



Addendum No. 1

DATE: January 16, 2024

Reference:	RFP# 1-006-23-0002
Description:	Preliminary engineering, surveying, misc. studies/Richmond to Raleigh (R2R) Project (Virginia Only)
RFP Issue Date:	12/15/2023
Proposal Due:	<u>2/1/2024 (by 2:00 PM EST)</u>

TO ALL OFFERORS:

This Addendum No. 1 informs Offerors as to following amended RFP Documents:

1. Instructions to Offerors; and
2. Exhibit 1 – Scope of Work.

Please note that only RFP Documents modified by this Addendum No. 1 are provided. 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,

A handwritten signature in black ink that reads "Jason Lofgreen". The signature is written in a cursive, flowing style.

Jason Lofgreen
Buyer

INSTRUCTIONS TO OFFERORS

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APPENDIX 1 DEFINITIONS

FORMS

A	OFFEROR INFORMATION AND ACKNOWLEDGEMENT (FORM PD 02)
B	OFFEROR QUESTIONS/REQUESTS FOR CLARIFICATION FORM (FORM PD 22)
C	SMALL AND DIVERSE BUSINESS SUBCONTRACTING PLAN (FORM PD 60)
D	DBE UTILIZATION PLAN (FORM PD 50B)
E	MONTHLY SMALL AND DIVERSE BUSINESS SUBCONTRACTING UTILIZATION REPORT (FORM PD 61)
F	MONTHLY DBE PARTICIPATION REPORT (FORM PD 51)
G	PROOF OF AUTHORITY TO TRANSACT BUSINESS IN VIRGINIA (FORM PD 44)
H	PROPRIETARY/CONFIDENTIAL INFORMATION IDENTIFICATION (FORM PD 25)
I	KEY PERSONNEL DESIGNATIONS
J	EXCEPTIONS TO RFP DOCUMENTS (FORM PD 20)
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EXHIBITS

- EXHIBIT 1 SCOPE OF WORK
- EXHIBIT 2 GENERAL TERMS AND CONDITIONS (FORM PD 100)
- EXHIBIT 3 SPECIAL TERMS AND CONDITIONS (FORM PD 210 (FRA/SVC))
- EXHIBIT 4 CONSOLIDATED RAIL INFRASTRUCTURE AND SAFETY IMPROVEMENTS CLAUSES ATTACHMENT 1A
- EXHIBIT 5 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)
- EXHIBIT 6 INSURANCE REQUIREMENTS
- EXHIBIT 7 CONTRACT FOR CONSULTANT SERVICES (FORM PD 04)

1.0 DEFINITIONS

- 1.1 Unless otherwise defined herein, capitalized terms shall have the meanings set forth in Appendix 1.

2.0 INTRODUCTION

- 2.1 The Virginia Passenger Rail Authority (“VPRA”) is issuing this Request for Proposals (“RFP”) to solicit proposals from qualified single entities to establish contract(s) through competitive negotiation for the procurement of professional services in support of the Richmond to Raleigh Project (the “R2R Project”).
- 2.2 The R2R Project is a collaboration with the North Carolina Department of Transportation (“NCDOT”) to develop the currently out-of-service S-Line corridor for future high-performance rail service between Richmond, VA and Raleigh, NC (the “R2R Corridor”). Additional information about the R2R Project is available at <https://vapassengerrailauthority.org/richmond2raleigh/>.
- 2.3 VPRA seeks to retain a qualified firm or firms to perform survey, design concept studies, and preliminary engineering work for that portion of the R2R Corridor which originates in the City of Richmond (S 0.0) and terminates at the Virginia/North Carolina border in Mecklenburg County (S 90.7) (the “Project”). This is a single step, qualifications-based procurement.
- 2.4 Deliverables for the Project have been divided into six segments (each a “Project Segment” and in the plural, the “Project Segments”) with the Project limits lying exclusively within the Commonwealth.¹ Offerors may choose to be considered for one or more Project Segments. Proposals must clearly state the Offeror’s qualifications as to each Project Segment it is pursuing based on the unique features, if any, of the Project Segment.
- 2.5 Project Segments will be scored separately. Offerors pursuing more than one Project Segment may specify an order of preference as to the Project Segments, but are not required to do so (e.g., if an Offeror submits on three Project Segments but only wishes to perform as to one, it may assign an order of preference as to each Project Segment contained within its Proposal). If no order of preference is specified within the Proposal, the Offeror will be deemed ready, willing and able to perform as to any and all Project Segments designated within its Proposal should it be determined to be the top ranked Offeror on any or all of those Project Segments.

3.0 RFP DOCUMENTS

- 3.1 The documents included within this RFP shall consist of the RFP cover page, these Instructions to Offerors, as well as any appendices, form, exhibits, and addenda (collectively, the “RFP Documents”).
- 3.2 Hard copies of the RFP Documents will be available upon request. If there is any conflict between the electronic format and hard copy of any RFP Documents, the hard copy on file shall control.
- 3.3 Offerors shall not take advantage of any actual or potential error in the RFP Documents. Offerors shall identify any potential errors in writing to VPRA’s point of contact specified in Section 10. If VPRA determines that the RFP Documents contain an ambiguity, conflict, error, omission, or mistake, VPRA reserves the right to modify the RFP Documents to correct the ambiguity, conflict, error, omission, or mistake.

¹ Descriptions of the Project Segments are included at Sections 1.3 and 1.4 of Exhibit 1 (Scope of Work).

4.0 LEGAL AUTHORITY

- 4.1 VPRA was created by the Virginia General Assembly on July 1, 2020, pursuant to Va. Code § 33.2-287, *et seq.*, and established as “a body corporate and political subdivision of the Commonwealth....” Pursuant to its enabling legislation, VPRA administers all capital expansion projects, infrastructure, and land acquisitions related to the Transforming Rail in Virginia Program, which initiative will double Amtrak state-supported service and substantially increase Virginia Railway Express (“VRE”) service in Virginia over the next decade.
- 4.2 VPRA undertakes its procurements in accordance with the *Virginia Passenger Rail Authority Procurement Rules* dated May 23, 2022 (“Procurement Rules”). Offerors shall read and familiarize themselves with the Procurement Rules and the submittal of a Proposal shall constitute acceptance of the Procurement Rules for purposes of this procurement. Offerors may access a copy of the Procurement Rules on VPRA’s website at <https://vpassengerrailauthority.org/procurement/>.
- 4.3 VPRA is exempt from the requirements of the Virginia Public Procurement Act (“VPPA”) (Va. Code § 2.2-4300 *et seq.*) and this procurement is not subject to or otherwise governed by the VPPA. Notwithstanding the foregoing, in accordance with Va. Code § 33.2-299.1, VPRA procures professional services consistent with the terms of Va. Code §§ 2.2-4302.2, -4303.1, and -4303.2.

5.0 FEDERAL FINANCIAL ASSISTANCE

- 5.1 VPRA anticipates receiving federal financial assistance on the Project through the U.S. Department of Transportation (“USDOT”) in the form of a Consolidated Rail Infrastructure and Safety Improvements (“CRISI”) grant (or grants) to be awarded to NCDOT and which is to be allocated, in whole or in part, to VPRA as subrecipient. All work on the Project shall be performed and audited in accordance with 2 C.F.R. parts 200 and 1201. Offerors must also fully comply with the federal requirements set forth in Exhibits 3 and 4 and such additional terms as may be included within the Contract at time of execution.

6.0 RAILROAD INDEMNIFICATIONS

- 6.1 As part of VPRA’s delivery of the Project, VPRA is obligated to provide certain indemnifications to CSX Transportation, Inc. (“CSXT”) and the National Railroad Passenger Corporation (“Amtrak”) that will be passed through to the Consultant. These indemnification obligations are attached as Exhibit 5 and are non-negotiable.

7.0 STATEMENT OF NEEDS

- 7.1 A detailed description of the statement of needs for this RFP is set forth in Exhibit 1 (Scope of Work). Offerors are expected to thoroughly review this material before submitting a Proposal.

8.0 PRE-PROPOSAL CONFERENCE

- 8.1 VPRA will be hosting a virtual pre-proposal conference at **9:00 AM EST on December 20, 2023**.
- 8.2 Attendance at the pre-proposal conference is optional; however, Offerors who intend to submit a Proposal are highly encouraged to be present. Registration to attend the pre-proposal conference is required by December 19, 2023 at 11:59 PM. Offerors can register for the webinar at [Pre-Proposal Registration](#). Once registered, you will receive a link for the webinar. Please note that every person who plans to attend must register.

- 8.3 Any questions and answers that are presented during the pre-proposal conference or any changes to the solicitation resulting from this conference will be issued in a written addendum in accordance with Section 17.

9.0 PROCUREMENT SCHEDULE

- 9.1 The below is VPRA's planned schedule for this procurement. VPRA reserves the right to amend these dates in its sole discretion.

Event/Milestone	Date/Date Range
Release of RFP	12/15/2023
Pre-Proposal Conference (Industry Day)	12/20/2023
Questions/Requests for Clarifications Due	1/8/2024
Proposal Due Date	2/01/2024
Interviews	March 2024
Notice of Intent to Award Issued	April 2024
Negotiations	May 2024
Contract Award(s)	June 2024

10.0 SINGLE POINT OF CONTACT

- 10.1 VPRA's sole point of contact ("POC") for matters related to this procurement is:

Jason Lofgreen, Buyer
919 E. Main Street, Suite 2400
Richmond, VA 23219
procurement@vpra.virginia.gov

- 10.2 All communications regarding the procurement shall be directed to the POC by email transmittal to the address specified in Section 10.1. Written communications to VPRA's POC from Offerors shall contain "RFP 1-006-23-0002" in the subject line followed by the Offeror's name.
- 10.3 VPRA disclaims the accuracy of information derived from any source other than VPRA's POC, and the use of any such information is at the sole risk of the Offeror. Only written communications received from the POC or its designee may be relied on throughout this procurement. VPRA is not responsible for oral communications or other communications that occur outside the communications protocol established by this RFP.
- 10.4 VPRA may, in its sole discretion, waive or modify the provisions of this Section 10.0 wherever deemed prudent to the efficient administration of the procurement.

11.0 OFFEROR'S DESIGNATED CONTACT

- 11.1 Offeror's Designated Contact, who shall be the single point of contact for each Offeror, shall be the individual designated in Form A. Offerors may change the Designated Contact by written communication to VPRA's POC.

12.0 RULES OF CONTACT

- 12.1 As of the date of issuance of this RFP, no Offeror shall contact any employee or representative of VPRA concerning this RFP or the Project, including members of VPRA's Board of Directors, except for the POC as specifically permitted in this RFP. This prohibition does not apply to discussions with VPRA not related to this RFP or the Project.
- 12.2 The following entities are considered "representatives" of VPRA during this procurement and may not be contacted by any means whatsoever concerning this RFP or the Project:
- (a) Vanasse Hangen Brustlin, Inc.;
 - (b) Kimley-Horn and Associates, Inc.; and
 - (c) The Mott-MacDonald Group.
- 12.3 In addition, Offerors are prohibited from contact with the following stakeholders concerning this RFP or the Project:
- (a) CSXT;
 - (b) Amtrak;
 - (c) Virginia Department of Transportation ("VDOT");
 - (d) NCDOT;
 - (e) Other governmental agencies with jurisdiction;
 - (f) Adjacent landowners; and
 - (g) Business owners in the vicinity of the Project.

13.0 INELIGIBLE FIRMS

- 13.1 The below listed firms are not eligible to participate in this procurement as an Offeror or sub-offeror.
- (a) Michael Baker International (as to Project Segments 1 and 2 only);
 - (b) Vanasse Hangen Brustlin, Inc.;
 - (c) Kimley-Horn and Associates, Inc.; and
 - (d) The Mott-MacDonald Group.
- 13.2 VPRA made this determination in accordance with its Organizational Conflict of Interest Policy. If any firm listed above desires to appeal this determination of its ineligibility, such appeal must be made accordance with the procedures set forth in Section 2.6 of the Organizational Conflict of Interest Policy. In VPRA's discretion, exceptions may be granted on the grounds provided in the Organizational Conflict of Interest Policy. VPRA's reconsideration determination will be in writing.

