

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC – 2018

PROTECTIVE COATING OF STRUCTURES

PROPOSAL DOCUMENTS
CONTRACT AND CONTRACT BOND
SUPPLEMENTAL SPECIFICATIONS
SPECIAL PROVISIONS
NO REPAIR PLANS
RECORD PLANS

HNTB Corporation

January 2018

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC - 2018

PROTECTIVE COATING OF STRUCTURES

INSTRUCTIONS TO BIDDERS

1. FORM OF BID: Submit bid, on forms furnished by the Authority, without alterations in the form. When completing bid, please notice the unit (Lump Sum, Each, Square Foot, etc...) of the individual line item and enter unit and total bid item prices accordingly. Make sure to enter total bid amount at bottom of bid and double check math.

If applicable, Contractor shall replace any original bid tab sheets with replacement bid tab sheets issued through an Addendum.

- a. Required Forms: The following list of required forms to be included in bid is provided for Contractors reference only:
 - i. Bid
 - ii. Non-Collusion Affidavit
 - iii. Statement of Contracts Underway
 - iv. Joint Venture Statement (if applicable)
 - v. Bridge Cleaning and Coating Bidder Experience
 - vi. Bridge Cleaning and Coating Bidder Superintendent Experience
 - vii. Bid Bond
 - viii. Receipt of Addenda (if applicable)
 - ix. In addition, include proof of SSPC QP-1 & QP-2 certification.
 - x. CSXT Schedule I
2. SUBMISSION OF BID: Make sure bid is received by the Authority prior to time and date listed on the Invitation To Bid. Bidder is responsible for delivery of the bid at or before the time set for opening. Bids not received at or before the time set will be rejected.

If mailing, please write "Attention: RMTA PC – 2018 Contract Bid Opening" on outside of envelope or on mailing label.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

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PROTECTIVE COATING OF STRUCTURES

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018

PROTECTIVE COATING OF STRUCTURES

INVITATION TO BID

The Richmond Metropolitan Transportation Authority (RMTA), 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219 until 10:00 a.m. local time, will receive sealed Proposals for the above project Thursday February 22, 2018, at which time and place the bids will be publicly opened and read.

The work under this contract shall be completed no later than September 30, 2019. The principal items of work and approximate quantities are as follows:

Full Bridge Coating (Bridge 63, Type B)	L.S.
Full Bridge Coating (Bridge 64, Type B)	L.S.
Full Bridge Coating (Bridge 65, Type B)	L.S.
Full Bridge Coating (Bridge 66, Type B)	L.S.
Full Bridge Coating (Bridge 67, Type B)	L.S.
Full Bridge Coating (Bridge 68, Type B)	L.S.
Miscellaneous Coating (Various Locations) - 1100 SF	S.F.

A mandatory pre-bid meeting will be held at 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219 at 10:00 a.m. local time, on Thursday January 18, 2018. A mandatory site visit shall immediately follow the office portion of the pre-bid meeting. Only contractors and qualified subcontractors, who meet the requirements to propose, as stated below, should attend the pre-bid meeting.

Bids for this Contract must be submitted on complete bidding forms bound in the Contract documents. The successful bidder will be notified in writing.

To submit Proposals for this Contract, contractors shall, on Thursday January 18, 2018 at 10:00 a.m. local time, meet the following requirements:

- Be prequalified by the Virginia Department of Transportation for bidding on State projects under the “**Painting of Bridges & Structures**” classification.
- Be Steel Structures Paint Council (SSPC) QP-1 and QP-2 certified and be prepared to assign an SSPC Supervisor/Competent person to oversee activities to protect the environment throughout the project. Alternatively, the Contractor can employ a Certified Industrial Hygienist (CIH) currently certified by the American Board of Industrial Hygiene to perform the aforementioned oversight activities in lieu of the SSPC QP-2 certification and SSPC Supervisor/Competent person requirement.
- Have prior experience in the cleaning and coating of Type B classified highway bridge structures using SSPC SP-10 “Abrasive Blast Cleaning.” Contractor shall be able to provide written documentation demonstrating the successful completion of cleaning and coating of no less than 150,000 square feet of Type B bridge steel superstructure surfaces using these methods. Prospective bidders must be able to certify that superintendents available for this work have served in responsible charge over cleaning and coating of Type B Bridges totaling no less than 75,000 square feet.

