, not necessary for the Project, or need modification to be applicable to the Project, respectively. The technical specifications will be part of the bridging documents necessary for the project development and delivery.

The standards and practices to be utilized for the Project are:

#### General

- AASHTO Guide Specifications for Highway Construction, 9th Edition
- VDOT Materials Approved Lists
- VDOT Construction Manual (2005, revised May 2016)
- VDOT Post Construction Manual (December 2016)
- VDOT Construction Inspection Manual (January 2018)
- VDOT's Minimum Requirements for Quality Assurance & Quality Control on Design- Build & Public-Private Transportation Act Projects (July 2018)
- VDOT Traffic Engineering Design Manual (2020)
- VDOT Right of Way Manual of Instructions, Third Edition (8/18/2020)
- VDOT Utility Manual of Instructions – Utility Relocation Policies and Procedures, Tenth Edition (Rev 08/14/2017)
- VDOT Land Use Permit Regulations 24 VAC 30-151 (11/23/2011)
- VDOT Policy Manual for Public Participation in Transportation Projects (Rev July 2020)
- VDOT Instructional & Information Memorandums (IIM) – All Divisions (as of date of RFP)
- VDOT Road and Bridge Standards, Vol. 1 and Vol. 2 (2016), including all revisions as of the date of the RFP
- 2020 VDOT Road and Bridge Specifications
- VDOT 2022 Supplement to the 2020 VDOT Road and Bridge Specifications
- 2011 VDOT Virginia Work Area Protection Manual with Revision Number 2.1 (Revised November 2020)
- 2010 ADA Standards for Accessible Design
- Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, dated July 26, 2011
- Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities dated July 23, 2004, and amended May 7, 2014
- VDOT Policy for Integrating Bicycle and Pedestrian Accommodations, adopted March 18, 2004, by the CTB
- Transportation Research Board Highway Capacity Manual (2010)
- VDOT CADD Manual
- VDOT State Noise Abatement Policy (July 13, 2011)
- ISO 9001 Quality Management Systems September 2015
- AASHTO Guide for Park-and-Ride Facilities, 2nd Edition
- Virginia Uniform Statewide Building Code (2009)

- Uniform Relocation Assistance and Real Property Act of 1970, as amended
- 1950 Code of Virginia, Titles 25.1 and 33.1, as amended
- VDOT Survey Manual 2010 Edition, Issued 2009, Rev. August 2021
- American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, Current Edition
- Norfolk Southern Standards and Public Project Manual
- Amtrak Platform Guidelines
- Amtrak Track Design Specification Manual

#### Roadway Design

- VDOT State Bicycling Policy Plan (September 2011)
- VDOT Road Design Manual
- AASHTO A Policy on Geometric Design of Highways and Streets, 7th Edition (2018)
- AASHTO Roadside Design Guide, Fourth Edition, October 2011 (updated chapter 6)
- AASHTO Guide for the Development of Bicycle Facilities, 4th Edition (2012)
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Edition, December 2021
- FHWA 23CFR630 Subpart J Work Zone Safety and Mobility

#### Geotechnical and Pavement Design

- AASHTO Guide for Design of Pavement Structures (Rigid Pavement and Flexible Pavement) (1993 Edition and subsequent revisions)
- AASHTO Manual on Subsurface Investigations (1988)
- VDOT Pavement Design Guide for Subdivision and Secondary Roads, 2014
- VDOT Manual of Instruction for Material Division including all associated memorandum
- FHWA 23 CFR626 - Part 626 Pavement Policy – April 1, 2011

#### Structures

- VDOT Manual of the Structure and Bridge Division
- VDOT Supplement to the AASHTO Manual for Bridge Element Inspection, January 2016
- AASHTO Guide Specification for LRFD Seismic Bridge Design, 2nd Edition, 2012, 2014 and 2015 Interim Revisions
- 4. AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017; and VDOT Modifications
- AASHTO Standard Specifications for the Design of Highway Bridges, 16th Edition, 1996; 1997 and 1998 Interim Specifications; and VDOT Modifications
- AASHTO Construction Handbook for Bridge Temporary Works, 2nd Edition, 2017
- AASHTO Guide Design Specifications for Bridge Temporary Works, 2nd Edition, 2017
- AASHTO Manual for Bridge Evaluation, 3rd Edition, 2018 and all interim revisions
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals, 6th Edition, 2013 with 2015 Interim Revisions



- AASHTO Guide Specifications for Structural Design of Sound Barriers, 1989, with 1992 and 2002 Interim Revisions
- FHWA Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, December 1995, including Errata sheets and Revisions
- FHWA 23CFR650 - Subpart C – National Bridge Inspection Standards (“NBIS”)
- AASHTO LRFD Bridge Construction Specifications, 4th Edition, 2017
- AASHTO Manual for Bridge Element Inspection, 1st Edition, with 2015 Interim Revisions
- AASHTO Guide Specifications for Wind Loads on Bridges During Construction, 2017
- VDOT Traffic and Ancillary Structures Inventory & Inspection Manual, 2021
- American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, Current Edition

### Drainage

- VDOT 2002 Drainage Manual (including current Errata Sheets) and revisions (Revised 01/2021)
- Virginia Stormwater Management Handbook, Volume I & Volume II, (First Edition – 1999), Virginia Department of Conservation and Recreation
- 2013 Virginia Stormwater Management Handbook, Second Edition, (Draft)
- 2013 BMP Standards and Specifications (Draft)
- Virginia Erosion and Sediment Control Handbook (Third Edition – 1992), Department of Conservation and Recreation
- FHWA Hydraulic Engineering Circular Number 21 (HEC-21), Design of Bridge Deck Drainage Systems, 1993
- FHWA Hydraulic Engineering Circular Number 22 (HEC-22), Urban Drainage Design Manual, 2009, Revised August 2013
- FHWA Culvert Inspection Manual, 1986
- Virginia, Erosion and Sediment Control Law and Regulations, FY 2009
- FEMA National Flood Insurance Program Regulations
- US Army COE, River Analysis System (HEC RAS), Version 4.1
- The Virginia SWM Law dated 2015(as listed in the Code of Virginia)
- The Virginia SWM Regulations dated 2015 (as listed in the Virginia Administrative Code)

### Traffic Control Devices

- USDOT FHWA Standard Highway Signs, 2004 Edition and 2012 Supplement
- 2009 Manual of Uniform Traffic Control Devices (MUTCD), Revisions 1 and 2 (May 2012) and 2011 Virginia Supplement to MUTCD, Revision 1 (September 2013)
- National Fire Protection Association NEC Standards, 2008
- Virginia Standard Highway Signs, 2011 Edition
- Virginia Standard Highway Signs, Revision 1, January 2015
- Traffic Operations and Safety Analysis Manual (TOSAM), Version 1.0, February 2020
- VDOT Guardrail Installation Training Manual (GRIT), Revised August 2019

- Virginia Work Area Protection Manual 2011 Edition, Revision 2.1 (November 1, 2020)

### Instrumentation, Controls and Automation

- American National Standards Institute (ANSI) / International Society of Automation (ISA) Standards
  - ANSI/ISA-101-2015 Human Machine Interfaces for Process Automation Systems (referred to as ISA-101)
  - ISA-112 (working draft version), SCADA Systems
  - ANSI/ISA-62381-2011 (IEC-62381 Modified), Automation Systems in the Process Industry – Factory Acceptance Test (FAT), Site Acceptance Test (SAT), and Site Integration Test (SIT) (referred to as ISA-62381)
  - ANSI/ISA-18.2-2009, Management of Alarm Systems for the Process Industries
  - ANSI/ISA-62443-1-1 (99.01.01)-2007, Security for industrial automation and control systems Part 1: Terminology, concepts, and models (referred to as ISA-99.01)
  - ANSI/ISA-62443-2-1 (99.02.01)-2009, Security for industrial automation and control systems: Establishing an industrial automation and control systems security program (referred to as ISA-99.02)
  - ANSI/ISA-62443-3-3 (99.03.03)-2013, Security for industrial automation and control systems Part 3-3: System security requirements and security levels (referred to as ISA-99.03)
- National Fire Protection Agency
  - NFPA 70 – National Electrical Code, 2014
  - NFPA 70E – Standard for Electrical Safety in the Workplace, 2015
  - NFPA 72 - National Fire Alarm and Signaling Code
  - NFPA 130 - Standard for Fixed Guideway Transit and Passenger Rail Systems
- American National Standards Institute (ANSI) / Telecommunications Industry Association (TIA) / Electronic Industries Association (EIA)
  - ANSI/TIA/EIA-568-B Commercial Building Telecommunications Cabling Standards.
  - TIA-568C: Generic Telecommunications Cabling for Customer Premises.
  - TIA/EIA 598-C: Optical Fiber Cable Color Coding.
  - TIA/EIA 606-A: Administration Standard for Commercial Telecommunications Infrastructure
- AREMA Communication and Signals Manual (AREMA C&S) of recommended practices
- IEEE 1100: IEEE Recommended Practice for Powering and Grounding Electronic Equipment
- ANSI/BICSI Telecommunications Distribution Methods Manual
- EN 50122-1: Railway Applications, Fixed Installations – Protective Provisions Relating to Electrical Safety and Grounding
- Electronic/Telecommunications Industries Association (EIA/TIA) Standards
  - ANSI/TIA-568-C
  - ANSI/TIA-569-A
  - ANSI/TIA-607-B
  - ANSI/TIA-606-B
  - ANSI/TIA-1005 Generic Telecommunication Standards

## **Technical Specifications Deliverables**

- Technical Specification Matrix

## Task 8: Public Outreach

The Consultant shall coordinate the public outreach strategy with VPRA External Affairs and Communication department prior to undertaking activities to ensure consistent messaging. The Consultant shall follow guidance established in the VPRA Project Communications and Public Engagement Manual, in addition to prevailing state and local legal requirements for public information:

- VPRA Project Communications and Public Engagement Manual – Consultant should request from VPRA.
- VDOT Public Involvement Manual, Location and Design Division – [https://www.virginiadot.org/business/resources/LocDes/Public\\_Involvement\\_Manual.pdf](https://www.virginiadot.org/business/resources/LocDes/Public_Involvement_Manual.pdf)

### 8.1 PUBLIC OUTREACH

#### Public Meeting

The Consultant shall support VPRA at one (1) public meeting around the time of the 60% Engineering Design submittal. The meeting is intended to present project design plans and receive public comment. The Consultant shall follow guidance provided in the *VPRA Project Communications and Public Engagement Manual* and the *VDOT Public Involvement Manual, Location and Design Division*. VPRA shall secure meeting locations and send out notifications for the public to attend. The Consultant shall provide the materials for the public meeting and outreach. The public meeting format may include display boards, presentations, and informal discussions between project team members and meeting attendees. Information packets containing meeting handouts/fact sheets, maps, and/or comment forms prepared by the Consultant will be available to meeting participants. The Consultant shall apply VPRA Brand Standards on all outreach material.