14.0 VPRA FURNISHED INFORMATION

- 14.1 VPRA anticipates releasing certain reference documents for information purposes only. VPRA makes no representations or warranties with respect to the reference information, and, unless otherwise provided, Offeror may not rely on them. Given the confidential nature of the reference documents, Offerors will be required to execute a confidentiality/non-disclosure agreement ("NDA") prior to the release of the records. Offerors should contact the VPRA designated POC to request a copy of the NDA.

15.0 QUESTIONS/REQUESTS FOR CLARIFICATION FROM OFFERORS

- 15.1 All questions and requests for clarification regarding this RFP shall be submitted to VPRA's POC via electronic mail using Form B, which Offerors shall submit in Microsoft Word format. No requests for additional information, clarification or any other communication should be directed to any other individual. NO ORAL REQUESTS FOR INFORMATION WILL BE ACCEPTED.
- 15.2 Offerors shall not provide information that discloses the Offeror's identity in the body of the question or request for clarification. All questions or requests for clarification must be submitted by 5:00 PM, January 8, 2024. Questions or clarifications requested after such time will not be answered, unless VPRA elects, in its sole discretion, to do so.
- 15.3 VPRA will post responses to the questions/requests for clarification received and answered on VPRA's website at [Current RFPs - Virginia Passenger Rail Authority \(vpassengerrailauthority.org\)](https://vpassengerrailauthority.org). Upon submission of a Proposal, Offerors will be required to affirm receipt of all questions/clarification requests and responses using Form A.

16.0 REQUESTS FOR CLARIFICATION FROM VPRA

- 16.1 VPRA may at any time issue one or more requests for clarification to the individual Offerors, request additional information from an Offeror, or may request an Offeror verify or certify any aspect of its Proposal. Any requests for clarification from VPRA shall be in writing to Offeror's Designated Contact. Offerors shall respond to any such requests within the time stated in the request from VPRA. Upon receipt of requested clarifications and additional information as described above, if any, VPRA may re-evaluate the Proposals to factor in the clarifications and additional information.

17.0 ADDENDA

- 17.1 VPRA may amend the RFP from time to time in its sole discretion. Any such amendments shall be incorporated into the RFP through an addendum. Addenda to the RFP, if any, will be posted on VPRA's website at [Current RFPs - Virginia Passenger Rail Authority \(vpassengerrailauthority.org\)](https://vpassengerrailauthority.org).
- 17.2 Offerors shall base their Proposals on the terms and conditions of the RFP Documents included in the latest issued addendum. VPRA will not be bound by any oral communications, or written interpretations or clarifications that are not set forth in an addendum.
- 17.3 Upon submission of a Proposal, Offerors will be required to affirm receipt of all issued addenda on Form A.

18.0 QUALIFICATIONS; LICENSURE

- 18.1 Each business entity (prime and sub-consultants) on the proposed team who is practicing or offering to practice professional services in the Commonwealth, including but not limited to, those practicing or offering to practice engineering, surveying, hydrologic and hydraulic analysis, geotechnical analysis and landscape architecture, shall be required to possess the appropriate commercial professional registration and license details for all main and branch offices proposed for this Project, as well as appropriate individual registration and license details for those professional occupations.

19.0 SMALL, DIVERSE, AND DISADVANTAGED BUSINESS PARTICIPATION

- 19.1 It is the policy of VPRA that firms certified as a small and diverse businesses by the Department of Small Business and Supplier Diversity (“DSBSD”) (i.e., SWaMs), and those certified as a Disadvantaged Business Enterprise (“DBE”) by either the DSBSD or the Metropolitan Washington Airports Authority (“MWA”), have an equal opportunity to participate in VPRA procurements.
- 19.2 No SWaM or DBE contract goals are included within this solicitation. However, Offerors must ensure that DSBSD-certified SWaMs and DSBSD/MWA-certified DBEs have a meaningful chance to compete for and perform Work on the Project. Offerors should take all necessary and reasonable steps for this assurance.
- 19.3 Wherever feasible, the successful Offeror(s) should seek to maximize the use of SWaMs and DBEs for as much of the Work as possible throughout the lifetime of the Project. A directory of DSBSD-certified small businesses and DSBSD/MWA-certified DBEs is available online at: <https://directory.sbsd.virginia.gov/#/executiveExport>. Offerors should consider assisting small, diverse, and/or disadvantaged businesses in obtaining certification wherever eligible.
- 19.4 Additional details regarding SWaM and DBE submittal requirements are set forth in Section 22.3. Any agreement between an Offeror and a SWaM or DBE whereby the SWaM or DBE agrees not to provide quotations for performance of work to other Offerors is prohibited.

20.0 PRE-SUBMITTAL OBLIGATIONS

- 20.1 Each Offeror shall be solely responsible for examining the RFP Documents, including any addenda issued to such documents, and all conditions that may in any way affect its Proposal or the performance of the work on the Contract, including but not limited to:
- (a) examining and carefully studying the RFP Documents, including any addenda and other information or data identified in the RFP Documents;
 - (b) evaluating their organizational capacity to fulfill the requirements of the RFP in a timely and professional manner;
 - (c) addressing all potential issues and/or impacts involving third parties and ensuring all such issues and/or impacts have been included in the Offeror’s Proposal;
 - (d) becoming familiar with and satisfying itself as to all federal, state, and local laws and regulations that may affect the cost, progress, or performance of its work on the Contract;
 - (e) determining that the RFP Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance of Offeror’s work on the Contract; and
 - (f) notifying VPRA in writing, in accordance with the processes set forth in Section 10.0, of all conflicts, errors, ambiguities, or discrepancies that Offeror discovers in the RFP Documents which require correction and/or clarification.
- 20.2 Any failure to fulfill these responsibilities is at the Offeror’s sole risk and no relief will be provided by VPRA.

21.0 DESIGNATION OF CONFIDENTIAL INFORMATION

- 21.1 All Proposals submitted to VPRA become the property of VPRA and are subject to the disclosure requirements of the Virginia Freedom of Information Act (“VFOIA”) (Va. Code § 2.2-3700 *et seq.*). Offerors are advised to familiarize themselves with the provisions of VFOIA to ensure that documents identified as confidential will not be subject to disclosure under VFOIA. In no event shall the Commonwealth or VPRA be liable to an Offeror for the disclosure of all or a portion of a Proposal submitted pursuant to this request.
- 21.2 If an Offeror has special concerns about information that it desires to make available to VPRA, but that it believes constitutes a trade secret, proprietary information, or other confidential information exempted from disclosure, such Offeror should specifically and conspicuously designate that information as such in its Proposal and state in writing why protection of that information is needed in accordance with Form H.
- 21.3 Blanket designations that do not identify the specific information shall not be acceptable and may be cause for VPRA to treat the entire Proposal as public information. Nothing contained in this provision shall modify or amend requirements and obligations imposed on VPRA by applicable law, and the applicable law(s) shall control in the event of a conflict between the procedures described above and any applicable law(s).
- 21.4 In the event VPRA receives a request for public disclosure of all or any portion of a Proposal identified as confidential, VPRA will attempt to notify the Offeror of the request, providing an opportunity for such Offeror to assert, in writing, claimed exemptions under the VFOIA or other Commonwealth law. VPRA will come to its own determination whether or not the requested materials are exempt from disclosure. In the event VPRA elects to disclose the requested materials, it will provide the Offeror advance notice of its intent to disclose.

22.0 PROPOSAL PREPARATION AND SUBMISSION REQUIREMENTS

22.1 *General Requirements*

- (a) Proposals shall be signed by an authorized representative of the Offeror. All information requested should be submitted. Failure to submit all information requested may result in VPRA requiring prompt submission of missing information and/or giving a lowered evaluation of the Proposal. Proposals that are substantially incomplete or lack key information may be rejected by VPRA at its discretion. Offerors must use VPRA -issued forms when submitting their Proposal. Alteration or omission of any form may result in a Proposal being deemed non-responsive.
- (b) Proposals should be as thorough and detailed as possible so that VPRA may properly evaluate the Offeror’s capabilities to provide the required services.
- (c) Proposals should be organized in the order in which the requirements are presented in the RFP. All pages of the Proposal should be numbered. The Proposal should contain a table of contents which cross-references the RFP requirements. Information the Offeror desires to present that does not fall within any of the requirements of the RFP should be inserted at an appropriate place or be attached at the end of the Proposal and designated as additional material. Proposals that are not organized in this manner risk elimination from consideration if the Evaluation Team is unable to find where the RFP requirements are specifically addressed.
- (d) Proposals should be prepared simply and economically, providing straightforward concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content. Elaborate brochures and other representations beyond that sufficient to present a complete and

effective proposal are not required and will not be utilized in the evaluation of the Proposal. VPRA wants to remind Offerors to be mindful about size limits when sending electronic Proposals to proposals@vpra.virginia.gov. VPRA can accept files up to 150 MB in size. If the response exceeds 150 MB, it is recommended that the file(s) be compressed and sent as an attachment, zip file, if possible. VPRA will only accept a downloadable link if the response cannot be compressed.

- (e) As used in this RFP, the terms "must," "shall," "should," and "may" identify the degree to which requirements are critical. "Must" and "shall" identify requirements whose absence will have a major negative impact on the suitability of the proposed solution. Items labelled as "should" or "may" are highly desirable, although their absence will not have a large impact and would be useful but are not necessary. Depending on the overall response to the RFP, some individual "must" and "shall" items may not be fully satisfied, but it is the intent to satisfy most, if not all, "must" and "shall" requirements. The inability of an Offeror to satisfy a "must" or "shall" requirement does not automatically remove that Offeror from consideration; however, it may seriously affect the overall rating of the Offeror's Proposal. Once the Offeror and VPRA have entered into the Contract, the terms "must," "shall," "should," and "may" where used in those portions of the RFP incorporated into the Contract shall have their ordinary meaning.

22.2 Specific Requirements

- (a) To be considered for selection, Offerors must submit a complete written response to this RFP to: proposals@vpra.virginia.gov.
- (b) Proposals must be received by **2:00 PM, February 1, 2024**.
- (c) Text shall be in English in a standard font, a minimum of 12 points, single-spaced. Proposals are limited to a maximum of 10 single-sided, numbered pages **for each Project Segment** on which an Offeror is proposing, excluding the table of contents, a cover letter, required forms, registrations and licenses, records of disciplinary judgments or actions, covers, sub-tabs, dividers, Offeror's order of preference (if applicable), and Key Personnel resumes. Resumes should be limited to two (2) pages in length.
- (d) Proposals shall be presented on 8 ½" x 11" paper; however, pages with organizational charts, matrices, or diagrams may be presented on 11" x 17" paper. Type size shall be no smaller than 12 point for narrative sections, but may be reduced for captions, footnotes, etc., while maintaining legibility.

22.3 Required Submittals

Offerors are required to submit the below listed items for their Proposal to be considered complete. Offerors are advised that Tabs 2 - 5 are Project Specific and thus these submittals should be tailored for each Project Segment on which an Offeror is pursuing. Notwithstanding the foregoing, where Offerors are pursuing multiple Project Segments and do not have changes in content within Tabs 2, 3, 4, or 5, they may state which content is to apply across each of the various Project Segments they are pursuing.

TAB 1: General (non-scoring)

The Offeror shall include the following documents as part of its submittal requirements under this tab:

1. Form A (Offeror Information and Acknowledgement);

2. Form G (Proof of Authority to Transact Business in Virginia) (include additional forms for any sub-Offerors);
3. Form H (Disclosure of Proprietary/Confidential Information), if applicable; and
- ~~4. copies of all registrations and licenses for main and branch offices, and copies of individual licenses for project staff as issued by the Department of Professional and Occupational Regulation and such other applicable bodies; and~~
- 5.4. Offeror's order of preference as to the Project Segments, if applicable. Offerors which are submitting on multiple Project Segments but with limited Project delivery capacity may state their order of preference and should indicate the maximum number of Project Segments that they are ready, willing, and able to perform.