Note that a bidder must have prior experience and be able to provide written documentation in the experience categories as noted above. A bidder cannot have subcontractors be the documented experience in all categories. **Bidder must perform a minimum of 30 percent of contract value.**

Complete Contract documents will be available on Tuesday January 9, 2018 after 1:00 p.m. (local time) from www.rmaonline.org or may be purchased for \$60.00 per set from the Richmond Metropolitan Transportation Authority at 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219. The documents may also be examined by any party, without purchase, at the Authority’s office during normal business hours after such date. Specifications (Virginia Department of Transportation “Road and Bridge Specifications”, 2016) which form an integral part of this Contract, are available from the Virginia Department of Transportation.

Unsubmitted Contract documents need not be returned and no refunds will be made for any documents.

Each Bidder submitting a Proposal must also complete a statement bound with the Proposal forms, in which each Bidder shall give full information relating to the status of their contracts presently underway.

Each Proposal must be accompanied by a Proposal Guarantee consisting of either a certified check in the amount of at least five (5) percent of the Total Bid Price, made payable to the Richmond Metropolitan Transportation Authority, or a Proposal Bond (on the form provided) in the amount of five (5) percent of the same Total Bid Price.

The Authority strongly encourages the submission of bids by contractors whose principal businesses are located in the Richmond Metropolitan Area and further strongly encourage such contractors to utilize the services of local subcontractors and vendors.

The Authority strongly encourages minority owned and women owned businesses to submit proposals for this contract.

The Authority reserves the right to reject any and all Proposals submitted, and to waive informalities in bidding, as it may deem in its best interests.

Project related inquiries must be submitted in writing to Mr. Mark Grossenbacher, P.E. at HNTB Corporation at mgrossenbacher@hntb.com or Ms. Theresa Simmons, P.E., RMTA Director of Operations at theresa.simmons@rmtaonline.org. The deadline to submit inquiries and questions is Friday, February 15, 2018 at 1:00 p.m. local time.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY
Joi T. Dean
CEO
Richmond, Virginia

(Note: Bidders shall not remove this Bidding form from attached documents.)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC - 2018

PROTECTIVE COATING OF STRUCTURES

BID FOR GENERAL CONSTRUCTION CONTRACT

To the Richmond Metropolitan Transportation Authority
901 East Byrd Street, Suite 1120
Richmond, Virginia 23219

Gentlemen:

I/we, the undersigned, declare: that no other person, firm or corporation is interested in this Bid; that I/we have carefully examined the Plans, Standard Specifications, Supplemental Specifications, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ourselves, upon award to me/us by the Richmond Metropolitan Transportation Authority under this Bid, to enter into and execute a Contract, with necessary surety bond, for the project named above; that I/we agree to start work not later than the date stated in the written Notice to Proceed (Sec. 105.01 of the Specifications), to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to fully complete the entire project by September 30, 2019; and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the following named unit and lump sum prices for the various scheduled items of work.

The quantities shown in the above schedule of items are considered to be approximate only and are given as the basis for comparison of bids. The Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. The Authority reserves the right to delete, in whole or in part, without prejudice prior to the award of the Contract, any items listed in the Bid. It is understood that payment for unit price items will be made for the actual quantities of such work satisfactorily completed, rather than the estimated quantities given hereinabove, An increase or decrease in the quantity for any unit price item will not be regarded as sufficient ground for an increase or decrease in the unit price, nor in the time allowed for the completion of the work, except as provided for in the Specifications.

The cost of any work performed, materials furnished, services provided or expenses incurred, whether or not specifically delineated in the Contract document but which are incidental to the scope, intent and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a Proposal Guaranty (Sec. 102.07 of the Specifications) consisting of either a certified check in the amount of at least (5) percent of the Total Bid Price for this Contract or a Bid Bond (Elsewhere herein) in the amount of (5) percent of the same Total Bid Price. It is hereby understood and agreed that said check or bond is to be forfeited as described in the Bid Bond, in the event that, on the basis of this Bid, the Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the required progress schedule, proof of proper insurance coverage and other necessary documents, all within the prescribed time (Sec. 103.07 of the Specifications); otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder _____

Type of Organization Individual
 Partnership
 Corporation

Virginia Contractor Registration No. _____

Address of Bidder: _____

Signature of Owner, Partner or Corp. Officer: _____

Title: _____

Date: _____

Witness or Attest _____

(Affix Corporate Seal Here)

NOTE: ONLY A PREQUALIFIED BIDDER MAY
USE THIS BIDDING FORM. BIDDING FORMS ARE
NOT TRANSFERABLE.