The Consultant will support VPRA to publicize all public meetings by supplying the materials needed. VPRA will utilize the Project website, newspaper advertisements, press releases, email lists, local distribution of meeting flyers (nearby public facilities, community groups), and/or social media to publicize all public meetings. The public meetings will be accessible to persons with disabilities and persons with Limited English Proficiency (LEP). Special services, such as an interpreter or sign language services, will be made available upon request. VPRA's public notices announcing these meetings will provide instructions for requesting these services. The Consultant will be responsible for providing project- and event-specific content to VPRA to be incorporated into promotional materials for the meetings.

The Consultant shall follow guidelines for Title VI and Environmental Justice Public Involvement as described in the *VPRA Project Communications and Public Engagement Manual*. The Consultant shall determine whether 5% or 1,000 persons, whichever is less, of the total population within ¼-mile of the project limits identify as a LEP language group. If so, the Consultant will work with VPRA to translate key public outreach material for the identified language(s).

The Consultant shall summarize all questions and comments received during the public meetings for the record in public meeting reports. All written comments, including correspondence and comment sheets, shall be scanned and filed in accordance with the Project's procedures for record filing as defined in the PWP.

#### Public Outreach Deliverables

- Contact Information of In-Person Meeting Attendees

- Public Meeting Materials
- Public Meeting Comment Summary

# Appendix A – Slate Hill Tunnel 30% PE Design Plans

*The material contained within this Appendix contains confidential information and will be made available to Offerors upon execution of VPRA's Confidentiality and Non-Disclosure Agreement ("NDA"). To request the NDA, please contact Slade Greenway at [procurement@vpra.virginia.gov](mailto:procurement@vpra.virginia.gov).*

*VPRA reserves the right to refuse to enter an NDA and to deny access to confidential information to any party, who in VPRA's sole discretion, does not have a legitimate business interest in the material.*

# Appendix B – Merrimac Tunnel 30% PE Design Plans

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# Appendix C – Cinnabar Road Layover Station 30% PE Design Plans

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# Appendix D – Cinnabar Road Station and Station Infrastructure 30% PE Design Plans

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# Appendix E – New River Valley Station 30% PE Design Plans

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# Appendix F – Recommendations for Supplemental Work for Final Design

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# Appendix G – Slate Hill Geotech Report

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# Appendix H – Merrimac Geotech Report

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# Appendix I – Basis of Design

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# Appendix J – Construction Cost Estimate

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# Appendix K – Construction Schedule

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# Appendix L – Drainage and SWM Report

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# Appendix M – Project Work Plan (PWP)

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# Appendix N – Risk Register Matrix

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# Appendix O – Right-of-Way (ROW) Matrix

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# Appendix P – Slate Hill Tunnel Safety Improvements (TSI) Report

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# Appendix Q – Merrimac Tunnel Safety Improvements (TSI) Report

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# Appendix R – Amtrak Layover Facility - Review Drawing

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# Appendix S – NRV Layover Facility and Cinnabar Platform Geotech Report

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# Appendix T – NRV Platform and Track Improvements Geotech Report

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**EXHIBIT 2**  
**GENERAL TERMS AND CONDITIONS**  
**(FORM PD 100)**

[attached]



## GENERAL TERMS AND CONDITIONS

The following general terms and conditions shall govern the RFP and any contract that is awarded in connection with the RFP. Each of VPRA and Consultant are referred to herein, individually, as a "Party" and, collectively, as the "Parties." Capitalized terms shall have the meaning set forth herein or elsewhere in the RFP Documents and/or Contract Documents. Terms required by state law or policy are not subject to negotiation or modification.

### 1. NATURE OF RELATIONSHIP

Consultant shall be acting as an independent contractor. Neither Consultant nor employees of Consultant are employees of VPRA under the meaning or application of any federal or state unemployment or insurance laws or workers' compensation laws, or otherwise. Consultant shall assume all liabilities or obligations imposed by any one or more of such laws with respect to employees of Consultant in the performance of this Contract. Consultant shall not have any authority to assume or create any obligation, express or implied, on behalf of VPRA, and Consultant shall have no authority to represent itself as an agent, employee, or in any other capacity of VPRA. Any Consultant employee who is assigned a VPRA email account shall identify the name of the firm under which they are employed in the signature block and shall clearly indicate that they are not employees of VPRA. In addition, while attending any meetings for assignments under this Contract, Consultant employee(s) shall introduce themselves as a Consultant to VPRA while also noting the name of the company they are employed with. For the avoidance of doubt, in no instance, shall Consultant employee(s) identify themselves as employees of VPRA.

### 2. STANDARD OF CARE

Consultant shall perform all services under this Contract in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline and, in the case of projects using federal funds, consistent with the standards of the federal funding partner (e.g., Federal Railroad Administration (FRA), Federal Transit Administration (FTA), etc.). Consultant warrants and represents that it is skilled in the professional calling necessary to perform the Contract services and that all employees and subconsultants, if any, shall have sufficient skill and experience to perform the services assigned to them. By delivery of completed Work, Consultant certifies that the Work conforms to the requirements of this Contract; all applicable federal, state and local laws; and the professional standard of care. All services shall be subject to the approval of VPRA through its designated representatives.

### 3. CONSULTANT'S MANAGEMENT OF THE WORK

Consultant shall be responsible for completely supervising and directing the work under this Contract and all subcontractors that it may utilize with the prior written consent of VPRA, using its best skill and attention. Subcontractors who perform Work under this Contract shall be responsible to the Consultant, and Consultant agrees that it is as fully responsible for the acts and omissions of its subcontractors as it is for the acts and omissions of its own employees. The control and supervision of all phases of the services provided by Consultant shall be under the direction of a Project/Contracts Manager. The Project/Contracts Manager shall manage the services provided under this Contract until all services have been completed and shall keep VPRA informed on a regular basis regarding the status and progress of the Contract services.

### 4. QUALIFICATIONS OF STAFF

A competent staff, adequate in number and experience to perform the described services in the prescribed time, shall be assigned at all times. Job duties and responsibilities of key personnel shall not be delegated to others for the duration of the Contract. If the services covered by this Contract include the practice of architecture, professional engineering, land surveying or certified landscape architecture, Consultant or subcontractor shall have in responsible charge at each place of business a full-time resident Virginia licensed architect, professional engineer, land surveyor or certified landscape architect exercising supervision and control of the services of each profession being practiced. Any personnel or subconsultant,

if any, who fail or refuse to perform the Contract services in a manner acceptable to VPRA, or who are determined by VPRA, in its sole discretion, to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, or a threat to the safety of persons or property, shall be promptly removed from the Project by Consultant at the request of VPRA. Consultant warrants that it will continuously furnish the necessary personnel to complete the services on a timely basis as contemplated by the Contract.

## **5. CHANGES IN STAFF**

Consultant shall not change or substitute any key personnel including those identified in Consultant's proposal except due to voluntary or involuntary termination of employment, retirement, death, disability, incapacity, or as otherwise approved by VPRA. Unauthorized changes to Consultant's team at any time during the Contract may result in termination of services. If extenuating circumstances as listed above require a change, the Consultant shall submit in writing to VPRA's Project Manager, who, in his/her sole discretion, will determine whether to authorize a change, with it being understood and agreed that Consultant will provide VPRA at least thirty (30) days written notice of any request wherever practical. VPRA will have the right to review the qualifications of each individual proposed as a replacement and to approve or disapprove such individual prior to the commencement of any work by such individual. The individual proposed as a replacement shall be equally or more qualified than the key personnel that is being replaced. Consultant acknowledges that the discretionary reassignment of a key personnel to another project of Consultant is not considered extenuating circumstance and will not be permitted.

## **6. INSURANCE**

Consultant shall furnish VPRA with certificates evidencing insurance as specified in the Insurance Requirements provision within RFP Documents on or before the Effective Date of the Contract and prior to beginning any work on the Project. Consultant agrees to maintain all required insurance coverages throughout the life of this Contract and to furnish certificates of coverage upon each renewal. In the event of a non-renewal or cancellation of such required insurance coverage, thirty (30) days written notice must be given to VPRA prior to such non-renewal or cancellation. Should a claim or other legal action be filed against VPRA, and if VPRA in its good faith opinion, believes it may have coverage under any of the insurance required herein, then VPRA has the right to demand, and to receive within a reasonable time period, copies of the insurance policies related to such required insurance without regard to whether Consultant has agreed to fully defend, hold harmless, and indemnify VPRA against any such claim or other legal action. In the event Consultant hires other persons or firms to perform some of the work related to this Contract, Consultant shall ensure, and certify to VPRA in writing that: (i) the acts or omissions of such persons or firms are covered under the above-referenced liability insurance; or (ii) such firms maintain insurance equal to or better than, and subject to the same limits, terms and conditions as, the insurance required of Consultant under this Contract (except for firms which, by the nature of their work, are not be required to carry professional liability insurance); and in either instance, Consultant shall provide, or cause to be provided, evidence of such insurance coverage, reasonably acceptable to VPRA.

## **7. OPERATING AUTHORITY AND CREDENTIALS OF VEHICLES**

Wherever and whenever during the course of performing any Work under this Contract, Consultant will ensure that all vehicles utilized to accomplish the terms of the Contract are properly titled, registered, plated and have the required operating authority and credentials in accord with the *Code of Virginia*.

## **8. DELIVERABLES**

Consultant shall deliver to VPRA the studies, plans, reports, specifications, or other documents and/or materials as are identified in the Scope of Work and as may be more particularly described in any Work Plan or Task Order (the "Deliverables"); and Consultant shall, upon completion of the Work, submit to VPRA all information developed in the course of the Consultant's services. Where applicable, Consultant shall endorse, as required by law, plans and reports prepared under this Contract, and shall affix thereto his or her seal of professional registration, showing that he or she is licensed to practice in the Commonwealth of Virginia. Consultant shall, upon request by VPRA and upon completion or termination of this Contract, deliver to VPRA all material furnished to Consultant by VPRA. Except as provided for herein or otherwise agreed in writing by the Parties, each and every report, draft, work product, map, record, and other

document reproduced, prepared, or caused to be prepared by the Consultant pursuant to or in connection with this Contract shall be the exclusive property of VPRA.