TAB 2: Qualifications and Experience of Firm

[5 page maximum]

For each Project Segment that an Offeror is pursuing, the Offeror must describe the skills and qualifications it has available to perform the work described in Exhibit 1 (Scope of Work). The Offeror shall provide the following information concerning its company and sub-offerors:

1. expertise and experience of the firm relative to the tasks described in Exhibit 1 (Scope of Work) such as: passenger rail design, roadway design, bridge design, civil engineering, survey, utility coordination, geotechnical, cost estimating, value engineering, risk management, and stakeholder and railroad coordination.
2. a detailed statement indicating the organizational structure under which the firm proposes to conduct business. If more than one firm is involved in this project, state the type of arrangement between the firms, the percentage of work to be performed by each, a list of previous projects in which the firms have previously collaborated. Include a comprehensive organizational chart.
3. at least three and no more than five (5) projects—on which the Offeror or sub-Offeror have worked on that are similar in scope and character to the Project Segment(s). Projects shall have been completed in the last 10 years or be substantially complete. Projects shall include client contact name, address, telephone number; project description; small, diverse, or disadvantaged business percentage (original commitment and final achieved); and project dollar value.
4. disclosure of any professional disciplinary judgments or actions taken against the Offeror or the Offeror's principles by any professional regulatory bodies (include for sub-Offerors if part of Key Personnel).

Additionally for each Project Segment Offeror is pursuing, the Offeror shall identify Key Personnel with the qualifications and experience necessary to ensure efficient administration and successful completion of the Project. Offerors shall submit Form I containing the identity of the individuals proposed to fill the Key Personnel positions identified in the table below. Offerors shall also submit a resume for each Key Personnel. Resumes shall include three (3) references for each Key Personnel.

Key Personnel	Requirements and Preferred Qualifications
Project Manager	The Project Manager must be a registered Professional Engineer in the Commonwealth. The Project Manager must also have a minimum of 15 years of experience on projects of similar scope and size, including coordination with multiple agencies and stakeholders and experience with FRA regulations.
VDOT Interface Manager	The VDOT Interface Manager must have proven experience and history of interface with VDOT for roadway and bridge design projects. The VDOT Interface Manager must be a registered Professional Engineer in the Commonwealth and must have a minimum of 10 years of experience.
Rail Manager	The Rail Manager must have proven experience and qualifications working with CSXT and/or Amtrak, as well as experience with American Railway Engineering and Maintenance-of-Way Association (AREMA), CSXT, and Amtrak standards. The Rail Manager must be a registered Professional Engineer in the Commonwealth and must have a minimum of 10 years of experience.
Additional Value Add Positions	An Offeror may name up to four (4) other individuals that the Offeror considers as key to the success of the Project. Their resumes shall describe their anticipated role, relevant experience, registration(s), education, and other elements of qualification applicable to the Project.

TAB 3: Methodology / Approach for Providing Services [3 page maximum]

For each Project Segment that an Offeror is pursuing, the Offeror must provide a detailed description of its understanding of the Project requirements, with descriptions of the approach and procedures Offeror has successfully employed on similar projects elsewhere.

Additional required elements shall include:

1. a description of the project management procedures the Offeror will follow, including processes and procedures for meeting schedules and budgets, and recovery strategies proposed for the Project, particularly where the Offeror is seeking to perform work on multiple Project Segments.
2. a description of the firm’s risk management and mitigation strategies relevant to the tasks described in Exhibit 1 (Scope of Work).
3. a description of Offeror’s quality control procedures and how they will be deployed toward the successful completion of the tasks described in Exhibit 1 (Scope of Work).
4. A description of other services or specialties that may distinguish the ability of the Offeror to successfully deliver the Project Segment(s).

Where applicable, the Offeror may identify and describe any relevant support services that will be available to VPRRA relevant to the various types of tasks described in Exhibit 1 (Scope of Work).

TAB 4: Organizational Capacity

[2 page maximum]

For each Project Segment that an Offeror is pursuing, the Offeror shall describe its human and financial resources and discuss any issues which might positively or negatively impact its ability to fulfill the Project requirements. Additional required elements shall include the following:

1. disclosure of the location of Offeror's headquarters and primary office from where the Project work will be performed.
2. disclosure of Offeror's and sub-offerors' current major projects and the anticipated completion date of the projects.
3. discuss the availability of the Key Personnel by providing a list of current projects, anticipated completion dates, and percent availability for the Project. Offerors shall guarantee that Key Personnel identified will be available for the duration of the Project.
4. A description of organizational capacity to fulfill the Project requirements where multiple Project Segments are being pursued.

TAB 5: Small, Diverse, and Disadvantaged Business Participation

For each Project Segment that an Offeror is pursuing, the Offeror shall submit the following:

1. a completed Form C (Small and Diverse Business Subcontracting Plan; VPRA Form PD 60) detailing Offeror's Small and Diverse Business Subcontracting Plan for the Work; and
2. a completed Form D (DBE Utilization Plan; VPRA Form PD 50B) detailing Offeror's plan to use DSBSD/MWAA-certified DBEs for the Work.

As further addressed in Section 23, Offerors will be scored exclusively on Section B of their Small and Diverse Business Subcontracting Plan (Form C), which details their small/diverse business commitments for the Project. DBEs will not count toward an Offeror's score unless the DBE is also certified as a small business by DSBSD and listed within Section B of Form C. Firms not certified as a small business by DSBSD but holding other SWaM certifications or other status with DSBSD (e.g., women-owned business) will also not count towards a Proposer's score but should be listed in Section C of Form C.

Each Offeror is responsible for independently verifying the certification status of firms that it includes within its Small and Diverse Business Subcontracting Plan (Form C) and DBE Utilization Plan (Form D). VPRA may, in its sole discretion, elect to award zero (0) points in the evaluation process where an Offeror has specified a small business within Section B of Form C which is not properly certified by DSBSD at time of Proposal submittal.

If awarded the Contract, an Offeror's approved Small and Diverse Business Subcontracting Plan and approved DBE Utilization Plan become part of the Contract Documents and are to be construed as material to the Contract. Consultant will be required to report small, diverse, and/or disadvantaged business utilization to VPRA on a monthly basis using Forms E and F, as applicable.

During the performance of the Contract, VPRA may allow amendments to the Small and Diverse Business Subcontracting Plan and/or DBE Utilization Plan

where the modification to the plan will have the effect of increasing overall participation by SWaMs and/or DBEs on the Project or where the Consultant is able to evidence that a SWaM and/or DBE subcontractor has been terminated for cause or has been decertified.

23.0 EVALUATION AND SCORING

- 23.1 Immediately following the due date for Proposals, the Director of Procurement (or his designee) shall distribute the Proposals to the Evaluation Team. Proposals determined to be responsive to the RFP will be evaluated and scored in accordance with this Section 23.
- 23.2 Each Project Segment will be independently scored by the Evaluation Team and there shall be no carry-over in score from one segment to another. For the sake of clarity, an Offeror will not be prejudiced should its Proposal indicate a commitment for fewer than six (6) of the Project Segments. Similarly, an Offeror will not obtain a scoring advantage where its Proposal expresses a commitment to perform on multiple Project Segments.
- 23.3 Project Segments within an Offeror’s Proposal will be assigned points as follows:

Category	Total Points Available
<i>Qualifications and Experience of Offeror (Tab 2)</i>	40 points
<i>Methodology/Approach for Providing Services (Tab 3)</i>	30 points
<i>Organizational Capacity (Tab 4)</i>	20 points
<i>Small/Small and Diverse Business Participation (Tab 5)</i>	10 Points
Total	100 points

- 23.4 In ascribing points, the Evaluation Team will utilize the following Evaluation Criteria:

Category	Evaluation Criteria
<i>Qualifications and Experience of Offeror (Tab 2)</i>	The extent to which Offeror shows that it has successfully performed similar prior work that demonstrates its qualifications and ability to successfully fulfill the Project requirements; the extent to which Offeror’s Key Personnel have the background and experience to be successful at delivering a quality Project.
<i>Methodology/Approach for Providing Services (Tab 3)</i>	The extent to which Offeror demonstrates a comprehensive understanding of the Project, key risks, and mitigation strategies; overall soundness of Offeror’s plan; soundness of Offeror’s quality control procedures; other distinguishing elements Offeror can bring to the

	Project; and a comprehensive understanding of the Project Segment(s) on which the Offeror is submitting.
<i>Organizational Capacity (Tab 4)</i>	The Offeror's ability to timely perform the work given its current resources and other project demands.
<i>Small/Small and Diverse Business Participation (Tab 5)</i>	<p>VPRA will award points for small/small and diverse business participation based on a formula that awards to the maximum number of points available to the Offeror that commits to use the highest percentage of small or small and diverse businesses on the Project (Section B of <u>Form C</u>). The number of points awarded to each Offeror is as follows:</p> <p style="text-align: center;">10 x (Proposer's % Commitment / Highest % Committed).</p> <p><i>Note: Where an Offeror is a DSBSD-certified small business they will be awarded all 10 points provided they are self-performing 100% of the Work.</i></p>

- 23.5 Except for Small/Small Diverse Business Participation, VPRA will use a consensus approach to evaluate the Proposals. Members of the Evaluation Team will not score proposals individually but instead will arrive at a consensus as to the assignment of points. In developing a consensus score, the Evaluation Team is at liberty to consider all information contained within an Offeror's Proposal, as well as Offeror's presentation and responses to questions in any informal interviews, if held.
- 23.6 The consensus scores will be added to the Small/Small Diverse Business Participation score to yield an Offeror's overall score. The Offeror with the highest overall score as to each Project Segment will be deemed to be the top ranked Offeror for that Project Segment, subject to any adjustments in scoring as may be made by the Evaluation Team following the informal interviews described in Section 24.
- 23.7 Where an Offeror has designated an order of preference in Tab 1, VPRA may eliminate a top ranked Offeror on one or more Project Segments if it has been determined to be the top ranked Offeror on its preferred Project Segment(s). In such event, the Offeror deemed to have the second highest overall score will be deemed to be the top ranked Offeror for any Project Segment(s) on which the initial top ranked Offeror was eliminated based on its designated preferences set forth in Tab 1. For example, where an Offeror's order of preference states that it has capacity to perform a maximum of two Project Segments and they end up being the top ranked Offeror on three Project Segments, VPRA will eliminate that Offeror on the least preferred Project Segment as specified in Tab 1 of their Proposal.

24.0 DISCUSSIONS; INFORMAL INTERVIEWS

- 24.1 Upon completion of the initial scoring, VPRA will engage in individual discussions with two or more Offerors deemed fully qualified, responsible, and suitable on the basis of their Proposal and with emphasis on professional competence to provide the required services. These informal interviews, which may be repetitive in nature, may include each such Offeror giving an oral presentation of its Proposal.

- 24.2 Informal interviews shall not be used to fill in missing or incomplete information that was required in the Proposal and instead are designed to provide an opportunity for selected Offerors to clarify or elaborate on the corresponding Proposal and to expound upon their qualifications or staff expertise pertinent to the Project. The informal interviews are a fact finding/explanation session only and do not include negotiation. Offerors are advised that Project stakeholders and funding partners may be in attendance and have the ability to separately ask questions.
- 24.3 VPRA will not explicitly evaluate the interviews as a standalone element of the Proposal; however, the interviews may be considered by the Evaluation Team when evaluating and scoring the Proposals.
- 24.4 If selected for an informal interview, VPRA will provide the Offeror with the date and time to appear. Whenever feasible, VPRA will, in its sole discretion, accommodate any request by an Offeror to modify the date and/or time established for their informal interview.
- 24.5 At the conclusion of discussions outlined in this Section 24, VPRA shall, for each Project Segment, select in the order of preference two or more Offerors whose professional qualifications and proposed services are deemed most meritorious as determined by the Evaluation Team's final ranking.

25.0 NOTIFICATION TO OFFERORS

- 25.1 At the conclusion of the evaluation process described in this RFP, VPRA will advise Offerors as to the status of their Proposal and provide a Notice of Intent to Award to the top ranked Offeror for each Project Segment.

26.0 ADDITIONAL SUBMITTALS

- 26.1 Within ten (10) Business Days of receipt of the Notice of Intent to Award, the top ranked Offeror(s) shall provide the information and materials stated in this section to VPRA. Provision of these materials and approval thereof by VPRA is a condition precedent to execution of the Contract. Failure to provide these materials and receive approval from VPRA shall constitute a failure on the part of the Offeror to execute the Contract.
- 26.2 The top ranked Offeror(s) shall provide the following:
- (a) Form J (Exceptions to RFP Documents);
 - (b) Form K (Fee Schedule);
 - (c) copies of all registrations and licenses for main and branch offices, and copies for individual licenses for Key Personnel as issued by the Department of Professional and Occupational Regulation and such other applicable bodies. This includes registrations and licenses for any sub-Offerors that Offeror has named as Key Personnel;
 - (~~e~~)(d) evidence of insurance required by the Contract as specified in Exhibit 6. This document may take the form of a letter from an insurance carrier(s) that it will issue the insurance policies required by the Contract upon execution of the Contract; and
 - (~~d~~)(e) such additional information as may be designated by VPRA within the Notice of Intent to Award.