PC-2018 BID TAB

(_____) (INSERT BIDDER FIRM NAME HERE)

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	SPECIFICATION
1	MOBILIZATION	L.S.	1			513
2	ELECTRONIC ARROW	HR.	450			512
3	GROUP 2 CHANNELIZING DEVICES	DAY	1,300			512
4	TRUCK MOUNTED ATTENUATOR	HR.	450			512
5	FLAGGER SERVICE	HR.	500			512
6	MAINTENANCE OF TRAFFIC, BRIDGE 63	L.S.	1			512
7	MAINTENANCE OF TRAFFIC, BRIDGE 64	L.S.	1			512
8	MAINTENANCE OF TRAFFIC, BRIDGE 65	L.S.	1			512
9	MAINTENANCE OF TRAFFIC, BRIDGE 66	L.S.	1			512
10	MAINTENANCE OF TRAFFIC, BRIDGE 67	L.S.	1			512
11	MAINTENANCE OF TRAFFIC, BRIDGE 68	L.S.	1			512
12	FULL BRIDGE COATING (BRIDGE 63, TYPE B)	L.S.	1			231 / 411 / ATTD.
13	FULL BRIDGE COATING (BRIDGE 64, TYPE B)	L.S.	1			231 / 411 / ATTD.
14	FULL BRIDGE COATING (BRIDGE 65, TYPE B)	L.S.	1			231 / 411 / ATTD.
15	FULL BRIDGE COATING (BRIDGE 66, TYPE B)	L.S.	1			231 / 411 / ATTD.
16	FULL BRIDGE COATING (BRIDGE 67, TYPE B)	L.S.	1			231 / 411 / ATTD.
17	FULL BRIDGE COATING (BRIDGE 68, TYPE B)	L.S.	1			231 / 411 / ATTD.
18	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 63, TYPE B)	L.S.	1			411
19	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 64, TYPE B)	L.S.	1			411
20	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 65, TYPE B)	L.S.	1			411

PC-2018 BID TAB

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	SPECIFICATION
21	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 66, TYPE B)	L.S.	1			411
22	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 67, TYPE B)	L.S.	1			411
23	ENVIRONMENTAL PROTECTION AND HEALTH SAFETY (BRIDGE 68, TYPE B)	L.S.	1			411
24	DISPOSAL OF MATERIAL (BRIDGE 63, TYPE B)	L.S.	1			411
25	DISPOSAL OF MATERIAL (BRIDGE 64, TYPE B)	L.S.	1			411
26	DISPOSAL OF MATERIAL (BRIDGE 65, TYPE B)	L.S.	1			411
27	DISPOSAL OF MATERIAL (BRIDGE 66, TYPE B)	L.S.	1			411
28	DISPOSAL OF MATERIAL (BRIDGE 67, TYPE B)	L.S.	1			411
29	DISPOSAL OF MATERIAL (BRIDGE 68, TYPE B)	L.S.	1			411
30	RAILWAY COORDINATION SERVICE (BRIDGE 63, SPAN 23)	L.S.	1			ATTD
31	RAILWAY COORDINATION SERVICE (BRIDGE 64, SPANS 2, 9)	L.S.	1			ATTD
32	RAILWAY COORDINATION SERVICE (BRIDGE 65, SPAN 10, 13)	L.S.	1			ATTD
33	RAILWAY COORDINATION SERVICE (BRIDGE 67, SPANS 1,7,8,10)	L.S.	1			ATTD
34	RAILWAY COORDINATION SERVICE (BRIDGE 68, SPANS 1, 4, 7)	L.S.	1			ATTD
35	PARAPET WALL COATING	S.Y.	4,555			ATTD
36	MISCELLANEOUS COATING	S.F.	1,100			411 / ATTD

Total

(SIGN HERE)

(INSERT HERE)

Signature of Owner, Partner, or Corporate Officer:

Title:

RICHMOND EXPRESSWAY SYSTEM

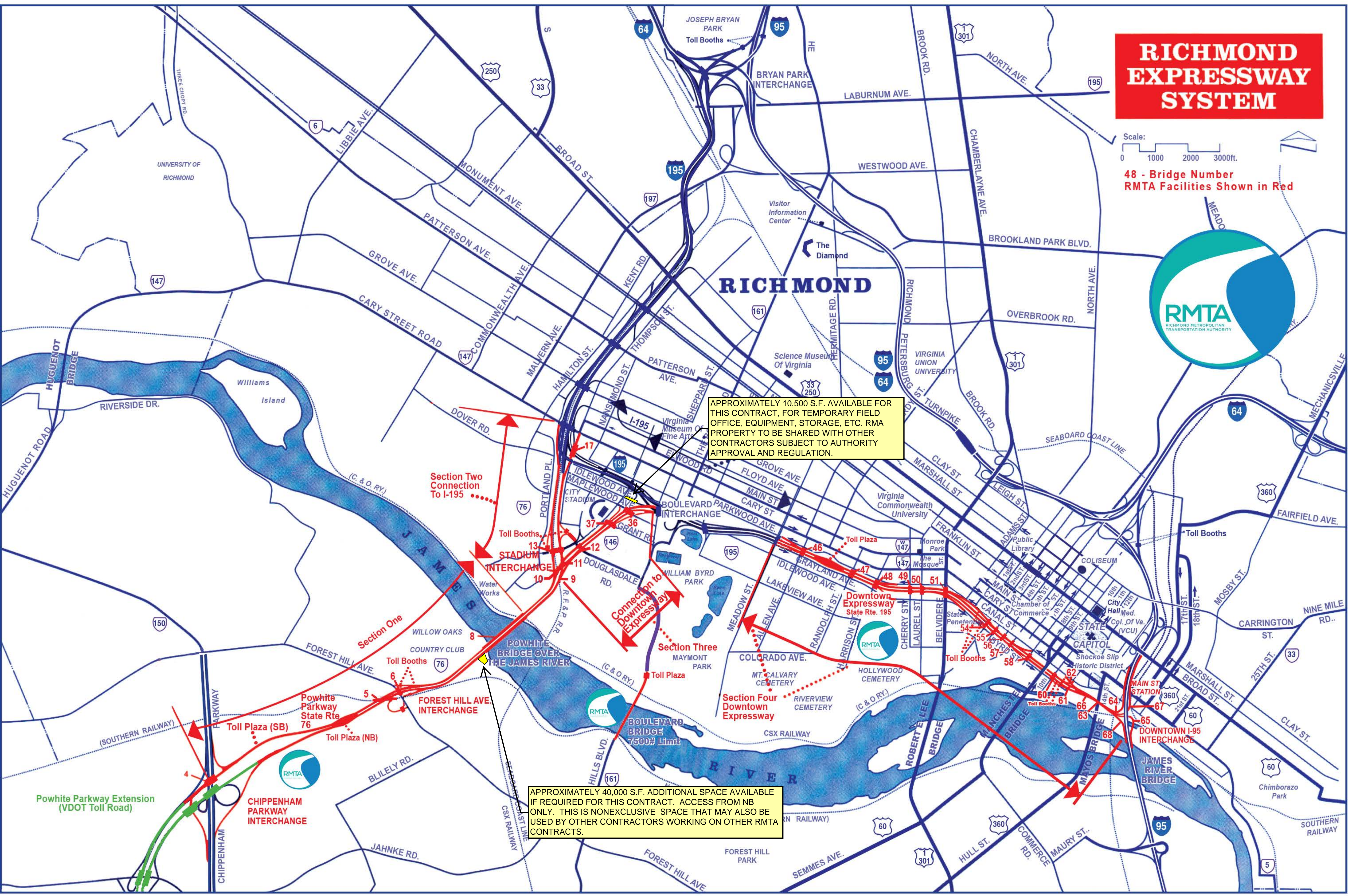
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48 - Bridge Number
RMTA Facilities Shown in Red



APPROXIMATELY 10,500 S.F. AVAILABLE FOR THIS CONTRACT, FOR TEMPORARY FIELD OFFICE, EQUIPMENT, STORAGE, ETC. RMA PROPERTY TO BE SHARED WITH OTHER CONTRACTORS SUBJECT TO AUTHORITY APPROVAL AND REGULATION.