## **9. CORRECTION OF ERRORS**

Consultant shall check for accuracy any reports, and the design, drafting and details of final plans prior to submission. Consultant will be required, without additional compensation, to correct any errors, including but not limited to omissions, discrepancies and ambiguities, in any services performed in fulfillment of the obligations of this Contract, and shall also reimburse VPRA for any costs incurred. Acceptance of the plans or reports by VPRA shall not relieve Consultant of the responsibility of subsequent correction of errors. Costs incurred by the Consultant in correcting errors in the plans or reports and reimbursing VPRA for costs incurred by VPRA as a result of such error shall be maintained in a separate account. Such account shall be clearly coded and identified, and shall be subject to audit by VPRA. Such costs shall not be billed to VPRA as a direct charge or an overhead item.

## **10. CHANGES TO THE CONTRACT**

VPRA may, at any time, by written order, make any changes in this Contract which either increase or decrease the services hereunder. If such change causes an increase or decrease in the cost of or the time required for performance of this Contract, an equitable increase or decrease in consideration may be made and this Contract shall be modified in writing between VPRA and Consultant. Such written Contract modification shall set forth the proposed changes in services, extension of time for completion and adjustment of the compensation, including net fee, to be paid to Consultant, if any. If the Parties fail to agree upon the adjustment to be made, the Dispute shall be determined as provided in this Contract, but nothing in this section shall excuse Consultant from promptly and diligently proceeding with the prosecution of the services so changed.

## **11. CONTINGENCY FUND**

On Contracts containing a contingency fund, the contingency fund shall not be used without written permission of VPRA. The additional services compensated by application of the contingency fund shall not begin until an agreement has been reached between the Parties with regarding the man-hours and costs required to perform such additional services. If any such additional services are provided prior to an agreement being reached between the parties regarding man-hours and costs, only those man-hours and costs determined to be necessary and reasonable by VPRA will be reimbursed.

## **12. INVOICING; PERIODIC PAYMENTS**

Invoices for services rendered or scheduled shall be submitted by Consultant directly to [accountspayable@vpva.virginia.gov](mailto:accountspayable@vpva.virginia.gov). In the event Consultant is unable to email, invoices shall be mailed to 919 E. Main Street, 24<sup>th</sup> Floor, Richmond, VA 23219, Attn: Accounts Payable Department. Periodic payment of Consultant's invoices will be made within thirty (30) days of receipt by VPRA, subject to adjustment as set forth herein. All invoices shall show the VPRA Contract number, purchase order number, and federal employer identification number for Consultant's firm. Additionally, Consultant's invoices shall include the name of the person who performed the work, a brief description of the services performed and/or the specific task in the Scope of Work to which it relates, the date the services were performed, the number of hours spent on all work billed on an hourly basis, and a description of any reimbursable expenditures. Consultant may submit invoices for progress payments no more than once each month and no less than once each calendar quarter for Work performed during such period. VPRA, in its sole discretion, may reject and refuse payment on any invoice that includes charges for Work performed more than 180 days prior to the invoice date. VPRA reserves the right to audit and refuse to process payment should there be findings associated with excessive hours to perform the required task or an excessive number of persons utilized to complete the necessary task.

## **13. FINAL ACCEPTANCE AND FINAL PAYMENT**

Upon receipt of a written notice from Consultant of completion of the services, VPRA will make a review to determine if all Work specified in the Contract has been satisfactorily completed in accordance with the

Contract Documents and applicable standards. If all services have been satisfactorily completed, VPRA will make final acceptance and provide written notification of same to Consultant. If the review discloses that any services, in whole or in part, are not in conformance with the Contract Documents and applicable standards, Consultant shall immediately correct the deficiency. Upon notification of completion or correction of the Work by Consultant, another review will be made that will constitute the final review. In such event, provided the services are in conformance with the Contract Documents and applicable standards, VPRA will make the final acceptance and provide notification to Consultant.

When final acceptance has been duly made by VPRA, Consultant shall submit a final estimate invoice. Upon review and approval of the final estimate invoice by VPRA, Consultant will be paid the entire sum due after previous payments are deducted and other amounts are retained or deducted under the provisions of the Contract. Final payment will become due and the final estimate paid within thirty (30) calendar days after approval of the final estimate invoice. VPRA will notify Consultant in writing when the final payment is made. Payments shall be subject to correction at the time of the final audit.

#### **14. SET-OFF RIGHTS**

VPRA shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, VPRA's option to withhold for the purposes of set-off any moneys due to Consultant under this Contract up to any amounts due and owing to VPRA with regard to this Contract, plus any amounts due and owing to the Commonwealth for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto.

#### **15. AVAILABILITY OF FUNDS; APPROPRIATION**

This Contract is contingent upon and subject to the availability and appropriation of sufficient state and/or federal funds. A failure by the Parties to perform any condition on its part to be performed under this Contract as a result of the failure of the General Assembly to appropriate sufficient funds, or the applicable oversight board or funding partner (e.g., FRA, FTA, etc.) to allocate sufficient funds, shall not in any manner constitute a breach or default by the Parties.

#### **16. PROMPT PAYMENT OF SUBCONTRACTORS**

Consultant is required to pay its subcontractors performing work related to this Contract for satisfactory performance of that work no later than thirty (30) calendar days after Consultant's receipt of payment for that work from VPRA. VPRA does not require retainage to be withheld by Consultant on any subcontracts. If Consultant elects to withhold retainage on subcontracts, Consultant agrees to pay subcontractors all undisputed retainage payments within thirty (30) calendar days of completion of the work, regardless of whether Consultant has received any retainage payment from VPRA. VPRA will notify Consultant and the subcontractor in writing when the services have been satisfactorily accepted. If retainage is not promptly paid, Consultant shall notify VPRA and the subcontractor in writing as to the reasons for not making payment. Consultant shall keep all property of VPRA and such property belonging to any third party which is managed, leased or operated by VPRA, free from all liens arising from services to be furnished in connection with this Contract. VPRA may, as a condition of final payment, require Consultant to submit an affidavit stating that all subcontractors and suppliers, if any, have been paid in full for any goods and/or services provided in connection with this Contract.

#### **17. TAX EXEMPT STATUS**

VPRA is exempt from state sales and use tax and federal excise tax. Consultant shall not include in the invoice any taxes imposed by any taxing authority of the state in which the Project is located, or any political subdivision thereof, upon the sale or use of the Work covered by this Contract. Any such sales or use tax, if applicable, shall be paid by Consultant. Consultant shall prepay all freight and transportation charges to the F.O.B point of delivery and such freight charges shall be stated separately, as requested from the sales price of material, so as not to impose any tax upon VPRA. Tax exemption certification shall be furnished to Consultant upon request.

## 18. SUSPENSION OF WORK

VPRA may, at its sole discretion, suspend any of the Work when determined to be in its best interest to do so. After receiving a suspension notice, Consultant must comply with the notice and cease performance of all Work under the Contract. Suspension of work will not entitle Consultant to any additional compensation. Consultant shall not resume Work unless and until so authorized by VPRA.

## 19. TERMINATION

### 19.1 Termination for Convenience

VPRA may cancel this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant. Reasons for such termination shall be left to the sole discretion of VPRA. Upon termination, Consultant will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed up to and including the effective date of termination.

### 19.2 Termination for Insufficient Funding

VPRA may immediately terminate this contract if the General Assembly fails to appropriate, or the applicable oversight board (i.e., the VPRA board of directors and/or the Commonwealth Transportation Board, depending on the funding source) fails to allocate, sufficient funds to continue the services, or if VPRA fails to receive funding anticipated from any other funding source. VPRA is not obligated to pay for any services that are provided after notice and effective date of termination. However, Consultant will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed up to and including the effective date of termination.

### 19.3 Termination for Cause

VPRA may, in its sole and absolute discretion, by written notice of default to Consultant, terminate all or any part of this Contract if (a) Consultant fails to perform the Work described herein, within the time specified herein or any extension hereof; (b) Consultant fails to satisfy any of the other provisions of this Contract, or so fails to make progress as to endanger performance of this Contract in accordance with its terms; (c) Consultant is or becomes insolvent or unable to pay its debts as they become due; (d) any bankruptcy or insolvency proceeding is commenced by or against Consultant; or (e) application is made for appointment of a receiver or custodian for the Consultant or any of Consultant's properties, or for an assignment for the benefit of Consultant's creditors, and in any of these above-described circumstances, does not cure such failure within a period of ten (10) days (or such longer period as VPRA may in its sole discretion authorize in a writing signed by VPRA) after receipt of notice from VPRA specifying such failure. Any termination by VPRA shall be without prejudice to any claims for damages or other rights of VPRA against Consultant. In the event of termination for cause, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by Consultant pursuant to this Contract shall, at the option of VPRA, be turned over to VPRA and become the property of VPRA.

### 19.4 Termination Necessitated by Standard

Consultant may, at any point, immediately terminate the Contract whenever it determines that the required services would be in violation of law or industry standard. In such instance, Consultant shall provide written notice to VPRA and include the specific law or industry standard that forms the basis for Consultant's determination that it is required to suspend work or terminate the Contract. Upon such termination by Consultant, VPRA shall only be obligated to compensate Consultant for services satisfactorily rendered through the date of termination.

## 20. EXAMINATION AND AUDIT; RETENTION OF RECORDS

Consultant agrees that VPRA or its designated representative (provided they have executed a

confidentiality/non-disclosure agreement with Consultant) shall have the right to review, photograph, and copy any records and supporting documentation pertaining to performance of this Contract. Consultant agrees to maintain such records for possible audit for a minimum of three (3) years after final payment, unless a longer period of records retention is stipulated. Consultant agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees or others who might reasonably have information related to such records. Further, Consultant agrees to include a similar right of VPRA to audit records and interview staff in any subcontract related to performance of this Contract. It shall be Consultant's responsibility to notify VPRA, in writing, of the completion of that subcontractor's portion of the services so that the records of the subcontractor can be audited within the three (3) year retention period. Failure to do so may result in Consultant's liability for any costs not supported by the proper documentation for the subcontractor's phase of the services. Any overcharges determined as a result of an audit shall be set off against any future invoices of the Consultant, if work is ongoing, or invoiced to Consultant in the event final payment has already been tendered. Invoices for overcharges shall be deemed a debt due VPRA and the Commonwealth and shall be due and payable by Consultant within thirty (30) days of the date of the invoice.

## **21. DISPUTE RESOLUTION**

Upon the occurrence of any Dispute that is not otherwise resolved by the Parties: (a) the Parties must first use all reasonable efforts to resolve the Dispute through a senior representative (b) if the Parties fail to achieve a resolution through a Senior Representative Negotiation, before either Party may institute legal action against the other in connection with the Dispute, the Parties must first attempt to resolve the Dispute by referring the matter to a Mediation. For purposes of this Section 21, "Dispute" shall be defined as "any claim, disagreement or controversy between the Parties concerning their respective rights and obligations under this Contract."