27.0 NEGOTIATION AND AWARD OF THE CONTRACT

- 27.1 After receipt and evaluation of all proposals, VPRA will conduct limited negotiations with the Offeror or Offerors deemed to be fully qualified and best suited among those submitting

Proposals (i.e., the top ranked Offeror for each Project Segment), including the negotiation of any terms and conditions proposed by VPRA to which the selected Offeror objected to within [Form J](#).

- 27.2 Offerors acknowledges that certain terms and conditions are not subject to negotiation or waiver by VPRA, including terms and conditions required by (a) VPRA's third party agreements, (b) federal or state law, regulation, order, or ordinance, and (c) funding partner agreements or guidance.
- 27.3 If a contract satisfactory and advantageous to VPRA can be negotiated at a price considered fair and reasonable and pursuant to contractual terms and conditions acceptable to VPRA, the award shall be made to that Offeror on that Project Segment. Otherwise, negotiations with the Offeror ranked first on that Project Segment shall be formally terminated and negotiations conducted with the Offeror ranked second, and so on until such a contract can be negotiated at a fair and reasonable price.
- 27.4 VPRA reserves the right to make multiple awards as a result of this solicitation. Award of the Project Segments shall be in the sole discretion of VPRA. Where an Offeror is awarded multiple Project Segments, VPRA reserves the right to consolidate the awards into a single Contract. Should VPRA in its sole discretion that only one Offeror is fully qualified, or that one Offeror is clearly more highly qualified than the others under consideration, a Contract may be negotiated and awarded to that Offeror for all six (6) Project Segments.
- 27.5 The award document will be a contract incorporating by reference all requirements, terms and conditions of the solicitation, and the successful Offeror(s)'s Proposal(s) as negotiated. A Contract template is included in this RFP at [Exhibit 7](#).
- 27.6 Notice of the award will be published on VPRA's website and shall remain available for public viewing for at least ten (10) days.

28.0 SENSITIVE SECURITY INFORMATION; CRITICAL INFRASTRUCTURE

- 28.1 If any information in this Project is determined to contain Sensitive Security Information ("SSI"), the top ranked Offeror(s) shall be required to execute a Sensitive Security Information Non-Disclosure Agreement.
- 28.2 Once negotiations have been completed and prior to execution of the Contract, personnel handling SSI material or who require access to Critical Infrastructure 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 the top ranked Offeror will be allowed to replace those individuals. However, if Key Personnel fail the fingerprint-based CHBC, the selection may be canceled and negotiations begun with the next ranked Proposer.

29.0 CONTRACT EXECUTION; AT RISK WORK

- 29.1 Upon award of the Contract, VPRA will deliver an executed copy of the Contract to the successful Offeror(s), who shall execute and deliver such copy to VPRA within five (5) Business Days of receipt.
- 29.2 No Work shall be performed by the successful Offeror(s) under the Contract until the Contract is fully executed and the successful Offeror(s) has been issued a written Notice to Proceed by VPRA.
- 29.3 Notwithstanding the provisions set forth in [Section 29.2](#), VPRA may, in its sole discretion, permit an Offeror to commence Work on the Project prior to execution of the Contract and/or issuance of Notice to Proceed, subject to such terms and conditions as are

established by VPRA and which will be memorialized in a letter agreement to be executed by the parties. In such event, all Work performed by Proposer prior to issuance of Notice to Proceed will be deemed to be “at risk” (Offeror assuming all risk of non-payment) and Offeror must, among other things, agree to waive any and all rights of recovery, claim, action or cause of action against VPRA and its officers, directors, employees and agents for labor and materials furnished in the event the Contract is not executed, the Notice to Proceed is not issued, or the procurement is otherwise canceled.

30.0 DEBRIEFINGS

30.1 Offerors not selected for an award may request a debriefing. If requested, debriefings shall be provided at the earliest feasible time after execution of the contract. The debriefing shall be conducted by VPRA’s POC or designee, who may be accompanied by other VPRA officials familiar with the rationale for the selection decision.

30.2 Debriefings shall:

- (a) be limited to discussion of the unsuccessful Offeror’s Proposal and will not include specific discussion of a competing Proposal;
- (b) be factual and consistent with the evaluation of the unsuccessful Offeror’s Proposal; and
- (c) provide information on areas in which the unsuccessful Offeror’s Proposal had weaknesses or deficiencies.

Debriefing will not include discussion or dissemination of the identities, thoughts, or notes of individual members of the Evaluation Team, but may include a summary of the rationale for the selection decision. In its sole discretion, VPRA may delay and/or limit the scope of a debriefing in the event it is determined that the information to be furnished to an Offeror may provide the firm with an unfair competitive advantage on another pending procurement.

31.0 APPLICABLE COST PRINCIPLES; ACCOUNTING REQUIREMENTS

31.1 The Contract will be performed and audited in accordance with 48 C.F.R Part 31, “Contract Cost Principles and Procedures,” (“FAR Part 31”), which provisions are incorporated herein by reference. To be eligible for reimbursement, the Offeror’s and sub-offerors costs must (1) be incurred in accordance with the terms of the Contract; (2) be in accordance with the final approved Fee Schedule; and (3) comply with cost principles set forth in FAR Part 31. All Offerors submitting Proposals (prime consultants, joint ventures and sub-consultants) must have internal control systems in place that meet federal requirements for accounting. These systems must comply with requirements of FAR Part 31 and be sufficient to exclude unallowable cost items from Project invoicing to VPRA.

32.0 ORGANIZATIONAL CONFLICTS OF INTEREST

32.1 Matters involving real or perceived organizational conflicts of interest (“OCI”) will be administered in accordance with VPRA’s Organizational Conflict of Interest Policy (the “OCI Policy”) which is available at <https://vapassengerrailauthority.org/procurement/>.

32.2 Offerors are notified that prior or existing contractual obligations between a company and a federal or state agency relative to the RFP or VPRA’s programs could give rise to potential OCI. Each Offeror shall independently assess potential OCI and require its proposed team members to identify real and apparent OCI, with particular emphasis on that which provides a real or perceived unfair competitive advantage relative to this procurement. In accordance with the OCI Policy, Offerors shall promptly disclose to VPRA

all real or apparent OCI. In instances where an Offeror is unclear as to whether a particular circumstance could be considered real or apparent OCI, they must, in accordance with the OCI Policy, seek a determination from VPRA.

- 32.3 VPRA shall have sole discretion as relates to determinations involving OCI on this RFP. Any firm determined to have an OCI that cannot be neutralized, mitigated or otherwise waived (when determined to be in the public interest), shall not be allowed to participate in the procurement. Failure to abide by VPRA's determination in this matter may result in a Proposal being declared non-responsive.

33.0 DURATION OF PROPOSAL

- 33.1 The Proposal shall be binding upon the Offeror for ninety (90) days following the due date for proposal submittal. If not withdrawn at that time, the Proposal shall remain effective until an award is made or the solicitation is cancelled.

34.0 PROCUREMENT DECISION APPEALS

- 34.1 Any Offeror who desires to file a procurement decision appeal (other than matters involving organizational conflicts of interest) must do so in accordance with sections 7.3, 7.4, and 7.5 of the Procurement Rules. Procurement decision appeals will be administered in accordance with the Procurement Rules.

35.0 OFFERORS RESPONSIBLE FOR ALL COSTS

- 35.1 Issuance of this RFP by VPRA in no way constitutes a commitment by VPRA to award a contract or to pay any costs incurred by an Offeror in the preparation of a response to this RFP. Offerors shall be responsible for all costs associated with participation in this procurement process, including but not limited to the preparation of Proposals, submission of questions, participation in informal interviews, attendance at public forums or other meetings established pursuant to the procurement process, and any other efforts or costs arising from or related to this procurement.

36.0 NO ASSUMPTION OF LIABILITY

- 36.1 In no event shall VPRA be bound by, or liable for, any obligations with respect to the RFP until such time (if at all) a contract, in form and substance satisfactory to VPRA, has been executed and authorized by VPRA and then, only to the extent set forth therein.

37.0 RESERVATION OF RIGHTS

- 37.1 In connection with this procurement, VPRA reserves to itself all rights (which rights shall be exercisable by VPRA in its sole discretion) available to it under applicable law, including without limitation, the following, with or without cause and with or without notice:
- (a) The right to cancel, withdraw, postpone or extend this RFP in whole or in part at any time prior to the execution by VPRA of the Contract, without incurring any obligations or liabilities.
 - (b) The right to issue a new RFP.
 - (c) The right to reject any and all submittals, responses and Proposals received at any time.
 - (d) The right to modify all dates set or projected in this RFP.

- (e) The right to suspend and terminate the procurement process for the Project, at any time.
- (f) The right to waive or permit corrections to data submitted with any response to this RFP until such time as VPRA declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- (g) The right to issue addenda, supplements, and modifications to this RFP.
- (h) The right to permit submittal of addenda and supplements to data previously provided with any response to this RFP until such time as VPRA declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- (i) The right to hold meetings and conduct discussions and correspondence with one or more of the Offerors responding to this RFP to seek an improved understanding of the responses to this RFP.
- (j) The right to seek or obtain data from any source that has the potential to improve the understanding and evaluation of the responses to the RFP, including the right to seek clarifications from Offerors.
- (k) The right to permit Offerors to add or delete firms and/or Key Personnel until such time as VPRA declares in writing that a particular stage or phase of its review has been completed and closed.
- (l) The right to add or delete Offeror responsibilities from the information contained in this RFP.
- (m) The right to waive deficiencies, informalities and irregularities in a Proposal, accept and review a non-conforming Proposal or seek clarifications or supplements to a Proposal.
- (n) The right to disqualify any Offeror that changes its submittal without VPRA approval.
- (o) The right to change the method of award at any time prior to submission of the proposals.
- (p) The right to respond to all, some, or none of the inquiries, questions and/or request for clarifications received relative to the RFP.

38.0 COMPLIANCE WITH LAW IN THE COMMONWEALTH

- 38.1 Failure to comply with the law with regard to those legal requirements in the Commonwealth (whether federal or state) regarding the Offeror's ability to lawfully offer and perform any services proposed or related to the Project may be cause for rejection of an Offeror's Proposal, in the sole and reasonable discretion of VPRA, and in that event an Offeror's Proposal submittal may be returned without any consideration for selection of contract award.

39.0 ETHICS IN PUBLIC CONTRACTING

- 39.1 By submitting their proposals, Offerors certify that their proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other Offeror, supplier, manufacturer or subcontractor in connection with their Proposal, and that they have not conferred on any public employee having official

responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

40.0 REPRESENTATIONS

- 40.1 By submitting a Proposal, Offeror hereby represents and warrants that (1) as of the date hereof, and on and as of the date of the provision of goods or services contemplated herein, the Offeror is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; and (2) the Offeror has the full right, power and authority and has taken all necessary action under the laws of its jurisdiction of organization to authorize it to execute and deliver a Contract, to consummate the transactions contemplated hereby and in the Contract and to perform its obligations thereunder. The Offeror hereby agrees to furnish to VPRA any and all certificates of governmental authorities and/or officers or directors of the Offeror that VPRA may reasonably require in order to confirm the due authorization and execution of the Proposal and the Contract and the Offeror's right, title and authority to perform its obligations under the Contract.