APPROXIMATELY 40,000 S.F. ADDITIONAL SPACE AVAILABLE IF REQUIRED FOR THIS CONTRACT. ACCESS FROM NB ONLY. THIS IS NONEXCLUSIVE SPACE THAT MAY ALSO BE USED BY OTHER CONTRACTORS WORKING ON OTHER RMTA CONTRACTS.



Powhite Parkway Extension (VDOT Toll Road)

CHIPPENHAM PARKWAY INTERCHANGE

Section One
Powhite Parkway State Rte 76
Toll Plaza (SB)
Toll Plaza (NB)
FOREST HILL AVE. INTERCHANGE

Section Two
Connection To I-195
Toll Booths
STADIUM INTERCHANGE

Section Three
MAYMONT PARK
Toll Plaza
BOULEVARD BRIDGE OVER THE JAMES RIVER
7500# Limit

Section Four
Downtown Expressway
Toll Plaza
Toll Booths

Section Five
DOWNTOWN I-95 INTERCHANGE
Toll Booths

Section Six
JAMES RIVER BRIDGE
Toll Booths

Section Seven
MAYOS BRIDGE
Toll Booths

Section Eight
ROBERT LEE BRIDGE
Toll Booths

Section Nine
MANCHESIE BRIDGE
Toll Booths

Section Ten
HULL ST. INTERCHANGE
Toll Booths

Section Eleven
COMMERCIAL INTERCHANGE
Toll Booths

Section Twelve
MAURY ST. INTERCHANGE
Toll Booths

Section Thirteen
DOWNTOWN I-95 INTERCHANGE
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Section Fourteen
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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC- 2018

PROTECTIVE COATING OF STRUCTURES

NON-COLLUSION AFFIDAVIT

STATE OF _____)
) ss.
COUNTY OF _____)

I, _____, of the City
of _____, County of _____ and State of
_____, being of full age and duly sworn according to law on my oath
depose and say:

That I am _____(Title) of
_____, the Bidder making
the Bid submitted to the Richmond Metropolitan Transportation Authority, on the _____ day of
_____, 20____, for Contract No. Protective Coatings-2018 in connection with the
Richmond Expressway System; that I executed the said Bid with full authority to do so;

The said Bidder has not, directly or indirectly, entered into any combination or
arrangement with any person, firm or corporation or entered into any agreement, participated in
any collusion, or otherwise taken any action in restraint of free, competitive bidding or which
would increase the cost of construction or maintenance in connection with the said Contract; that
no person or selling agency has been employed or retained to solicit or secure the said Contract
upon an agreement or understanding for a commission, percentage, brokerage or contingent fee,
except bona fide full-time employees;

And that said Bidder is or has been a member of the following highway contractors' association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed
before me this _____
day of _____,
20__.

By: _____ (L.S.)

Person Signing Bid

Print Name: _____

Notary Public

My commission expires:

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC – 2018

PROTECTIVE COATING OF STRUCTURES

STATEMENT OF CONTRACTS UNDERWAY

The following is a tabulation of all contracts in which I/we am/are engaged as of the date given below, whether as a prime contractor or as a subcontractor. This tabulation includes not only contracts which are under construction, but also those awarded to me/us but not begun, and those on which I/we am/are the lowest bidder awaiting formal award.

<u>Contract Designation</u>	<u>City and State</u>	<u>Owner</u>	<u>Estimated Value of Work Remaining to be Completed</u>	<u>Estimated Completion Date</u>

Total: \$

NOTE: Contracts in which the remaining work in each amounts to less than \$25,000 may be combined into one entry under the fourth column and designated as "Miscellaneous" in the first column.

If more space is needed, attach additional sheet(s).

The undersigned guarantees the accuracy and completeness of all the information given above.