### **21.1 Senior Representative Negotiations**

If either Party notifies the other Party of a Dispute, senior representatives of each Party (with authority to make decisions for the respective Parties) must meet and use all reasonable efforts to resolve the Dispute ("Senior Representative Negotiations"). The Senior Representative Negotiation must commence within thirty (30) days of receipt of notification from a Party initiating a Dispute and will not exceed sixty (60) consecutive days once commenced (or such longer period agreed by the Parties, with such period of negotiation being the "Senior Representative Negotiations Period"). Statements, materials and information prepared for, made or presented at, or otherwise derived from a Senior Representative Negotiation (including any meeting of the senior representatives) are privileged and confidential and may not be used as evidence in any proceedings. If the Senior Representative Negotiation resolves the Dispute, the Parties must record the resolution in writing.

### **21.2 Mediation**

If the Parties are unable to come to a resolution through Senior Representative Negotiations during the Senior Representative Negotiations Period, then either Party may submit such Dispute to mediation proceedings (a "Mediation"). Mediation is intended to assist the Parties in resolving Disputes over the correct interpretation of this Contract.

21.2.1 The mediator must be selected by mutual agreement of the Parties or, if an agreement cannot be reached by the Parties within seven (7) Business Days of submission of the Dispute to Mediation, the mediator will be selected by the American Arbitration Association ("AAA") in accordance with its Commercial Industry Mediation Rules and Procedures then in effect. Any mediator selected by mutual agreement of the Parties or through the AAA selection process must have no current or ongoing relationship with either Party (or an Affiliate of either Party). The Parties agree that only one (1) mediator shall be selected as the AAA mediator.

21.2.2 Each Mediation must: (a) be administered in accordance with AAA's Commercial Industry Mediation Rules and Procedures then in effect; (b) be held in Richmond,

Virginia, unless the Parties mutually agree, in writing, to the Mediation being held in a different location; (c) be concluded within sixty (60) days of the date of selection of the mediator, or within such other time period as may be agreed by the Parties (acting reasonably having regard to the nature of the Dispute). The Parties shall share the mediator's fee and any filing or administrative fees equally. No mediator will be empowered to render a binding decision as to any Dispute. Any Mediation will be nonbinding.

## **22. FORUM AND VENUE**

Any and all Disputes arising out of or in connection with this Contract, or any performances made hereunder that are not otherwise resolved through Senior Representative Negotiations or Mediation, shall be brought, and any judicial proceeding shall take place, only in the Circuit Court of the City of Richmond, Virginia or the United States District Court for the Eastern District of Virginia, Richmond Division. The Consultant accepts the personal jurisdiction of such court and waives all jurisdiction and venue-related defenses to the maintenance of such actions.

## **23. GOVERNING LAW**

The validity, performance, and construction of the solicitation and this Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, without reference to its choice of law provisions. No doctrine of choice of law shall be used to apply any law other than that of the Commonwealth of Virginia, and no defense, counterclaim or right of set-off given or allowed by the laws of any other state or jurisdiction, or arising out of the enactment, modification or repeal of any law, regulation, ordinance or decree of any foreign jurisdiction, be interposed in any action hereon.

## **24. NOTICES**

Any notice required pursuant to the Contract shall be in writing and sent by registered or certified mail, return receipt requested, or by courier, express or overnight delivery, and by confirmed e-mail at the addresses of the Point of Contact designated by the Parties. In the event of notice to VPRA, a copy shall also be contemporaneously transmitted to its General Counsel. The date such notice shall be deemed to have been given shall be the Business Day of receipt if received during business hours, the first Business Day after the Business Day of receipt if received after business hours on the preceding Business Day, the first Business Day after the date sent by courier, express or overnight ("next day delivery") service, or the third Business Day after the date of the postmark on the envelope if mailed, whichever occurs first. As used herein, "Business Day" shall mean that day that is neither a Saturday, a Sunday nor a day observed as a legal holiday by the Commonwealth of Virginia or the United States Government.

## **25. COMPLIANCE WITH ALL LAWS AND REGULATIONS**

Consultant shall comply with the applicable provisions of all federal, state, or local laws or ordinances and all related lawful orders, rules, and regulations, as well as any provisions, representations, or agreements, or contractual clauses required to be included or incorporated by reference or operation of law in the Contract. Consultant shall keep fully informed of all federal, state, and local laws, ordinances, and regulations, and all orders, decrees, and guidance of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on this Contract, or which in any way affect the conduct of the services provided by Consultant. If any discrepancy or inconsistency is discovered between this Contract and any such law, ordinance, regulation, order, or decree, Consultant shall immediately report the same to VPRA in writing. To the extent required for the Work, Consultant shall secure and obtain any and all permits, licenses, and consents as may be necessary.

## **26. AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH**

A consultant organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the *Code Virginia* or as otherwise required by law. Any business entity described above that enters

into a contract with VPRA shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provision of this section.

## **27. NON-DISCRIMINATION PROVISION**

The Consultant shall comply with the provisions of the Virginians with Disabilities Act, Sections 51.5-40 through 51.5-46 of the Code of Virginia (1950); Further, pursuant to Va. Code § 2.2-4201, in every Contract over \$10,000 the provisions in A. and B. below apply:

A. During the performance of the Contract, Consultant agrees as follows:

1. Consultant will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of Consultant. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
2. Consultant, in all solicitations or advertisements for employees placed by or on behalf of Consultant, will state that Consultant is an equal opportunity employer. However, notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements.
3. If Consultant employs more than five employees, Consultant shall (i) provide annual training on Consultant's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post Consultant's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that Consultant owns or leases for business purposes and (b) Consultant's employee handbook.
4. The requirements of these provisions A. and B. are a material part of the Contract. If Consultant violates one of these provisions, VPRA may terminate the affected part of the Contract for breach, or at its option, the whole Contract. Violation of one of these provisions may also result in debarment from State contracting regardless of whether the specific contract is terminated.

B. Consultant will include the provisions of subdivisions 1-3 above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or supplier.

## **28. IMMIGRATION REFORM AND CONTROL ACT OF 1986**

By signing this Contract, Consultant certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

## **29. DRUG FREE WORKPLACE**

Consultant acknowledges and certifies that they understand that the following acts by Consultant, its employees, and/or agents performing services on state property are prohibited: The unlawful manufacture, distribution, dispensing, possession or use of alcohol or other drugs; and any impairment or incapacitation from the use of alcohol or other drugs (except the use of drugs for legitimate medical purposes). Consultant further acknowledges and certifies that they understand that a violation of these prohibitions constitutes breach of contract and may result in default action being taken by VPRA in addition to any criminal penalties that may result from such conduct. During the performance of this Contract, Consultant agrees to provide a drug-free workplace for Consultant's employees.



### **30. OCCUPATIONAL SAFETY AND HEALTH STANDARDS**

Consultant shall not require any individual employed in the performance of this Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health or safety as determined under the Occupational Safety and Health Standards promulgated by the United States Secretary of Labor. This provision shall be made a condition of any subcontract entered into pursuant to this Contract. In addition, Consultant shall abide by the Virginia Occupational Safety and Health Standards adopted under Section 40.1-22 of the Code of Virginia (1950), as amended, and will fulfill the duties imposed under Section 40.1-51.1 of the Code of Virginia. Any violation of the aforementioned requirements or duties which is brought to the attention of Consultant by any person shall be immediately abated.

### **31. CRITICAL INFRASTRUCTURE INFORMATION/SENSITIVE SECURITY INFORMATION (CII/SSI)**

The required services may involve the handling of Critical Infrastructure Information/Sensitive Security Information (CII/SSI) material. Firm(s) handling CII/SSI material will be required to sign non-disclosure agreements. Individuals with the firm(s) that handle CII/SSI material will be required to sign non-disclosure agreements. Once negotiations have been completed and prior to executing a contract, personnel handling CII/SSI material, visiting Critical Infrastructure (CI) facilities or performing bridge/tunnel inspections may be required to pass a fingerprint-based Criminal History Background Check (CHBC). An individual employee's failure to successfully pass the fingerprint-based CHBC will not negate the selection and offerors will be allowed to replace those individuals. However, if key personnel fail the fingerprint-based CHBC, the selection may be cancelled and negotiations begun with the next ranked offeror. VPRA reserves the right to conduct fingerprint-based CHBC on all employees of Consultant, on any employees of sub-consultants or on any proposed replacements during the term of the Contract who will be involved in this Project. All costs associated with the fingerprint-based CHBC are the responsibility of Consultant. A VPRA issued photo-identification badge is required for each employee of Consultant or any sub-consultant who will need access to VPRA CI facilities or who will be performing bridge/tunnel inspections. Based upon the results of the fingerprint-based CHBC, VPRA reserves the right to deny issuance of a VPRA security clearance or a VPRA issued photo-identification badge.

### **32. CONFIDENTIALITY OF PERSONALLY IDENTIFIABLE INFORMATION**

Consultant assures that information and data obtained as to personal facts and circumstances related to VPRA will be collected and held confidential, during and following the term of this Contract, and unless disclosure is required pursuant to court order, subpoena or other regulatory authority, will not be divulged without VPRA's written consent and only in accordance with federal law or the Code of Virginia. Consultants who utilize, access, or store personally identifiable information as part of the performance of a contract are required to safeguard this information and immediately notify VPRA of any breach or suspected breach in the security of such information. Consultant shall allow VPRA to both participate in the investigation of incidents and exercise control over decisions regarding external reporting. Consultants, subconsultants and their respective employees working on this Contract may be required to sign a confidentiality statement.

### **33. INTELLECTUAL PROPERTY RIGHTS**

#### **33.1 Rights, Generally**

All rights in intellectual property developed or created pursuant to this Contract shall be the sole property of VPRA and deemed part of the Contract Deliverables. For purposes of this Contract, "Intellectual property" includes all inventions subject to the U.S. Patent System (including but not limited to new processes, materials, compounds and chemicals), and all creations subject to the U.S. Copyright Act of 1976 (including but not limited to printed material, software, drawings, blueprints, and compilations such as electronic databases). All copyrightable material created pursuant to this Contract shall be considered work made for hire and shall be considered part of the Contract Deliverables. Neither Party intends any copyrightable material created pursuant to this Contract, together with any other copyrightable material with which it may be combined or used, to be a "joint work" under the copyright laws. If the whole or any part of any such copyrightable material cannot be deemed work made for hire or is deemed a joint work, Consultant agrees to assign, and does hereby irrevocably

assign, its entire copyright interest therein to VPRA and shall execute and deliver such further documents as VPRA may reasonably request for the purpose of acknowledging or implementing such assignment. Consultant warrants that no individual, other than regular employees of Consultant or VPRA working within the scope of their employment, shall participate in the creation of any intellectual property pursuant to this Contract unless such individual and his or her employer, if any, have signed an intellectual property agreement satisfactory to VPRA.