APPENDIX 1 – DEFINITIONS

Amtrak	The National Railroad Passenger Corporation.
Business Days	A Monday, Tuesday, Wednesday, Thursday, or Friday that is not a holiday.
Commonwealth	The Commonwealth of Virginia.
Consultant	The firm selected pursuant to the RFP, which enters into the Contract with VPRA to perform the requisite professional services for Project.
Contract	The written agreement executed between VPRA and the Consultant pursuant to this RFP and which contains the terms and conditions governing the Work.
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.
Designated Contact	The individual designated by an Offeror as the point of contact for communications with VPRA during the procurement (i.e., the person listed in Section B of Form A).
Disadvantaged Business Enterprise (DBE)	A firm certified as a DBE by either DSBSD or MWAA.
Evaluation Team	The individuals who will perform the evaluation and scoring of Proposals.
Evaluation Criteria	The criteria used to score and rank Proposals as set forth in <u>Section 23.4</u> of this RFP.
Fee Schedule	The hourly wage rates and Federal Acquisition Regulation (“FAR”) audited overhead rates submitted by an Offeror and any their sub-offerors as detailed on <u>Form K</u> .
Instructions to Offerors	The part of the RFP stating the submission requirements and evaluation criteria for the selection of the Consultant.
Key Personnel	The individuals specified in <u>Section 22.3 (Tab 2)</u> of this RFP.
Offeror	A professional services entity that submits a Proposal in response to the RFP. Where context dictates, Offeror shall also mean a potential Offeror.
Notice of Intent to Award	The written notification provided by VPRA informing a Offeror that it is the party to whom VPRA intends to award the Contract.
Notice to Proceed	The written notice issued by VPRA authorizing Consultant to proceed with the Work.
Organizational Conflict of Interest Policy	VPRA’s policy governing conflicts of interest, as described further in <u>Section 32</u> of this RFP.
Procurement Schedule	The schedule for this procurement detailed in <u>Section 9.1</u> of this RFP.
Proposal	The response to the RFP submitted by an Offeror.
Sensitive Security Information	The information covered by Title 49 of the Code of Federal Regulations.
SWaM	A firm certified as a Small, Women-Owned, or Minority-Owned Business by DSBSD.
Utility Owner	The owner or operator of any utility.
VA GESC	Vanasse Hangen Brustlin, Inc. (VHB).
Work	The efforts and services to be provided by the Consultant to complete its obligations under the Contract.



**Raleigh to Richmond (R2R)
Virginia Preliminary Engineering Design**

**Exhibit 1
Scope of Work**

December 2023

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1. Overview

1.1. Background

The Raleigh to Richmond (R2R) Corridor is a segment within the Southeast High-Speed Rail (SEHSR) corridor designated by the FRA. The SEHSR Tier I Environmental Impact Statement (EIS) and Record of Decision (ROD) covered the entire Washington, DC to Charlotte, NC corridor at a program level, establishing the overall project purpose and need and modal alternative along with the preferred corridor. FRA advanced several Tier II environmental documents under this Tier I EIS that examined various segments of the preferred corridor on a more detailed, local level. The Tier II Final EIS for the R2R portion of the SEHSR corridor was completed in 2015 and the ROD was issued in March 2017.

The NCDOT's Rail Division recently received two (2) FRA grants to progress the design for the R2R program. These grants include:

- \$48 million Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant for corridor rights-of-way purchase awarded to the North Carolina Department of Transportation (NCDOT) in 2020
- \$58.9 million CRISI grant for survey and preliminary engineering (PE) to begin engineering work on the rail corridor between Raleigh, NC and Richmond, VA awarded to NCDOT in 2022

NCDOT Rail Division and VPRA are working together to deliver the R2R program of projects. This overall program consists of seven tasks: Task 1, Project Development and Administration; Task 2, Survey; Task 3, Design Concept Studies; Task 4, Environmental Screening; Task 5, Operations Analysis; Task 6, Preliminary Engineering; and Task 7, Final Design and Construction of Rogers Road. These tasks cover both the North Carolina and Virginia portions of the R2R Corridor.

The scope of work (SOW) for the Project covers the Virginia portion only of Task 2, Survey, Task 3, Design Concept Studies, and Task 6, Preliminary Engineering of the R2R program of projects.

NCDOT Rail Division is responsible for the administration of the R2R program of projects, as well as the technical development of the North Carolina design. VPRA is responsible for the technical development of the Virginia design. NCDOT Rail Division and VPRA have awarded separate General Engineering Service Consultant (GESC) contracts to consultant firms to oversee design development. Within Virginia, the Virginia GESC (VA GESC), Vanasse Hangen Brustlin, Inc. (VHB), will support VPRA in overseeing the survey, rail design, and roadway design for the Project.

1.2. Objective

The R2R program of projects aims to restore passenger rail service between Raleigh, NC and Richmond, VA through Petersburg, VA while providing a faster (up to 110 mph) and more direct route. The completion of the R2R program of projects will help to address growing transportation demands, provide for potential additional freight rail connections, and replace many at-grade crossings with grade separated crossings, while also improving safety, system resiliency, reliability, and efficiency along the corridor.

The objective of this Project is to build upon previous planning and design efforts along the R2R Corridor in Virginia and sufficiently develop a PE design to support the future advancement of final design and construction activities.

1.3. Project Location

The R2R Corridor is located along both the active and inactive portions of the CSXT S-Line freight corridor from Raleigh, NC, to Petersburg, VA, and a portion of the high-volume CSXT A-Line from Petersburg, VA, to Richmond, VA, a total length of approximately 162 miles (Figure 1). Within the R2R Corridor, the S-Line runs in a north-south direction roughly paralleling interstates I-85 and I-95.

FIGURE 1 – R2R AND OTHER RAIL CORRIDORS IN NORTH CAROLINA AND VIRGINIA



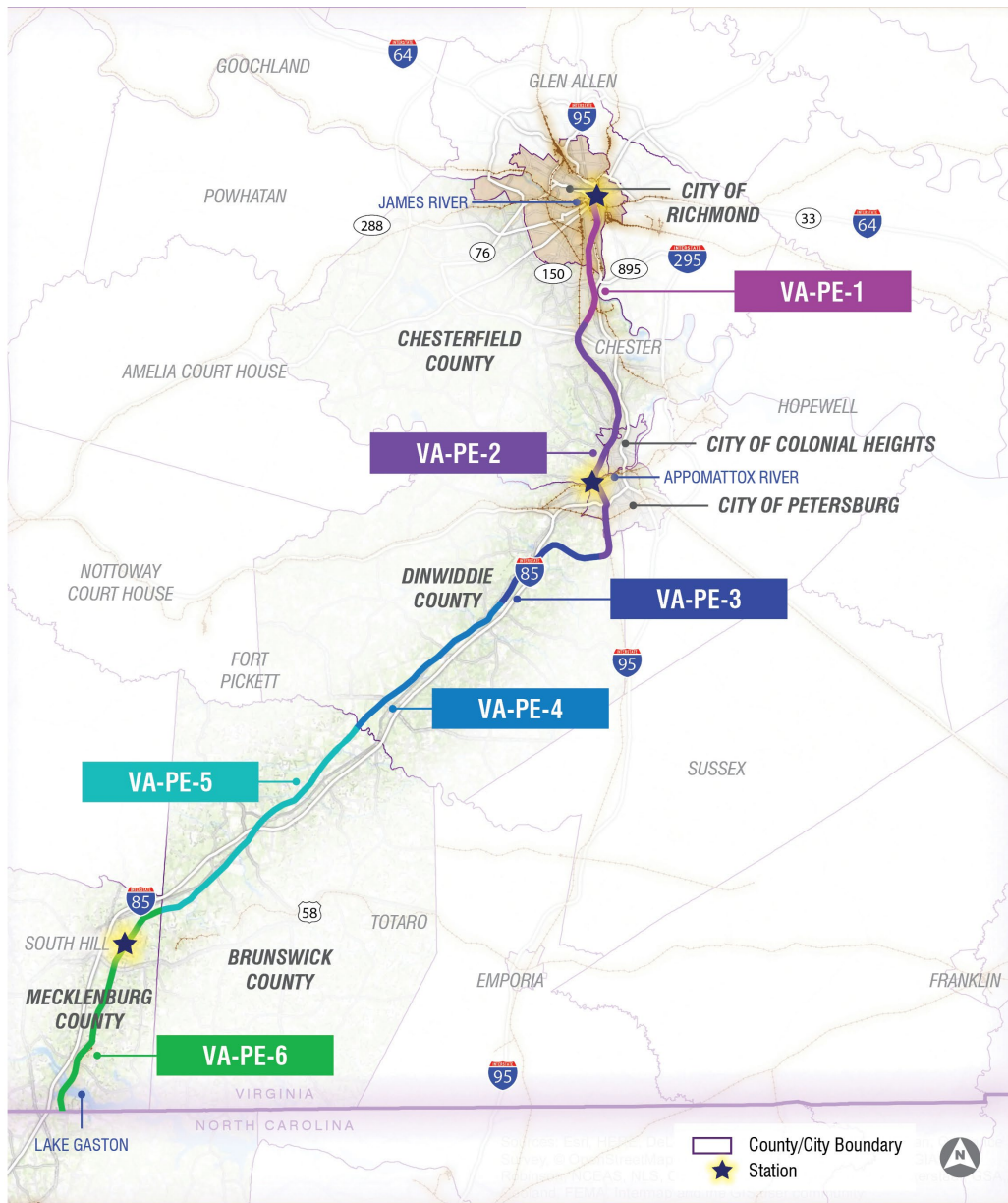
Source: NCDOT Rail Division

In Virginia, the Project starts in Richmond and continues south through Chesterfield, Dinwiddie, Brunswick, and Mecklenburg counties to the Virginia-North Carolina state line. The corridor passes through the Richmond Urbanized Area, including the cities of Richmond, Colonial Heights, and Petersburg as well as rural areas that include the towns of Dinwiddie, Dewitt, McKenney, Rawlings, Kress, Warfield, Alberta, Cochran, La Crosse, and Bracey.

Within Virginia, the Project will be comprised of six (6) Project Segments (Figure 2):

- VA-PE-1 – Richmond to Bellwood
- VA-PE-2 – Bellwood to Petersburg
- VA-PE-3 – Petersburg to Dinwiddie
- VA-PE-4 – Dinwiddie to Warfield
- VA-PE-5 – Warfield to La Crosse
- VA-PE-6 – La Crosse to Paschall

FIGURE 2 – R2R VIRGINIA PROJECT SEGMENTS



1.4. Project Segment Details

Within Virginia, the R2R Corridor is comprised of six (6) Project Segments to allow concurrent design activities to occur and achieve the PE design schedule. Each segment has unique environmental, geographic, and infrastructure features that will need to be considered throughout the design process. A summary of these features is provided in Table 1.

TABLE 1 PROJECT SEGMENT KEY FEATURES

Segment	Track Miles	Key Features
VA-PE-1 Richmond to Bellwood S-0.0 to S-9.8	9.8	<ul style="list-style-type: none"> ▪ Active S-Line corridor ▪ Proposed double tracking of existing single-track S-Line ▪ Proposed connections to existing freight tracks ▪ Proposed at-grade crossings of existing freight tracks ▪ Existing Main Street station platform to remain ▪ Proposed Main Street station platform to be added ▪ Three (3) existing rail yards to remain ▪ Existing viaduct through downtown and over James River ▪ Existing rail bridges over Gordon Ave Ext, a pedestrian underpass, and Marina Dr/Falling Creek ▪ One (1) proposed rail bridge ▪ 10 existing at-grade road crossings to be modified
VA-PE-2 Bellwood to Petersburg S-9.8 to S-26.0	19.9	<ul style="list-style-type: none"> ▪ Active A-Line corridor ▪ Proposed single track adjacent to existing A-Line tracks ▪ Existing Ettrick station to remain ▪ Proposed connections to Collier Yard and existing freight tracks ▪ 15 proposed rail bridges ▪ 11 existing at-grade road crossings to be modified ▪ Three (3) private drive crossings to be removed
VA-PE-3 Petersburg to Dinwiddie S-26.0 to S-40.0	13.5	<ul style="list-style-type: none"> ▪ Inactive S-Line corridor ▪ Proposed single track with passing sidings ▪ Existing rail bridges over Arthur Swamp and Gravelly Run ▪ Six (6) proposed rail bridges ▪ Seven (7) existing at-grade road crossings to be modified ▪ Eight (8) private drive crossings to be removed
VA-PE-4 Dinwiddie to Warfield S-40.0 to S-51.0	10.8	<ul style="list-style-type: none"> ▪ Inactive S-Line corridor ▪ Proposed single track with passing sidings ▪ Existing rail bridges over Great Creek and Nottoway River ▪ Eight (8) existing at-grade road crossings to be modified ▪ Seven (7) private drive crossings to be removed

	Segment	Track Miles	Key Features
VA-PE-5	Warfield to La Crosse S-51.0 to S-73.3	21.2	<ul style="list-style-type: none"> ▪ Inactive S-Line corridor ▪ Proposed single track with passing sidings ▪ Existing rail bridge over Meherrin River ▪ Six (6) Five (5) proposed rail bridges ▪ 19 existing at-grade road crossings to be modified ▪ 17 private drive crossings to be removed
VA-PE-6	La Crosse to Paschall S-73.3 to S-90.7	17.2	<ul style="list-style-type: none"> ▪ Inactive S-Line corridor ▪ Proposed single track with passing sidings ▪ Proposed La Crosse station ▪ Existing rail bridge over Lake Gaston ▪ Four (4) proposed rail bridges ▪ 14 existing at-grade road crossings to be modified ▪ 18 private drive crossings to be removed

NOTES:

1. Existing rail bridges and viaducts will require inspection and determination on suitability for future use. This work will be performed by the Consultant.
2. The existing at-grade road crossings are currently under study by the VA GESC. Depending on the results of the study, at-grade road crossings may remain at-grade, be converted to a grade separated crossing, or be closed. The results of the study will be provided to the Consultant after Notice to Proceed (NTP).
3. The number of private drive crossings is approximate, and the final count will be dependent on field verification.
4. Track miles are approximate.