### 33.2 Exceptions and Exclusions

Notwithstanding the foregoing, Consultant shall retain all right, title and interest in and to any intellectual property, technology, know-how, methodologies, works of authorship, and other materials pre-existing the Contract, created, acquired, or licensed separately from the Contract, or created in performance of the Contract but not identified as a Contract Deliverable, including any modifications, enhancements, improvements, or derivative works thereof (collectively referred to herein as, "Consultant Property"). To the extent that Consultant Property is contained in any of the Contract Deliverables, upon full and final payment, Consultant grants VPRA, under Consultant's intellectual property rights in such Consultant Property, a royalty-free, non-exclusive, non-transferable, perpetual license to use such Consultant Property solely in connection with VPRA's use of the Deliverables. Further, VPRA agrees that nothing in this Contract shall prevent Consultant from using any generalized knowledge, experience, know-how, or any of the ideas, concepts, methodologies, tools, or techniques derived from or discovered during the provision of services and that are not unique to VPRA (collectively, "Residual Knowledge") to perform similar services and develop similar work product, results, or technology as that performed or developed under the Contract. Consultant reserves the right to use, disclose, reproduce, sublicense, modify, prepare derivative works from, perform, and display its Residual Knowledge, subject to the obligations of confidentiality set forth in this Contract.

### **34. COVENANT REGARDING BROKERAGE**

Consultant warrants that it has not employed or retained any company or person to solicit or secure this Contract and that it has not paid or agreed to pay any company or person, other than subconsultants identified in this Contract or a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, VPRA shall have the right to void this Contract without liability or, at its discretion, to deduct from the Contract price or consideration, or otherwise recover, the full amount of such fee, commission, brokerage fee, gift, or contingent fee.

### **35. TESTIMONY**

In the event that the testimony of Consultant is required in any legal proceeding in connection with claims brought against or prosecuted by VPRA, Consultant agrees to appear as a witness on behalf of VPRA. Payment for appearance will be based on the approved current hourly salary rate and daily per diem rate for each eight-hour day's preparation for, or attendance in, court and one-fourth of this sum for each two hours or fraction thereof.

### **36. CONFIDENTIAL RELATIONSHIP; PUBLICITY**

Consultant shall keep in strictest confidence, and treat as proprietary all information that may be acquired in connection with, or as a result of, this Contract. During the term of the Contract and at all times thereafter, Consultant shall not, without the prior written consent of VPRA, publish, communicate, divulge, or use (except in the performance of the Contract itself) any such information unless it is in the public domain. Except as required by any applicable law, regulation or judicial process, Consultant shall not release any information concerning the Contract or disclose or use VPRA's name for purposes of advertising or soliciting business, including, but not limited to, press releases, social media posts, brochures, photographs, or verbal announcements without the prior written permission of VPRA.

### **37. STRICT LOYALTY**

Consultant acknowledges its duty of loyalty to VPRA and covenants to conduct itself in accordance with such duty. Consultant and its employees shall avoid all circumstances and actions that would place Consultant in a position of divided loyalty with respect to the obligations undertaken under this Contract.

### **38. INDEMNIFICATION**

Subject to state law or regulation (inclusive of Va. Code § 11-4.4, whenever applicable), Consultant, to the fullest extent permitted by law, shall indemnify and hold harmless the Commonwealth of Virginia, VPRA, CSX Transportation, Inc., Norfolk Southern Railway Company, and National Railroad Passenger Corporation, together with their officers, employees, and affiliates (collectively, the "VPRA Indemnitees") from suits, claims, actions, damages and costs, of every name and description arising from the Work under this Contract. This obligation shall include the cost of attorneys' fees, disbursements, costs and other expenses incurred in connection with such suits, actions or proceedings. VPRA may retain such monies from the amount otherwise due Consultant as may be necessary to satisfy any claim for damages recovered against the VPRA Indemnitees relative to the project. Acceptance of the services by VPRA shall not waive any of the rights of VPRA contained in this section nor release or absolve the Consultant from any liability, responsibility or duty contained herein.

### **39. LIMITATION OF LIABILITY**

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Contract, is limited to the amount of direct damage actually incurred. To the extent permitted by applicable law, neither Party will be liable to the other under this Contract for any indirect, incidental, special or consequential damages, or damages from loss of profits, revenue, data or use of the supplies, equipment and/or services delivered under this Contract.

### **40. FORCE MAJEURE**

A Party shall not be in default for any failure to perform any of its obligations under the Contract if such failure arises from any cause that could not have been prevented by means reasonably available to the Party and that was beyond the control of and without the fault or negligence of the Party. Such causes include but are not limited to: acts of God or of the public enemy; acts of Government in either its sovereign, legislative or contractual capacity; fire; flood; landslide; earthquake; epidemic; pandemic; quarantine restrictions; freight embargo; sabotage; or unusually severe weather. The affected Party shall, as soon as reasonably possible, give Notice to the other, including all relevant information that it has available, regarding any such actual event that is impacting or any potential event that threatens to impact the affected Party's performance of its obligations under the Contract.

### **41. ASSIGNMENT AND SUBCONTRACTING**

Any Contract awarded or any interest thereunder shall not be assigned, subcontracted, or transferred, in whole or in part, by Consultant without the prior written consent of VPRA. Consultant shall not assign any monies due or to become due to it, without the prior written consent of VPRA. No assignment shall relieve Consultant from its obligations under the Contract. This Contract shall inure to the benefit of and shall be binding upon the personal representatives and legal successors of the respective Parties hereto. Nothing contained in this Contract is intended or shall be construed to inure to the benefit of any person or entity other than the Parties hereto and their legal successors.

### **42. DUTY TO COOPERATE ON FUNDING OPPORTUNITIES**

VPRA seeks to maximize funding opportunities pertaining to its projects and the Work included in this Contract may become eligible for a grant and subject to certain requirements of a funding sponsor. Consultant agrees to work cooperatively and creatively with VPRA in connection with any grant application

submittals to VPRA's funding partners. Consultant further agrees to fully comply with any terms and conditions required as a result of VPRA's participation in a grant.

#### **43. REMEDIES CUMULATIVE**

Except as otherwise expressly provided herein, all rights, powers and privileges conferred hereunder upon the Parties hereto shall be cumulative and in addition to all other rights, powers, and remedies hereunder and those available at law or in equity. All such rights, powers, and remedies may be exercised separately or at once, and no exercise of any right, power or remedy shall be construed to be an election of remedies or shall preclude future exercise of any or all other rights, powers, and remedies granted hereunder or available at law or equity, except as provided herein.

#### **44. NO WAIVER**

Except as otherwise expressly provided herein, neither the failure of either Party to exercise any power given such Party hereunder or to insist upon strict compliance by the other Party with its obligations hereunder, nor any custom or practice of the Parties at variance with the terms hereof, shall constitute a waiver of either Party's right to demand exact compliance with the terms hereof.

#### **45. ENTIRE AGREEMENT**

This Contract contains the entire agreement of the Parties hereto with respect to the subject matter hereof, and no representations, inducements, promises or agreements, oral or otherwise, between the Parties not embodied herein or incorporated herein by reference with respect to the subject matter hereof, shall be of any force or effect. Any previous agreements or understandings among the Parties regarding the subject matter hereof are merged into and superseded by this Contract.

#### **46. AMENDMENTS**

No amendment to the Contract shall be binding on the Parties hereto unless such amendment is in writing and is executed by an authorized representative of the Party against whom enforcement of such amendment is sought.

#### **47. SOVEREIGN IMMUNITY**

VPRA, specifically and the Commonwealth of Virginia generally, neither waive nor abrogate their sovereign immunity, in part or in whole, in any manner, under any theory, hereunder. Notwithstanding the foregoing, VPRA agrees and acknowledges that the Contract constitutes a legal, valid, and binding obligation of VPRA, enforceable against VPRA in accordance with its terms, except as enforceability may be limited or otherwise affected by (i) bankruptcy, insolvency, reorganization, moratorium and other laws affecting the rights of creditors generally, (ii) principles of equity, whether considered at law or in equity, and (iii) the sovereign immunity of the Commonwealth of Virginia; provided that sovereign immunity shall not bar an action to enforce a claim based on a breach of this Contract presented in accordance with the law of the Commonwealth of Virginia.

#### **48. SEVERABILITY**

The invalidity, illegality, or unenforceability of any provision of this Contract or the occurrence of any event rendering any provision of this Contract void, shall not affect the validity or enforceability of any other provision. Any such provision shall be severed from the Contract and the remainder shall be construed and enforced as if it did not contain it.

\*\*\*END OF DOCUMENT\*\*\*

## **EXHIBIT 3**

**SPECIAL PROVISION INVOLVING PROPERTY AND FACILITIES OWNED, CONTROLLED  
OR UTILIZED BY CSX TRANSPORTATION, INC., NORFOLK SOUTHERN RAILWAY  
COMPANY, AND THE NATIONAL RAILROAD PASSENGER CORPORATION  
(SP 01 CRA)**

[attached]

**SPECIAL PROVISION INVOLVING PROPERTY AND FACILITIES  
OWNED, CONTROLLED OR UTILIZED BY  
CSX TRANSPORTATION, INC.,  
NORFOLK SOUTHERN RAILWAY COMPANY, AND  
THE NATIONAL RAILROAD PASSENGER CORPORATION**

This Special Provision shall apply to all work being undertaken by Contractor in and along property and facilities owned, controlled or utilized by CSX Transportation, Inc., Norfolk Southern Railway Company, and/or the National Railroad Passenger Corporation (collectively, the "Railroad Operators" and each a "Railroad Operator"). These terms are required pursuant to VPRA's contractual arrangements with the Railroad Operators and are not subject to negotiation or modification. In the event of a conflict between the terms and conditions of this Special Provision and any other instrument incorporated within the Contract Documents, the terms and conditions of this Special Provision shall control. Capitalized terms not defined herein shall have the meaning assigned in the Contract, and if not defined therein, the meaning recognized within industry. For reference, Contractor as used herein, may be identified elsewhere in the Contract Documents as "Design-Builder," "CM/GC Contractor," "Consultant," "Service Provider," or "Vendor".

**1. DEFINITIONS**

1.1 **"Affiliate"** means, when used to indicate a relationship with a specified Person, a Person that: (a) directly or indirectly, through one or more intermediaries has a 10% or more voting or economic interest in such specified Person or (b) controls, is controlled by or is under common control with such specified Person, and a Person is deemed to be controlled by another Person, if controlled in any manner whatsoever that results in control in fact by that other Person (or that other Person and any Person or Persons with whom that other Person is acting jointly or in concert), whether directly or indirectly and whether through share ownership, a trust, a contract, or otherwise.