2. Description of Work

The work effort for the Project Segments includes survey, design concept studies, and PE for both rail and roadway to support advancing the delivery of intercity passenger rail within the R2R Corridor. This section describes the scope of services for project management, project controls, stakeholder coordination, survey, design concept studies, and PE tasks pertaining to each of the six (6) Project Segments. Successful completion of the work includes on-time, formal submittals of survey, design concept studies, and PE plans for VPRA, NCDOT Rail Division, VDOT, and stakeholder review. In addition, these activities will be used to advance permitting and approvals necessary for project delivery. Each task described below includes additional details on the required submittals and other deliverables.

The following professional and technical services will, if needed, be provided separately by NCDOT Rail Division, VPRA, and/or others, or be performed during a future project phase. They are not part of this Project's Scope of Work:

- Railroad agreements
- Railroad signal engineering (Consultant will coordinate with Amtrak)
- Environmental planning (NEPA)
- Permitting
- GeoEnvironmental services
- ~~Highway traffic signal design~~
- Diagnostic Team Crossing Evaluation in accordance with FHWA's Highway-Rail Crossing Handbook
- Hazardous materials testing and abatement
- Right-of-way acquisition
- Construction management

While the SOW detailed in Section 2 Description of Work pertains to each of the six (6) Project Segments, each segment will be designed under a separate contract.

2.1. Project Management and Coordination

The objective of this task is to support VPRA in the oversight and execution of technical and administrative functions needed to keep the Project on schedule, within budget, and maintain compliance with all applicable requirements. All management, administrative, financial, accounting, and reporting procedures will be in accordance with Virginia law.

2.1.1. PROJECT MANAGEMENT PLAN

Within the first 14 calendar days following NTP or by the Project Segment kickoff meeting, whichever is earlier, the Consultant shall submit a detailed Project Management Plan (PMP) for VPRA review and approval. This PMP shall describe roles and responsibilities and establish protocols and procedures for internal and external coordination, as well as protocols/procedures/templates for invoicing, progress reporting, administrative record filing

(both emails and hard copies), communications, and other management-related operations. The PMP shall follow the guidance set forth by FRA in *MP 20 - Project Management Plan (PMP) Review* (<https://www.fra.dot.gov/eLib/Details/L16051>) in terms of structure and content.

At a minimum, the PMP shall include the organization chart, a list of Key Personnel and other Consultant staff, a contract schedule and budget breakdown. The PMP will be a living document and shall be updated and submitted to VPRA for review at key milestones or at VPRA's request.

Project Management Plan Deliverables:

- Project Management Plan (updated as required)

2.1.2. QUALITY ASSURANCE / QUALITY CONTROL

NCDOT 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 R2R program of projects. NCDOT has also developed a program-level S-Line Document Management Standard Operating Procedure (SOP) that establishes the overall document control procedures and review processes to be adhered to for the R2R program of projects.

Within the first 21 calendar days following NTP, the Consultant shall develop a project-level Quality Control Plan ("QCP"), including detailed quality assurance/quality control (QA/QC) procedures that are consistent with or equal to the framework outlined in the QMP and S-Line Document Management SOP. The QCP shall define the procedures for providing quality control reviews of all deliverables, providing quality assurance throughout the life of the Project, and maintaining quality records. The QCP shall ensure conformance with all applicable design criteria, standards, and requirements. A process shall be established to ensure non-conforming work, information, and documents are not used. QCP procedures shall also apply to all subconsultants or subcontractors.

The work under this section will consist of:

- Preparation and submission of the project QCP, as described above, for approval including updates as required throughout Project delivery
- Quality assurance reviews of project deliverables by the Project QC administrator for adherence to QCP procedures

QA/QC Deliverables:

- Quality Control Plan (updated as required)
- Record copies of quality assurance reviews and findings

2.1.3. RISK MANAGEMENT

VPRA will provide the Consultant(s) with a draft Risk and Contingency Management Plan (RCMP) and risk register template for the Project. The draft RCMP describes how risks will be identified, analyzed, assessed, and monitored during the project. The draft RCMP and risk register template provided are based on the general procedures outlined in FRA's *MP 40a – Risk and Contingency Review*.

After the Draft PE Design Submittal has been completed, the Consultant shall prepare and submit to VPRA a Project Segment specific RCMP that consists of the draft risk register and an initial risk management strategy that includes a mitigation plan to manage the impact of each unexpected event should it occur. The draft risk register will:

- Identify potential risks
- Identify the entity responsible for each risk
- Identify parties other than the risk owner that are affected by each risk
- Evaluate each risk based on probability and severity levels

Prior to the completion of PE, the Consultant shall hold a formal Risk Assessment Workshop with VPRA that the Consultant shall use to further inform the RCMP. The Consultant shall incorporate elements from the risk assessment into the design deliverables, where applicable. The workshop will provide a more rigorous probabilistic analysis of the cost and schedule impact and provide additional input to the RCMP. The RCMP and workshop shall be used to determine the required amount of cost and schedule contingency necessary at the PE level. The Consultant shall apply the risk contingency to the construction cost estimate.

Risk Management Deliverables:

- Draft Project Segment RCMP, including risk register and risk management strategy
- Risk Assessment Workshop
- Final Project Segment RCMP, including risk register and risk management strategy

2.1.4. COORDINATION MEETINGS

The Consultant shall meet with entities (VPRA, NCDOT Rail Division, VA GESC, VDOT, and Amtrak) involved with the R2R program as required to coordinate project progress, identify and resolve potential design issues, coordinate the PE design, and engage stakeholders. The Consultant shall:

- Schedule meetings
- Prepare meeting materials (e.g., agendas, presentations, etc.) at least one (1) business day in advance of the scheduled meeting
- Attend meetings and facilitate the discussion
- Prepare summary meeting notes within three (3) business days after the meeting

The Consultant shall participate in the following meetings throughout the length of the Project:

- One (1) kickoff meeting with VPRA and the VA GESC within two (2) weeks of NTP
- Project management coordination meetings with VPRA and the VA GESC held every other week
- Design coordination meetings with VPRA, VA GESC, and other stakeholders held every other week, or as directed by VPRA

Coordination Meeting Deliverables:

- Meeting materials
- Summary meeting notes

2.1.5. RAILROAD COORDINATION AND TRAINING

In Project Segments where access to railroad right-of-way is required the Consultant shall be responsible for:

- Complying with all aspects of the Right of Entry and PE agreement between VPRA and CSXT.
- Handling the costs for flaggers, field construction inspectors (FCI), and any other fees requested by CSXT.
- Securing and maintaining the minimum CSXT insurance requirements for work within the railroad right-of-way.
- Obtaining mandatory CSXT Roadway Worker Protection Training for every employee that will enter the railroad right-of-way.
- Performing daily coordination with FCI personnel to schedule the area/areas in which surveys will be performed.
- Being accompanied by FCI for any work within the Railroad right-of-way.

Additionally, survey crews will not be allowed to foul the tracks. Fouling would be occupying a space within four (4) feet of the edge of the rail. The Consultant will be allowed to cross over the track but not to walk down the middle of it, stop and stand within four (4) feet of the edge of the rail, set up targets/instruments within four (4) feet of the rail or stop and take shots along the rail. If it becomes necessary to foul the track it will require permission and guidance from CSXT.

2.1.6. PROJECT ADMINISTRATION AND MANAGEMENT

The Consultant shall submit the PMP and detailed PE design schedule within 14 calendar days of NTP or by the Project Segment kickoff meeting, whichever is earlier. The schedule shall contain the activities, tasks, events, meetings, reviews, and deliverables for the duration of the Project Segment. Within the schedule, the Consultant shall provide a clear timeline for completion of deliverables and adhere to the schedule. The Consultant shall complete all deliverables for the Project Segment by the end of December 2025. The schedule shall be reviewed by VPRA. The Consultant shall address the review comments, update the schedule, and resubmit to VPRA.

It is the responsibility of the Consultant to propose recovery measures, mitigate delays, and update the schedule and logic of activities to avoid delays to the critical path and maintain the schedule.

In addition, this task will include:

- Overall technical direction and oversight of the Consultant's team
- Monthly progress reports, schedule updates, and invoicing; VPRA will provide the Consultant sample progress reports and invoices for use on this project

- Electronic 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, CADD, etc.) and PDF format
- File management and user management for the Consultant's work on the VA GESC-provided ProjectWise site

Project Administration and Management Deliverables:

- PE design schedule
- Monthly progress reports, schedule updates, and invoicing
- Electronic records of all deliverables (native and PDF files)

2.2. Stakeholder and Public Outreach

The Consultant shall coordinate a public outreach strategy with VPRA's External Affairs and Communication department prior to undertaking activities to ensure consistent messaging. The Consultant shall follow guidance established for the R2R program of projects and/or in the Transforming Rail in Virginia Communications Plan and Style Guide(s), in addition to prevailing state and local legal requirements for public information.

Public and Agency Contact Lists

The Consultant shall develop and maintain a Project Segment specific public contact list and a separate agency contact list, comprised of stakeholders or other interested parties. Templates for these lists will be provided by VPRA. The Consultant shall circulate a signup sheet at all in-person events/meetings and update the contact lists as needed. The Consultant shall provide attendee contact information to VPRA to be added to the program-level public contact list and agency contact list. The final lists will be maintained by VPRA.

Public Meetings

The Consultant shall support public meetings to provide an overview of the R2R program as well as detailed information for the Project Segment. The meetings are intended to present Project Segment design plans and receive public comment. The Consultant shall follow guidance provided in the Transforming Rail in Virginia Communications Plan and Style Guide. The Consultant shall provide meeting promotional materials and Project Segment information to support VPRA's public notification process. The public information 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. Consultant staff shall attend the public meetings in-person.

Public Outreach Deliverables:

- Public contact list, in electronic format
- Agency contact list, in electronic format
- Contact information of in-person meeting attendees
- Public meeting materials

2.3. Survey

VPRA will provide preliminary mapping including planimetrics, DTM, and orthophotos from survey flown in early spring 2022. The Consultant shall complete supplemental survey and base mapping to support the railroad and roadway PE design within the Project Segment. The survey and mapping collection shall include detail and deliverables consistent with standard industry practice, the tasks listed below, and the following information:

- Horizontal Datum: NAD83/2011 (epoch 2010.00)
- Vertical Datum: NAVD88
- Zone: Virginia South (4502)
- Geoid Model: Geoid 18
- Units: U.S. Survey Feet
- All work on or near CSXT property shall be conducted in accordance with CSXT safety rules and regulations. Operations will be subject to CSXT inspection at any and all times.
- All traffic control shall be conducted in accordance with VDOT's *Work Zone Safety Guidelines for Temporary Traffic Control*
- All survey and mapping shall comply with VDOT's Survey Manual Rev. August 2021 (https://www.virginiadot.org/business/locdes/survey_manual.asp), VDOT's Location & Design LD-436 Quality Control Checklist (<https://www.formalu.com/forms/89151/quality-control-checklist>) and VDOT's *CADD Manual: Location and Design Division, Rev. April 2021* (https://www.virginiadot.org/business/locdes/vdot_cadd_manual.asp)
- All survey topographic information must comply with the Model Virginia Map Accuracy Standards and the National Map Accuracy Standards for the scale of mapping (https://www.vita.virginia.gov/media/vitavirginiagov/it-governance/psgs/pdf/Model-Virginia-Map-Accuracy-Standards-Guideline-OTH701_March-2009.pdf)

Task 1: Property Owner Contact

Property owner contact letters and Project information sheets will be mailed by VPRA. The Consultant will be provided copies of the letters and information sheets. Field crews shall keep copies in vehicles at all times to present/provide to property owners as needed for incidental cases. During the initial site visit, the Consultant is expected to make personal contact where applicable. Care shall be taken to not disturb or damage personal property, paths, crops, etc.

Task 2: Property Owner Research

The Consultant will complete deed and plat research on properties within the Project Segment. The Consultant will develop a Deed Book file and a Map Book file with the research results which shall include separate deed and plat PDFs for each property as well as an index.

Task 3: Terrestrial Mobile LiDAR (TML) – Project Segments VA-PE-1 and VA-PE-2 only

The Consultant will perform rail digital terrain model (DTM) data collection via a TML scan on all existing rail lines within the Project Segment. The Consultant will perform ground truthing on the TML data. The Consultant will merge the VPRA-provided preliminary mapping with the

Consultant-collected TML and conventional data to produce the final terrain model and best fit alignments.

Task 4: Field Surveys

- **Pavement DTMs** – The Consultant will perform Pavement DTM data collection of all existing roadway crossings. For Project Segments VA-PE-1 and VA-PE-2, Mobile Scan (MS) pavement data will be limited to at-grade rail crossing areas captured during the rail TML scan. The Consultant will supplement conventional pavement DTM data with rail TML data to complete the pavement DTM mapping throughout the Project Segment limits. Coverage should extend to overlap the MS to ensure sufficient data is captured for merging. Pavement shots are required at 50-foot intervals and supplemented as needed per terrain. Edge of Pavement (EOP) and Edge of Travel (EOT) shots are required at locations where the paved shoulder is two (2) feet or greater.
- **Earth DTMs (including obscured areas)** – The Consultant will collect check shots to supplement the TML data and the VPRA-provided preliminary mapping to complete the DTM mapping throughout the Project Segment limits. The top of bank along ditches/creeks/rivers can be used as checks. Survey data outside of the provided Project Segment limits shall not be included in the final terrain model deliverable unless the areas have been field verified. Planimetric data may be shown past the Project Segment limits where needed for informational purposes/clarity but shall be classified. Contours crossing buildings do not need to be clipped.
- **Hydrographic DTMs** – The Consultant will perform DTM data collection of hydrographic (water features) within the Project Segment limits. This includes survey of existing creek crossings, cross ditches, and lateral field ditches, as well as bridge seat locations at existing bridges. Roadside ditches shall be mapped from the preliminary mapping/LiDAR, unless determined by inspection to have been recently upgraded and/or prone to holding water. In addition, all paved roadside ditches shall be field located and shown in the final survey to replace any preliminary mapping paved ditch locations.
- **Planimetric Features** – The Consultant will locate any planimetric features not captured on the VPRA-provided preliminary mapping/LiDAR. The Consultant will obtain the vertical clearance on any overhead transmission lines that could potentially conflict with future design considerations. The clearance should reference lowest point and be labelled in the final survey file.
- **Underground (U/G) Storm Utilities** – The Consultant will field locate and provide pipe size/inverts for any storm water features to include storm manholes, catch basins, drop inlets, etc. within the Project Segment limits in accordance with VDOT Hydro guidelines. Carry one structure past Project Segment limit. Revise shell mapping structure locations with actual field located data.
- **Gravity Sanitary Sewer Utilities** – The Consultant will field locate any gravity sanitary sewer features to include manholes, cleanouts, etc. within the Project Segment limit in accordance with VDOT guidelines. Carry one structure past Project Segment limit. The Consultant will use as-builts to verify top of lid elevations and provide computed inverts on any Sealed or “Hot” Sewer Lines with bolted lids.

Task 5: Compute Best-Fit Alignments

The Consultant will generate best-fit alignments on all existing rail lines and roadways within the Project Segment. The alignments will be computed from existing plans where available using existing structures as constraints if feasible. MS data and/or conventional survey DTM locations will be used to generate best-fit alignments where no plans are available. Rail alignments shall be computed using cord definition. All best-fit alignments should be established within 0.5 foot of the mean centerline between the existing EOPs. Alignment numbering and stationing will increase from North to South (or East to West) to mimic the railroad mile markers. The Consultant will provide a stand-alone 2D Alignment and Property ORD CADD reference file.

Task 6: Property Recon and Tie Down

The Consultant will use deeds, plats, and field located evidence to accurately depict each property within the Project Segment limits. The Consultant will locate property monumentation and tie down all properties within the Project Segment limits (all front property corners plus back corners if reasonably accessible or as needed to compute property as accurately as possible). Smaller properties shall be closed out in the property file where reasonable using recorded deeds/plats. Existing right-of-way shall be established paralleling the computed existing centerline alignments using widths determined by existing as-built plans, found monumentation, or other pertinent sources. The Consultant will provide a stand-alone 2D Alignment and Property ORD CADD reference file and a 2D Parcel Polygon ORD CADD File.

Task 7: Subsurface Utility Engineering (SUE)

The Consultant will perform a Quality Level "D" SUE investigation. To streamline Project coordination with the Utility Owners, the VA GESC will perform records research and provide the information to the Consultant. The Consultant will determine the existence of utilities throughout the Project Segment limits. The Consultant will verify, cross reference, and integrate record data with survey point attributes above-ground appurtenance and produce a stand-alone 2D SUE (Quality Level "D") ORD CADD reference file depicting the location of record utilities. The Consultant will document utility owner information in a report (*.pdf).

For each utility identified in a Project Segment, the report shall include the location (by Mile Post or stationing), name of the utility owner and contact information (if known or ascertainable), a brief description of the utility (aerial or underground, type, size/capacity, and material where ascertainable) and the utility's interaction with the Project (whether a crossing or parallel) for all utilities within 200 feet of all likely work areas in a Project Segment. The report shall be in the format of a plan set, basic utility matrix, and narrative report, which together contain the required information.

Task 8: Development of Survey Files

The Consultant shall develop the survey files identified below for use in the PE design. The files will be produced as 2D and 3D ORD CADD files at a scale of 1" = 50', and shell mapping classification shall be per VDOT's *CADD Manual: Location and Design Division, Rev. April 2021*.

- Reference 3D Conventional Survey (all other conventional survey data) file
- 3D Final Survey file
- 3D Existing Complex Terrain Model file

- Reference 2D Survey Limits Polygon
- DGN. attestations (*.pdf) signed & sealed by PLS
- Survey Report (*.pdf) signed & sealed by PLS

Survey Deliverables:

- Bi-weekly progress reports
- Deed Book file with index in alphabetical order (*.pdf)
- Map Book file with index in numerical order (*.pdf)
- Reference 2D Property and Alignment file
- Reference 2D Parcel Polygon for Deed Draft
- Reference 2D SUE file
- Utility Owner's Information (*.pdf)
- Reference 2D Survey Limits Polygon
- Reference 3D Conventional Survey (all other conventional survey data) file
- 3D Final Survey File
- 3D Existing Complex Terrain Model File
- DGN. attestations (*.pdf) signed & sealed by PLS
- Survey Report (*.pdf) signed & sealed by PLS

2.4. Design Concept Studies

This task includes reviewing the conceptual designs and public hearing maps prepared for the Tier II EIS/ROD to identify any changes in existing conditions and validate the location and configuration of infrastructure elements. The Consultant shall develop design concepts for select infrastructure elements when identified as warranted by VPRA during the design concept study process. The new or modified design may include, but not be limited to track alignment, passing sidings, overhead or undergrade roadway or railroad bridges, proposed station sidings or platforms. The Consultant shall prepare conceptual design study documents (roll maps) for FRA review prior to beginning PE.

Design Concept Studies Deliverables:

- Conceptual design study roll maps illustrating the design that will be progressed into PE

2.5. Preliminary Engineering

This task includes advancing the existing conceptual level design, completed as part of the Final EIS, to a PE design set for all elements of the Project Segment. The Final EIS is located at ([SEHSR cover2015v3.pdf \(ncdot.gov\)](#)). PE is generally defined as 30% plans. The PE design shall include detail and deliverables consistent with standard industry practice, the Project Segment description of work, and the list below.

- The PE design shall establish the Project's horizontal alignment, vertical alignment, and typical sections for the rail and roadway designs.
- The PE design shall be consistent with the approved Railroad Basis of Design (BOD) and Roadway BOD documents and adhere to all applicable design criteria including, but not limited to, Amtrak Track Design Criteria Specification No. 63, American Railway Engineering and Maintenance-of-Way Association's (AREMA) Manual for Railway Engineering (April 2023), CSXT Design and Construction Standard Specifications (June 5, 2018), and VDOT manuals and standards (latest date as of NTP).
- The PE design shall comply with all Project Commitments identified in the 2015 Final EIS.
- The PE design shall be completed in Bentley's OpenRoads Designer, OpenRail Designer, and OpenBridge Designer (ORD), shall use the VA GESC-provided ORD workspace, and shall comply with VDOT's *CADD Manual: Location and Design Division, Rev. April 2021*.
- All Project files shall be stored on the VA GESC-provided ProjectWise site.

The Consultant shall provide a Draft and Final PE Design Submittal, which will include design drawings, the ORD model, recommended updates to the BOD documents, and construction cost estimate. All submittals must follow the program-level S-Line Document Management Standard Operating Procedure (SOP) that establishes the overall document control procedures and review processes to be adhered to for the R2R program of projects.

The Consultant shall provide VPRA with one (1) electronic copy of the drawings (*.pdf), BOD, specifications outline, and cost estimate deliverables at each submission. The Consultant shall provide all CADD files and the ORD model with each submission.

2.5.1. GEOTECHNICAL EXPLORATION PROGRAM

Identification of subsurface conditions and the related geotechnical risks is needed to inform the decision of feasibility for design elements. The Consultant shall develop a Preliminary Geotechnical Exploration Plan for foundation support for rail and roadway bridges and retaining walls (if applicable), which shall include one to two (1-2) borings per structure. The Consultant shall submit the Preliminary Geotechnical Engineering Exploration Plan to VPRA for review.

After VPRA approves the Preliminary Geotechnical Engineering Exploration Plan prepared by the Consultant, the Consultant shall execute the approved subsurface exploration plan including, but not limited to, field work, lab analysis, and preparing foundation recommendations for rail and roadway bridges and retaining walls (if applicable). The execution of the subsurface exploration program shall be supervised by a Professional Engineer licensed in the Commonwealth of Virginia. The Consultant shall document the findings from the field exploration in a Geotechnical Engineering Report.

Subsurface exploration requirements shall be developed considering the following publications. Where requirements conflict with each other, the Consultant shall coordinate with VPRA to confirm the stricter requirements are desired:

- VDOT Materials Division Manual of Instructions, latest date as of NTP
- AREMA Manual for Railway Engineering, dated April 2023

Geotechnical Exploration and Design Deliverables:

- Preliminary Geotechnical Engineering Exploration Plan
- Geotechnical Engineering Report

2.5.2. RIGHT-OF-WAY DOCUMENTATION

Some land may be required from adjacent property owners. The Consultant shall develop a Project Segment limit of disturbance (LOD) as part of the PE design that identifies property needed for the Project Segment. The LOD will support VPRA's future negotiation for property acquisition. No property acquisitions will be performed during this phase of the Project.

The Consultant shall identify ROW impacts to adjacent landowners based on the PE design and shall prepare a GIS shape file identifying the proposed impacts within the Project Segment. A ROW impact is defined as a parcel where land acquisition, temporary easement, or permanent easement is required. Permanent easements may include utility, drainage, ROW, and line-of-sight easements as well as construction, staging, and maintenance easements. Temporary easements may include construction, staging, and laydown area easements. The Consultant shall identify properties where acquisitions and/or easements may be required and make every effort to minimize ROW impacts, including temporary construction easements. The Consultant shall also prepare a GIS-based cost estimate for the anticipated ROW impacts.