1.2 **"Amtrak-Assumed Individuals"** means:

- i. an employee of Amtrak;
- ii. any person who is on an Amtrak train other than a Commonwealth-Introduced Individual;
- iii. any person other than a Commonwealth-Introduced Individual at or adjacent to a passenger station located on the rail lines used for Amtrak service who is at such passenger station for the purpose of boarding or detraining from an Amtrak train, meeting an Amtrak train, purchasing a ticket for an Amtrak train, making a reservation for an Amtrak train, or obtaining information about Amtrak service or conducting business with Amtrak (including a vendor from whom Amtrak receives compensation);
- iv. any person at or adjacent to a passenger station who is providing local transportation to or accompanying a person described in (iii) above; and
- v. any person injured or killed by the collision of a vehicle or person with an Amtrak train on or adjacent to the rail lines on which Amtrak operates, including the collision of a derailed Amtrak train or any part thereof beyond the Commonwealth's railroad right-of-way.

1.3 **"Amtrak-Assumed Property"** means:

- i. the property of any Amtrak-Assumed Individual;
- ii. any locomotive, passenger car, or any other property or equipment owned by, leased to, used by or otherwise in control, custody, or possession of Amtrak (except that Amtrak's

## SP 01 (CRA)

(Rev. 09/2023)

dispatching of trains, which trains are not otherwise in control, custody, or possession of Amtrak, by itself shall not be deemed to place such trains into Amtrak's control, custody, or possession); and

- iii. property of parties other than Amtrak and VPRA, to which damage is caused by fuel oil which is demonstrated to have spilled from an Amtrak engine and for fuel oil which is demonstrated to have spilled by Amtrak's employees, agents, or contractors (but excluding CSXT) while fueling an Amtrak Train.

1.4 **"Amtrak Trains"** means all trains operated by Amtrak as part of its intercity passenger rail service, but which excludes commuter rail service.

1.5 **"Commonwealth"** means the Commonwealth of Virginia.

1.6 **"Commonwealth-Introduced Individual"** means any employee, invitee, or agent of the Commonwealth or the Commonwealth's contractor in the course of his employment or agency, except when such employee, invitee, or agent is a fare-paying passenger of Amtrak.

1.7 **"CSXT Indemnitees"** means CSXT, any Affiliate of CSXT, and any of the officers, directors, shareholders, employees, agents, successors, or assigns of such entities.

1.8 **"Norfolk Southern Railway Indemnified Parties"** means the Norfolk Southern Railway Company, its parent company, its affiliates, and any and all of their respective officers, directors, employees, agents, affiliates, successors, and permitted assigns.

1.9 **"Person"** means any individual (including the heirs, beneficiaries, executors, legal representatives or administrators thereof), corporation, partnership, joint venture, trust, limited liability company, limited partnership, joint stock company, unincorporated association or other entity or a governmental authority, including VPRA.

## 2. RAILROAD OPERATOR INDEMNIFICATION AND INSURANCE REQUIREMENTS

Subject to applicable law, including Va. Code § 11-4.1, the following indemnity and insurance obligations shall apply to the Contract:

### 2.1 Projects Involving Property/Rights of Way Used by CSX Transportation, Inc. ("CSXT")

Where the Scope of Work involves entry or work upon "Segment 1" or "Segment 3" (as defined within the Comprehensive Rail Agreement dated March 26, 2021, ("CSXT Comprehensive Rail Agreement")), Contractor shall be required to indemnify the CSXT Indemnitees, regardless of fault, to the same extent Contractor is required to indemnify VPRA pursuant to the Contract Documents. A copy of the CSXT Comprehensive Rail Agreement is available at <https://vapassengerrailauthority.org/wp-content/uploads/2021/06/11.1.1.43-Comprehensive-Rail-Agreement-Fully-Executed-without-Exhibits-1.pdf?bcs-agent-scanner=6f5ab9a3-367c-924b-9a9a-e2794740ce2d>.

Additionally, prior to entering upon any property/right of way owned or controlled by CSXT, Contractor may be required to execute CSXT's standard Inspection Right of Entry Agreement using the CSXT Property Portal ([https://propertyportal.csx.com/pub\\_ps\\_res/ps\\_res/jsf/public/index.faces](https://propertyportal.csx.com/pub_ps_res/ps_res/jsf/public/index.faces)). CSXT shall have sole discretion on whether Contractor will be required to execute the standard Inspection Right of Entry Agreement, and if executed, Contractor's failure to comply with the standard Inspection Right of Entry Agreement may constitute a breach of the Contract.

## **2.2 Projects Involving Property/Rights of Way Used by Norfolk Southern Railway Company (“Norfolk Southern”)**

Where the Scope of Work involves entry upon the Purchased V-Line (as defined within the Comprehensive Rail Agreement dated January 10, 2022 (“NS Comprehensive Rail Agreement”)) for purposes of construction and maintenance activities, Contractor shall be required to indemnify the Norfolk Southern Railway Indemnified Parties to the same extent Contractor is required to indemnify VPRA pursuant to the Contract Documents. To the extent Contractor engages in construction and maintenance activities on the Purchased V-line, it must also be adequately insured in accordance with the requirements set forth in Exhibit K to the NS Comprehensive Rail Agreement. A copy of the NS Comprehensive Rail Agreement is available at <https://vapassengerrailauthority.org/wp-content/uploads/2022/02/Redacted-Final-Signature-NSR-Comprehensive-Rail-Agreement-Combined-Execution-Version-c.pdf?bcs-agent-scanner=a52d286c-bdbb-d647-90e8-d47eec142fd9>.

Additionally, prior to entering upon any property/right of way owned or controlled by Norfolk Southern, Contractor may be required to execute Norfolk Southern’s standard Right of Entry Agreement using the Norfolk Southern Access NS Property Portal (<http://www.nscorp.com/content/nscorp/en/real-estate/norfolk-southern-services/access-norfolk-southern-property.html>). Norfolk Southern shall have sole discretion on whether the Contractor will be required to execute the standard Right of Entry Agreement, and if executed, Contractor’s failure to comply with the standard Right of Entry Agreement may constitute a breach of the Contract. Background information (FAQs) on Norfolk Southern’s right of entry process is available at <http://www.nscorp.com/content/nscorp/en/real-estate/norfolk-southern-services/access-norfolk-southern-property/right-of-entry-faqs.html>.

## **2.3 Projects Involving Rail Lines Used by the National Railroad Passenger Corporation (“Amtrak”)**

Where the Scope of Work involves entry or work upon rail lines used in connection with the operation of Amtrak Trains, Contractor shall be obligated to indemnify and defend Amtrak for all losses or claims arising from the acts or omissions of the Contractor in the performance of the Contract whether or not Contractor is negligent and irrespective of any negligence or fault of Amtrak. Notwithstanding the foregoing, Contractor’s indemnity and duty to defend shall not extend to Amtrak-Assumed Individuals and/or Amtrak-Assumed Property.

In case a lawsuit shall at any time be brought against Amtrak asserting a liability against which Contractor or any of its subcontractors has agreed to indemnify and save harmless Amtrak, Contractor or subcontractor, at Contractor’s or subcontractor’s own cost and expense and without any cost or expense whatever to Amtrak, shall defend such suit and indemnify and save harmless Amtrak against all costs and expenses thereof and promptly pay or cause to be paid any final judgment recovered against Amtrak; provided, however, that Amtrak shall promptly upon the bringing of any such suit against it give notice to VPRA and thereafter provide all such information as may from time to time be requested by either VPRA or Contractor.

To the extent Contractor engages in construction and maintenance activities on Amtrak rail lines, it must also be adequately insured in accordance with the requirements set forth in Attachment 1 to this Special Provision

## **3. INCLUSION IN SUBCONTRACTOR AGREEMENTS**

Contractor agrees to have the foregoing terms flow down to each subcontractor agreement and lower tier subcontract issued under this Contract, modified only to identify the subcontractor that will be subject to the provisions.



**Attachment 1**  
**(Amtrak Insurance Requirements)**

**A. Liability Insurance Guidelines for Construction Projects Impacting Rail Lines**

The guidelines below are intended to provide protection for Amtrak under contracts issued by VPRA for the construction along the Amtrak rail lines:

1. Limits of Insurance

Construction Crossing Active ROW	\$10M/\$20M
Construction Adjacent to Active ROW	\$10M/\$20M
Construction Not Impacting Active ROW	\$10M/\$20M

2. Amtrak included as an additional insured

3. Contractor and its insurer waive right of recovery/subrogation against Amtrak

4. No exclusion for contractual liability to railroads

5. Cross liability of insureds and severability of interests of insureds

6. Contractor coverage is primary and non-contributory with respect to coverage carried by additional insureds

**B. Liability Insurance Guidelines for Maintenance along Rail Lines**

The guidelines below are intended to provide protection for Amtrak under contracts issued by VPRA for the maintenance of the Amtrak rail lines:

1. Limits of Insurance

Maintenance Within the ROW	\$10M/\$20M
Maintenance Outside of ROW	\$2M/\$2M

2. Amtrak included as an additional insured

3. Contractor and its insurer waive right of recovery/subrogation against Amtrak

4. No exclusion for contractual liability to railroads

5. Cross liability of insureds and severability of interests of insureds

6. Contractor coverage is primary and non-contributory with respect to coverage carried by additional insureds

**EXHIBIT 4**  
**INSURANCE REQUIREMENTS**

[attached]

## INSURANCE REQUIREMENTS

Consultant, at its sole expense, shall procure and maintain the types of insurance specified below (or cause others to procure the types and amounts of insurance specified below as appropriate) subject to any conditions noted therein. Consultant shall have its insurance broker or insurance company submit a certificate of insurance giving evidence of the relevant coverage types and amounts set forth below, prior to commencing the corresponding Work under the Contract. All required insurances shall contain a waiver of subrogation provision in favor of the Commonwealth of Virginia, Virginia Passenger Rail Authority, CSX Transportation, Inc., and National Railroad Passenger Corporation.