ROW Acquisition Deliverables:

- ROW impact GIS shape file
- ROW cost estimate

2.5.3. BASIS OF DESIGN DOCUMENTS

The Railroad BOD and Roadway BOD documents are intended to promote consistency in design delivery and to identify design criteria requirements. VPRA will provide an initial draft of the Railroad BOD and the Roadway BOD documents. The Consultant shall use these documents to guide the approach to the PE design. The Consultant shall be responsible for recommending updates to the Railroad BOD and Roadway BOD documents and ensuring the Project Segment design is consistent with the final versions of the Railroad BOD and Roadway BOD documents.

BOD Document Deliverables:

- Recommended updates to the Railroad BOD
- Recommended updates to the Roadway BOD

2.5.4. RAILROAD DESIGN

Railroad design work shall include horizontal track alignments and vertical profiles that maximize operating speeds, efficiency, maintainability, and safety while minimizing impacts on the environment, third parties, ROW requirements, existing railroad operations during construction, and costs. For Commonwealth-owned infrastructure, the design shall follow Amtrak design criteria, supplemented with CSXT Design and Construction Standards, and AREMA Manual for Railway Engineering recommended practices. The design shall comply with all FRA regulations.

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

- Horizontal alignments

- Vertical profiles
- Track geometry
- Typical sections
- Cross sections (at 50-foot intervals and critical locations)
- Grading and drainage
- Bridge and retaining wall locations (if applicable)
- Special trackwork (such as turnouts, at-grade rail crossings, etc.)
- Proposed track changes, including removals and installations
- Preliminary passenger platform locations and configurations
- Track charts
- Limit of disturbance
- Public utility conflicts/relocations

Railroad Design Deliverables:

- General sheets (title sheet, index of drawings, symbols and abbreviations, and general notes)
- Track geometry data sheets
- Railroad plan and profile sheets
 - Horizontal alignments with stations, rail centerlines, tangent bearings, track centers, and curve data (chord definition)
 - Vertical profiles with stations, proposed grades, and curve data
 - Special trackwork
 - Proposed track changes, including removals and installations
 - Preliminary passenger platform locations and configurations
 - Horizontal and vertical clearances
 - Existing survey and aerial feature lines gray-scaled in the background on the plan view
 - Public and private at-grade crossing locations
 - Major cross-drainage structures with stations, descriptions, and inverts
 - Bridge structures (if applicable)
 - Retaining walls with stations and descriptions (if applicable)
 - Existing ROW limits and proposed impacts
- Typical sections sheets

- Cross section sheets (at 50-foot intervals and critical locations)
- Design exceptions
- ORD 3D model

2.5.5. ROADWAY DESIGN

This task will define the roadway design requirements for the grade separated crossings, at-grade crossing closures, road closures, and roadway realignments. The Consultant will prepare the roadway design for to the Public Hearing (PH) level in accordance with VDOT's Location & Design LD-436 Quality Control Checklist (<https://www.formalu.com/forms/89151/quality-control-checklist>).

The roadway design plans shall be developed to provide the following information in accordance with the current VDOT Road Design Manual for the functional classification of each roadway:

- General plan and typical sections
- Horizontal alignment
- Vertical profiles with stations, proposed grades, and curve data
- Pedestrian facilities, where requested
- ROW impacts
- Traffic signing, signal, lighting, and striping
- Drainage structures and networks
- Public utility conflicts/relocations
- Cross sections (50-foot intervals and critical locations)

Roadway Design Deliverables:

- General sheets (index of drawings, symbols and abbreviations, and general notes)
- Roadway geometry data sheets
- Roadway plan and profile sheets
 - Horizontal alignments with stations and curve data
 - Vertical profiles with stations, proposed grades, and curve data
 - Horizontal and vertical clearances
 - Existing survey and aerial feature lines gray-scaled in the background on the plan view
 - Major drainage structures and networks with stations, descriptions, and inverts
 - Pedestrian facilities
 - Bridge structures (if applicable)

- Retaining walls with stations and descriptions (if applicable)
- Limit of disturbance
- Typical section sheets
- Signing and marking sheets
- Cross sections (at 50-foot intervals and critical locations)
- Design exceptions
- ORD model

2.5.6. STRUCTURES

This task will define the structural requirements for at grade separations (rail and roadway bridges), drainage, and waterway crossings.

Task 1: Structural Inspections

The Consultant shall inspect the existing rail bridges proposed to be retained in the Final EIS document. Any additional rail bridges to be retained by the Consultant's design shall also be inspected. The Consultant shall assume that previous inspection reports and plans will not be available.

The scope of the bridge inspection(s) shall follow the current AREMA Bridge Inspection Handbook. The inspection will include a comprehensive visual examination of the bridge structure, including the superstructure, substructure, and deck and will comply with the following:

- The inspection team will be composed of qualified and experienced personnel who are trained in accordance with AREMA guidelines
- Where inspections are performed on CSXT property, inspectors shall have completed the CSXT Operating Rules Test, CSXT Safety Rules, and Roadway Worker Protection training
- Specialized equipment and tools, including binoculars, ladders, and drones will be used to inspect the bridge(s); access for large equipment will be limited
- Structural deficiencies, including cracks, corrosion, and deformation will be identified
- The bridge's load-carrying capacity, alignment, and stability will be evaluated
- The scope of the inspection will be limited to the visual examination of the bridge and will not include any destructive testing or analysis
- Bridges crossing streams will require underwater inspections as necessary

The Consultant shall prepare a Bridge Inspection Report including a detailed description of the bridge's condition and any identified deficiencies. The report shall describe defects requiring repair and repair concepts for each defect with estimated repair quantities, as well as the rating of the bridge's condition based on the Railroad BOD.

Task 2: Structural Design

The Consultant shall prepare a bridge type, size, and location (TS&L) report, along with bridge plans for PE for proposed rail and roadway bridges, as well as any existing bridges identified as

requiring replacement under Task 1. The structural design shall be developed to provide the following bridge plan information:

- General plan, elevation, and transverse section
- Proposed superstructure including type, number of girders, and structure depth
- Proposed substructure including a typical plan and elevation view for abutment and piers
- Horizontal alignments
- Vertical profiles
- Minimum vertical and horizontal clearances (existing and proposed)
- Minimum waterway width and height from the Mean High-Water Level
- Typical sections
- Soil and foundation type considerations
- Retaining walls (location, type, and height)
- Limit of disturbance
- Public utility conflicts/relocations
- Phasing to maintain operations during construction including any temporary structures (if applicable)

Structures Deliverables:

- Bridge Inspection Report
- Bridge TS&L report
- General sheets (index of drawings, symbols and abbreviations, and general notes)
- Bridge plan and elevation
- Bridge transverse section (existing & proposed)
- Bridge construction phasing concept
- Retaining wall envelopes and typical sections
- ORD model
- Design exceptions

2.5.7. CIVIL ENGINEERING

Proper drainage from railroads and roadways is critical to providing safe conditions and maintaining transportation infrastructure. The hydraulic design shall be coordinated with the rail and roadway design to ensure that both the recommended horizontal and vertical alignments can meet all regulatory requirements, including but not limited to, environmental permitting and Federal Emergency Management Agency (FEMA) compliance. If any major drainage structures are encountered along the corridor, the Consultant shall prepare a Hydrology and Hydraulic

report and make a preliminary size and material recommendation for the proposed crossing. Minor drainage structures will be sized during final design.

In conjunction with the development of the rail and roadway design plans, rail corridor and roadway grading plans shall be prepared. The Consultant also shall prepare Erosion and Sediment Control Plans 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 the current *Virginia Department of Environmental Quality Erosion and Sediment Control Handbook*.

All current federal, state, 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). Additionally, 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, CSXT Design and Construction Standard Specifications, and the *Virginia Stormwater Management Handbook*. If differences exist between the above-stated regulations, the more stringent of the regulations shall apply.

Civil Engineering Deliverables:

- Hydrology and Hydraulics Report (major drainage structures only)
- General sheets (index of drawings, symbols and abbreviations, and general notes)
- Grading plans
- Erosion and sediment control plans
- ORD model

2.5.8. PRELIMINARY UTILITY COORDINATION

The Consultant shall be responsible for the following preliminary utility coordination services required for the Project Segment.

Task 1: Utility Owner Meetings

The Consultant shall participate in meetings with the utility owners to discuss utility facilities in the Project Segment area and vicinity. These meetings may be held jointly with other Project Segments to streamline coordination with the utility owners. The VA GESC will be the main point of contact for the utility owners and will coordinate the meetings with the utility owners. In these meetings the Consultant shall:

- Explain the Project Segment scope and location
- Explain the projected schedule and expected project duration
- Gather the following data from the utility owner:
 - Type, size, and function of all facilities in the Project Segment area
 - Critical facilities that have restrictions on service interruption for relocation or may be difficult to relocate
 - Facilities with a high cost of relocation

- Off-site work required to perform relocation on the Project Segment
- Factors that may affect the Project Segment schedule, such as lengthy design times, need to establish a construction budget, long-lead times when ordering materials, or long times between construction of the new facilities and abandonment of the old facilities.
- Preliminary estimation of durations for the relocation of critical facilities with the understanding that it is to be further refined as the overall Project Segment design develops and actual impacts identified and evaluated
- Discuss the expected impact of each of the utility facilities on the Project Segment and the impact of the Project Segment on the utility facilities

Task 2: Preliminary Utility Investigations

Using the information collected from the utility owners, the Consultant shall analyze reasonably expected conflicts between existing and planned utilities and the Project Segment design. The Consultant shall:

- Update and maintain the Utility Conflict Matrix to include a full inventory of utilities encountered in the Project Segment; VPRA has developed an initial Utility Conflict Matrix that includes utility information gathered to-date from previous studies. The matrix will be provided to the Consultant
- Perform site inspections and prepare field notes and sketches (if needed)
- Provide a preliminary estimate for utility relocation costs
- Analyze risks to the Project Segment budget
- Identify facilities to avoid, and facilities that may be relocated, without significant burdens to the utility or the Project Segment
- Provide relocation durations of critical facilities as provided by the utility owners, even if identified as a facility to avoid in case Project Segment conditions prohibit avoidance
- Identify whether construction of utility relocation may be necessary outside of the study area

Task 3: Utility Risk Analysis and Inventory

The Consultant shall provide a Utility Risk Analysis and Inventory Report that:

- Provides an inventory of utilities and facilities in the Project Segment (i.e., Utility Conflict Matrix)
- Includes the information provided by the utility owners
- Makes recommendations to reduce risk or budget, including a strategy for possible relocations and/or utilities to avoid
- Includes a preliminary schedule for the utility designs and relocations
- Includes an opinion of likely cost responsibility (for budgeting purposes); this is not intended to require an analysis of data or documents

Preliminary Utility Coordination Deliverables:

- Updated Utility Conflict Matrix
- Utility Risk Analysis and Inventory Report

2.5.9. VALUE ENGINEERING

The Consultant shall host one value engineering workshop with VPRA, NCDOT, and the VA GESC for the Project Segment. The workshop will occur prior to the Draft 30% PE submittal. The intent of the workshop is to analyze, optimize, and enhance the value of the Project Segment by identifying opportunities for cost reduction, performance improvement, and risk mitigation.

Value Engineering Deliverables:

- Documentation of identified value engineering recommendations

2.5.10. TECHNICAL SPECIFICATIONS

The VA GESC will provide a draft 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 specifications are required for the Project Segment, not necessary for the Project Segment, or need modification to be applicable to the Project Segment, respectively.

Technical Specifications Deliverables:

- Specification Matrix recommendations

2.5.11. CONSTRUCTION COST ESTIMATE

The Consultant shall use the FRA Standard Cost Category (SCC) Worksheet to prepare a Construction Cost Estimate based on quantities from the Draft PE Design submittal. The cost estimate should be supplemented with estimated quantities for major categories not included in the PE 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, signal design (provided by Amtrak), 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.

The construction cost should include, but not be limited to, major items such as railroad, roadway, bridges, retaining walls, major drainage, environmental mitigation, and utilities. 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 (in applicable Project Segments). 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 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 FRA SCC Worksheet, 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 Capital Cost Estimating Guidance. The Consultant shall coordinate with the VA GESG regarding unit costs, contingency, and escalation to ensure cost consistency for the overall R2R program.

The Consultant shall submit the Construction Cost Estimate and Cost Estimate and Unit Cost Methodology Memorandum with the Draft and Final PE Design submittals.

Construction Cost Estimate Deliverables:

- Construction Cost Estimate
- Cost Estimate and Unit Cost Methodology Memorandum