1. **Workers' Compensation** for all of its employees engaged in the Project as required by Chapter 8 of Title 65.2 of the *Code of Virginia* (1950), as amended.
2. **Employer's Liability Insurance** with limit of no less than \$1,000,000 per accident for bodily injury or disease.
3. **Commercial General Liability Insurance** including coverage for premises and operations, independent contractors, personal injury, and broad form contractual liability of limits of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate applicable on a per project basis. Policy must include a CG 24 17 Contractual Liability – Railroads endorsement. The Commonwealth of Virginia, Virginia Passenger Rail Authority, CSX Transportation, Inc., and National Railroad Passenger Corporation are to be named as an additional insured on a primary, non-contributory basis.
4. **Automobile Liability Insurance** with a limit of at least \$1,000,000 combined single limit for bodily injury and property damage covering all owned (if any), non-owned, hired, or borrowed vehicles on site or off. The Commonwealth of Virginia, Virginia Passenger Rail Authority, CSX Transportation, Inc., and National Railroad Passenger Corporation are to be named as an additional insured on a primary, non-contributory basis.
5. **Umbrella/Excess Liability Insurance** in excess of the underlying limits noted above for all the above mentioned policies in the amount of \$5,000,000 per occurrence and in the aggregate. Such policy(ies) shall apply without any gaps in the limits of coverages and be at least as broad as and follow the form of underlying primary coverages required herein. The Commonwealth of Virginia, Virginia Passenger Rail Authority, CSX Transportation, Inc., and National Railroad Passenger Corporation are to be named as an additional insured on a primary, non-contributory basis.
6. **Professional Liability Insurance** covering liability for acts, errors, or omissions arising in connection with professional services, for not less than \$2,000,000 with respect to any one claim and in the aggregate.
7. **Cyber Liability Insurance** with limits not less than \$2,000,000 per claim. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Consultant in this Contract and shall include, but not be limited to, claims involving infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information,

alteration of electronic information, extortion, and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties, and credit monitoring expenses with limits sufficient to respond to these obligations.

8. **Railroad Protective Liability Insurance** will be maintained on behalf of owners/operators of railway service within the Project limits (the "Railway Operators") whenever requested by the Railway Operators. The policy, which shall name the Railway Operators as covered insureds, shall be in accordance with the form prescribed by the Railway Operators and must comply with Federal Aid Policy Guide 23 CFR 646 subpart A. The limits of the policy will be set by the Railway Operators.

\*\*\*\*END OF DOCUMENT\*\*\*\*

**EXHIBIT 5**

**CONTRACT FOR CONSULTANT SERVICES  
(FORM PD 04)**

[attached]

## CONTRACT FOR CONSULTING SERVICES

Contract Id No. [insert number]

This Contract for Consulting Services ("Contract") dated this \_\_\_\_ day of \_\_\_\_\_, 202\_\_ is made and entered into between the VIRGINIA PASSENGER RAIL AUTHORITY, a political subdivision of the Commonwealth of Virginia ("VPRA") and \_\_\_\_\_, a [specify entity type (e.g., limited liability company, corporation, etc.)], organized under the laws of [specify state], and authorized to transact business in the Commonwealth of Virginia ("Consultant").

### WITNESSETH:

**WHEREAS**, pursuant to its enabling legislation (Va. Code § 33.2-287 *et seq.*), VPRA is, among other things, expressly authorized to procure goods and services and to make and enter into contracts necessary and or incidental to the performance of its duties; and

**WHEREAS**, in accordance with its Procurement Rules, VPRA issued a solicitation for the above-numbered Contract and received proposals from offerors determined to be responsive and responsible; and

**WHEREAS**, upon consideration of the evaluation criteria set forth within the RFP Documents (defined below), VPRA has determined that Consultant possesses the requisite skill, experience, ability, background, certification, and knowledge to provide the services described in this Contract and desires to retain Consultant to render services under the terms and conditions set forth in this Contract.

**NOW, THEREFORE**, for and in consideration of the mutual promises, covenants and conditions herein contained, the parties hereto agree as follows:

### ARTICLE 1

#### PROJECT TITLE/DESCRIPTION

The project or program that is the subject this Contract (the "Project" or "Program") is hereby identified as follows: New River Valley Passenger Rail Project.

**ARTICLE 2**  
**CONTRACT EXHIBITS**

The following exhibits (the “Exhibits”) are attached and hereby incorporated by reference into this Contract:

Exhibit A	Definitions
Exhibit B	Designation of Confidential/Proprietary Information (Form PD 25) [if applicable; specify “Reserved” if exhibit not needed]
Exhibit C	Scope of Work
Exhibit D	Designated Key Personnel
Exhibit E	Approved Fee Schedule (Form PD 71)
Exhibit F	General Terms and Conditions (Form PD 100)
Exhibit G	Insurance Requirements
Exhibit H	Approved Small and Diverse Business Subcontracting Plan (Form PD 60)
Exhibit I	Approved DBE Utilization Plan (Form PD 50B)
Exhibit J	Monthly Small and Diverse Business Subcontracting Utilization Report (Form PD 61)
Exhibit K	Monthly DBE Participation Report (Form PD 51)

**ARTICLE 3**  
**CONTRACT DOCUMENTS**

Each of the documents listed below (together the “Contract Documents”) is an essential part of the Contract and a requirement occurring in one is binding as though occurring in all. The Contract Documents are intended to be complementary and to comprise a complete Contract. In the event of any conflict among the Contract Documents, the order of precedence is as follows:

- (a) Change Orders;
- (b) Work Plans/Task Orders;
- (c) The Contract, including the Exhibits thereto and such other documents as may be incorporated by reference;
- (d) Consultant's Proposal dated [redacted];
- (e) Request for Proposals [specify RFP no.] dated [specify] (inclusive of all attachments, exhibits, and addendum) (collectively, the “RFP Documents”); and

(f) [list additional materials where applicable].

Notwithstanding anything to the contrary contained in the Contract Documents, in the event of any conflict between any Federal requirements and the other requirements of the Contract Documents, the Federal requirements will prevail, take precedence, and be in force over and against any such conflicting provisions.

#### **ARTICLE 4**

#### **CONTRACT REPRESENTATIVES**

The respective points of contact for the parties (each a "Contract Representative") and related contact information, including the places for delivery of notice, are as designated below:

**For VPRA:**

Virginia Passenger Rail Authority  
Attn: Oliver Thatcher, Engineering Project Senior Manager  
919 East Main Street, Suite 2400  
Richmond, VA 23219  
Phone: (804) 385-4176  
Email: [oliver.thatcher@vpra.virginia.gov](mailto:oliver.thatcher@vpra.virginia.gov)

Any notice tendered to VPRA in accordance with the Contract shall also be contemporaneously sent by electronic mail to Michael Westermann, General Counsel at: [michael.westermann@vpra.virginia.gov](mailto:michael.westermann@vpra.virginia.gov).

**For the Consultant:**

Company Name:  
Address:

Point of Contract:  
Phone:  
Email:

***EACH PARTY SHALL NOTIFY THE OTHER PARTY PROMPTLY OF ANY CHANGES IN THEIR CONTACT INFORMATION. UNLESS AND UNTIL NOTICE OF THE NEW ADDRESS OR POINT OF CONTACT IS GIVEN IN THE MANNER REQUIRED FOR NOTICE, A NOTICE TO SUCH PARTY IS SUFFICIENT IF GIVEN CONSISTENT WITH THE INFORMATION SET FORTH HEREIN.***

#### **ARTICLE 5**

#### **DEFINITIONS**

A list of acronyms and definitions used throughout the Contract Documents is set forth at Exhibit A. Unless specifically defined differently elsewhere within the Contract Documents, acronyms and capitalized terms shall have the meaning set forth in Exhibit A. Any acronym or capitalized term used in



this Contract, but not defined in Exhibit A or elsewhere in the Contract Documents, shall have the meaning generally ascribed to such terms within the engineering and design industry.

## **ARTICLE 6** **SERVICES**

Consultant shall furnish services required for the Project as outlined in the Scope of Work (“SOW”) attached at Exhibit C and as may be more particularly described in any Work Plan and/or Task Order that may be issued under the Contract (the “Work”). All such Work shall be delivered in conformance with the Contract Documents. VPRA may, in its sole discretion, elect to delete certain tasks/services set forth within the SOW and any Work Plan and/or Task Order.

Upon successful completion of the Work, VPRA may, in its sole discretion, direct Consultant to perform the final design services associated with the Work (the “Final Design Work”) at rates negotiated and agreed to by the parties. If authorized, Final Design Work will be added to the Contract through a Change Order. Any such Change Order, if issued, will include Consultant’s supplemental Small and Diverse Subcontracting Plan and DBE Utilization Plan for the Final Design Work.

No Additional Services shall be rendered by Consultant unless and until such Additional Services are first approved by written amendment to this Contract. As used herein, “Additional Services,” means any work that is determined by VPRA to be necessary for the proper completion of professional services in support of the Project, but which is not included within the SOW and which the parties did not reasonably anticipate would be necessary at time for execution of this Contract. Compensation for any authorized Additional Services shall be in accordance with the terms of the agreed Fee Schedule, inclusive of any adjustments made thereto in accordance with the terms of this Contract. For the sake of clarity, Additional Services are separate from the Final Design Work.

Consultant acknowledges and agrees that this Contract and the provision of services hereunder are nonexclusive and that VPRA may enter into similar agreements with other entities for the provision of similar services.

**ARTICLE 7**  
**KEY PERSONNEL**

Consultant's list of designated Key Personnel approved and accepted by VPRA is identified in Exhibit D. Consultant shall comply with all requirements applicable to Key Personnel as are set forth in the Contract Documents.

**ARTICLE 8**  
**TERM; COMMENCEMENT OF WORK**

The initial term of this Contract ("Initial Term") shall commence on the date this Contract is fully executed by the parties and shall continue in effect until completion of the Work, or until VPRA, in its sole discretion, determines Work must terminate as provided for in this Contract. Notwithstanding the foregoing, Consultant shall complete the Work within **228 calendar days** from issuance of the NTP.

Where a Change Order is issued for the Final Design Work, the Contract Term shall be extended by the timeframe specified in the Change Order (the "Extended Term"). A separate NTP will be issued for any Final Design Work.

Consultant shall not commence the Work or Final Design Work until such time as the Director of Procurement or his/her designee has issued an NTP to Consultant. Under no circumstances shall VPRA be liable for any services rendered unless and until the NTP has been issued. Consultant must acknowledge receipt of the NTP. In its sole discretion, VPRA may elect to issue a "Preliminary" or "Emergency" NTP.

**ARTICLE 9**  
**PAYMENT OF FEES AND COSTS**

Subject to the terms set forth in the Contract Documents, VPRA will compensate the Consultant for the Work in accordance with the Fee Schedule negotiated and agreed to by the parties and attached at Exhibit E. For any Extended Term, the Director of Procurement or designee and Consultant shall negotiate and agree upon any adjustment to the billing rates set forth in the Fee Schedule, prior to commencement of the Extended Term and as condition precedent to the NTP.

Consultant shall be compensated based on the Approved Fee Schedule, which shall be comprised of actual direct salary costs, overhead costs, and a \_\_\_% fixed amount for profit. Consultant will be

reimbursed for all eligible direct costs consistent with this Contract or as otherwise agreed by the Parties and documented in a written amendment to this Contract. Indirect cost rates shall be updated on an annual basis in accordance with the Consultant's annual accounting period and in compliance with the Federal cost principles.

Direct costs shall include mileage, parking (as needed), and travel [expand to include other direct costs where applicable]. Consultant shall not be reimbursed for any other expenses unless the expense is first approved in writing by VPRA. Reimbursement for travel (mileage, meals, and lodging) is not allowed for positions not required to have a vehicle, unless approved in advance by VPRA. In those cases where travel allowance is authorized, travel reimbursement shall be in accordance with the most current version of the Commonwealth of Virginia, Department of Accounts ("DOA"), "Commonwealth Accounting Policies and Procedures (CAPP) Manual Topic 20335." The CAPP Manual is available at the DOA website at <http://www.doa.virginia.gov>. When travel is authorized, it must originate from Consultant's nearest office.

Consultant may account for annual escalation of its hourly wage rates once a year beginning one year from execution of this Contract. The escalation rate shall be negotiated and not exceed 3.0%. Where escalation is proposed by Consultant, an amended fee schedule shall be submitted to VPRA's Contract Representative (as designated in Article 4) for approval prior to escalated rates being invoiced to VPRA.

Invoicing and payment will be governed by Article 12 of the General Terms and Conditions (Form PD 100) attached hereto as Exhibit F. For the sake of clarity, any payment terms set forth in Consultant's Proposal which in any way deviate from or otherwise conflict with VPRA's General Terms and Conditions (Form PD 100) will be deemed a nullity and of no legal effect.

## **ARTICLE 10** **INSURANCE**

Consultant agrees to maintain insurance in accordance with Exhibit F (General Terms and Conditions) and the requirements and specifications set forth in the Insurance Requirements attached hereto at Exhibit G, subject to any agreed exceptions and modifications as may be granted in writing by VPRA's Director of Procurement. In executing this Contract, Consultant warrants and represents that the certificates of coverage furnished to VPRA remain in full force and effect as of the Effective Date of this Contract.

**ARTICLE 11**  
**REPORTING ON SMALL, DIVERSE, AND DISADVANTAGED  
BUSINESS PARTICIPATION**

Consultant shall be bound by its participation commitments within its approved Small and Diverse Business Subcontracting Plan (Exhibit H) and approved DBE Utilization Plan (Exhibit I), and Consultant may not make changes to its contractual small business commitments, substitute a certified SWaM or DBE or make any other changes to the plans without the prior written approval of VPRA. Unauthorized changes or substitutions, including performing Work designated for a SWaM or DBE with Consultant's own forces, without the prior written approval of VPRA shall be a breach of the Contract. Notwithstanding the foregoing, VPRA may allow amendments to the approved Small and Diverse Business Subcontracting Plan and/or approved DBE Utilization Plan where the modification to the plan will have the effect of increasing overall certified SWaM and/or DBE utilization on the Project or where Consultant is able to evidence that a subconsultant/subcontractor certified as a SWAM or DBE has been terminated for cause or has been decertified.

Unless otherwise directed by VPRA, Consultant shall report SWaM and DBE utilization on a monthly basis using VPRA Procurement Forms PD 61 and PD 51 (Exhibits J and K, respectively), which forms shall be included with Consultant's invoices. If a subcontractor/subconsultant is certified as both a SWaM and a DBE, Consultant shall report their utilization on both Forms PD 61 and PD 51 and utilization credit will be allowed under both the Small and Diverse Business Subcontracting Plan and DBE Utilization Plan, including for the same work activity.

Consultant shall maintain a record of payments to certified SWaM and DBE businesses and all other subcontractors and suppliers for Work performed, including any Final Design Work, if authorized. The records shall be made available to VPRA for inspection and copying upon request. Consultant shall report to VPRA any performance deficiencies with its approved Small and Diverse Business Subcontracting Plan and/or approved DBE Utilization Plan. Any notice of deficiency provided by Consultant shall include a description of the proposed corrective action to be taken by the Consultant.

Consultant has a duty to accurately report SWaM and DBE information to VPRA. A Consultant who intentionally supplies inaccurate information may be subject to civil and/or criminal sanctions or contractual remedies available to VPRA and other third parties.

Neither Consultant nor any of its subcontractors/subconsultants shall discriminate on the basis of race, color, national origin, or sex in the performance of this Contract.

**ARTICLE 12**  
**E-VERIFY COMPLIANCE**

Consultant and its subconsultants/subcontractors have an obligation to utilize the U.S. Department of Homeland Security's ("DHS") E-Verify system for all newly hired employees. By executing this Contract, the Consultant certifies that it is registered with and uses the E-Verify system for all newly hired employees. Consultant shall provide a copy of its DHS Memorandum of Understanding ("MOU") to VPRA's Contract Representative within ten (10) Business Days of Contract execution. If Consultant is not enrolled in DHS E-Verify System, it will do so within (10) Business Days of the Notice of Award and provide VPRA's Contract Representative a copy of its MOU within ten (10) Business Days of Contract execution.

**ARTICLE 13**  
**REPRESENTATIONS AND WARRANTIES TRUE AND COMPLETE**

All representations and warranties of Consultant in this Contract are true, accurate and complete in all material respects as of the Effective Date of this Contract.

**ARTICLE 14**  
**COUNTERPARTS/FACSIMILE OR ELECTRONIC EXECUTION**

This Contract may be executed in one or more counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. The facsimile or electronic transmission of the signature of any party executing this Contract on behalf of VPRA or the Consultant to the other party hereto shall constitute an original hereof.

**ARTICLE 15**  
**EFFECTIVENESS**

This Contract shall be binding and deemed effective when executed by the parties whose signature is provided for on the signature pages hereof (the "Effective Date").

**ARTICLE 16**  
**AUTHORITY TO EXECUTE AGREEMENT**

Each individual executing this Contract represents that he or she is duly authorized to sign and deliver this Contract on behalf of the party indicated and that this Contract is binding on such party in accordance with its terms.

IN WITNESS WHEREOF, the undersigned have executed this Contract on the dates set forth beside their respective signatures.

**[SIGNATURES FOLLOW ON SUBSEQUENT PAGE]**

**For: VIRGINIA PASSENGER RAIL AUTHORITY**

By, \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(printed name)

Its, \_\_\_\_\_  
(title)

Dated: \_\_\_\_\_

**For: [specify]**

By, \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(printed name)

Its, \_\_\_\_\_  
(title)

Dated: \_\_\_\_\_

## EXHIBIT A

### ACRONYMS AND DEFINITIONS

As used in the Contract to which this Exhibit is attached and in the other Contract Documents (unless otherwise specified therein), the following acronyms and terms shall have the meanings set forth below (unless the context requires otherwise).

#### A.1 ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
AREMA	American Railway Engineering and Maintenance-of-Way Association
ATC	Automatic Train Control
BMP	Best Management Practice
BOD	Basis of Design
BOCC	Backup Operation Control Center
CADD	Computer-Assisted Drafting and Design
CFR	Code of Federal Regulations
CSI	Control System Integrator
CSXT	CSX Transportation, Inc.
DHS	United States Department of Homeland Security
DSBSD	Department of Small Business and Supplier Diversity
EA	Environmental Assessment
EEO	Equal Employment Opportunity
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
GIS	Geographic Information System
MWAA	Metropolitan Washington Airports Authority
NBIS	National Bridge Inspection Standards
NEPA	National Environmental Policy Act
NTP	Notice to Proceed
OCC	Operation Control Center
OSHA	Occupational Safety and Health Administration
PE	Preliminary Engineering
PH	Public Hearing
PMP	Project Management Plan
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
QMP	Quality Management Plan
RCMP	Risk and Contingency Management Plan
ROD	Record of Decision
ROW	Right of Way
SCC	Standard Cost Category
SOP	Standard Operating Procedure
SOW	Scope of Work
SSI	Sensitive Security Information
SUE	Subsurface Utility Engineering
TS&L	Type, Size, and Location
U.S.C.	United States Code
USDOT	United States Department of Transportation
VDOT	Virginia Department of Transportation



## A.2 DEFINITIONS

Amtrak	The National Railroad Passenger Corporation.
Approved Fee Schedule	The VPRA approved hourly wage rates and Federal Acquisition Regulation (“FAR”) audited overhead rates submitted by the Consultant and included in the Contract at <u>Exhibit E</u> .
Business Days	A Monday, Tuesday, Wednesday, Thursday, or Friday that is not a holiday.
Change Order	Means any written modification to the Contract between VPRA and Consultant, signed by VPRA and Consultant.
Commonwealth	The Commonwealth of Virginia.
Consultant	[insert firm name]
Contract	The written agreement entered into between VPRA and Consultant dated <b>XXX</b> and the Contract Documents as defined in <u>Article 3</u> of the Contract.
Contract Documents	The documents and materials defined in <u>Article 3</u> of the Contract.
Contract Representative	The respective points of contact for the parties as specified in <u>Article 4</u> to the Contract.
Contract Term	The Initial Term and any Extended Term.
Criminal History Background Check	A criminal history check of an individual based on fingerprints and other identifying information obtained by a law enforcement officer conducted through the Federal Bureau of Investigation-Identification Division (FBI-ID).
Critical Infrastructure	A system or asset so vital that its incapacity or destruction would (i) have a debilitating impact on public health, safety or security; or (ii) cause significant economic harm or instability.
Disadvantaged Business Enterprise (DBE)	A firm certified as a DBE by either DSBSD or MWAA.
Dispute	Shall have the meaning set forth in Section 21 of the General Terms and Conditions.
General Assembly	The legislative body of the Commonwealth.
Insurance Requirements	The minimum insurance that must be maintained by Consultant during the performance of the Contract as set forth <u>Exhibit G</u> to the Contract.
Key Personnel	The individuals specified in <u>Exhibit D</u> to the Contract.
Notice to Proceed	The written notice issued by VPRA authorizing Consultant to proceed with the Work and any Final Design Work, if authorized.
Organizational Conflict of Interest Policy	VPRA’s policy governing conflicts of interest and which is available at <a href="http://Procurement.VPRA(vapassengerrailauthority.org)">Procurement - VPRA (vapassengerrailauthority.org)</a> .
Project	The New River Valley Passenger Rail Project.
Party	A party to the Contract, as identified therein.
Sensitive Security Information	The information covered by Title 49 of the Code of Federal Regulations.
SWaM	A firm certified by DSBSD as a small, women-owned, or minority-owned business or related to a small, women-owned, or minority-owned business.
Task Order	Means any document issued by VPRA and signed by both parties for the services to be provided under this Contract and which may include terms pertaining to milestones and deliverables.
Utility Owner	The owner or operator of any utility.

Work	The meaning set forth in <u>Article 6</u> to the Contract.
Work Plan	Means the plan that outlines the Project's planned activities, budget, timeline, outputs/outcomes and milestones as agreed to by both parties.