Business Name of Bidder: _____

Address of Bidder: _____

Signature of Owner,
Partner or Corp. Officer: _____

Title: _____

Date: _____

Witness or Attest:

(Affix Corporate Seal Here)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018

PROTECTIVE COATING OF STRUCTURES

JOINT VENTURE STATEMENT

STATE OF _____)
_____) ss.
COUNTY OF _____)

We, the undersigned, being duly sworn according to law, upon our respective oaths depose and say that:

1. The following named contractors have entered into a Joint Venture for the purpose of carrying out all the provisions of Contract No. PC-2018 for the above project:

- | | |
|-----------|--|
| (a) _____ | <input type="checkbox"/> An Individual
<input type="checkbox"/> A Partnership
<input type="checkbox"/> A Corporation |
| (b) _____ | <input type="checkbox"/> An Individual
<input type="checkbox"/> A Partnership
<input type="checkbox"/> A Corporation |
| (c) _____ | <input type="checkbox"/> An Individual
<input type="checkbox"/> A Partnership
<input type="checkbox"/> A Corporation |

2. The contractors, under whose names we have affixed our respective signatures, have duly authorized and empowered us to execute this Joint Venture Statement in the name of and on behalf of such contractors for the purpose herein above stated.

3. Under the provisions of such Joint Venture, the assets of each of the contractors named in Paragraph 1 hereof, and in case any contractor so named above is a partnership, the assets of the individual members of such partnership, will be available for the performance of such Joint Venture and liable therefore and for all obligations incurred in connection therewith.

4. The assets and liabilities of the named contractors for whom we respectively execute this Joint Venture Statement are set forth in the statements given to the Virginia Department of Transportation in our prequalification questionnaire(s).

5. This Joint Venture Statement is executed so that the named contractors, as one organization, may, under such Joint Venture, bid upon said Contract, and be awarded the Contract if they should become the successful bidder therefore. Any bid, bond and agreement relating to said Contract shall be executed by any of the undersigned, and when so executed shall bind this Joint Venture and each and every contractor named herein, severally and jointly. Simultaneously with the execution of the Contract, the contractors entering into this Joint Venture shall designate and appoint a Project Supervisor to act as their true and lawful agent with full power and authority to do and perform any and all acts or things necessary to carry out the work set forth in said Contract.

6. We bind the contractors for whom we respectively execute this Joint Venture Statement in firm agreement with the Richmond Metropolitan Transportation Authority that each of the representations herein set forth is true.

Subscribed and sworn to before me, (a) _____
this _____ day of _____ Name of Contractor
_____, 20__.

By _____ (L.S.)
Notary Public Print Name:
My commission expires _____ Title:

Va. Contractor Reg. No. _____

Subscribed and sworn to before me,
this _____ day of
_____, 20__.

Notary Public

My commission expires _____

(b) _____
Name of Contractor

By _____ (L.S.)
Print Name:

Title: _____

Va. Contractor Reg. No. _____

Subscribed and sworn to before me,
this _____ day of
_____, 20__.

Notary Public

My commission expires _____

(c) _____
Name of Contractor

By _____ (L.S.)
Print Name:

Title: _____

Va. Contractor Reg. No. _____

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC - 2018

PROTECTIVE COATING OF STRUCTURES

BRIDGE CLEANING AND COATING EXPERIENCE - BIDDER

In addition to the bidding requirements stated elsewhere in these contract documents, prospective bidders must have successfully completed bridge cleaning and coating projects, utilizing SSPC SP-10 "Abrasive Blast" cleaning methods of Type B classified bridges, where the cumulative cleaning and coating surface area is a minimum of 150,000 Square Feet. This form is provided to bidders for them to demonstrate that experience, and must be submitted by the bidders, bound in this proposal.

BRIDGE CLEANING AND COATING EXPERIENCE – PROJECT #1

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING EXPERIENCE – PROJECT #2

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING EXPERIENCE – PROJECT #3

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING EXPERIENCE – PROJECT #4

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC - 2018

PROTECTIVE COATINGS OF STRUCTURES

BRIDGE CLEANING AND COATING EXPERIENCE – BIDDER SUPERINTENDENT

In addition to the bidding requirements stated elsewhere in the contract documents, prospective bidders must have on-staff, currently employed Construction Superintendents who have supervised and completed bridge cleaning and coating projects, utilizing SSPC SP-10 “Abrasive Blast” cleaning methods of Type B classified bridges, where the cumulative cleaning and coating surface area is a minimum of 75,000 square feet. This form is provided to bidders for them to demonstrate employee/supervisor experience, and must be completed and submitted by all bidders bound in this proposal.

BRIDGE CLEANING AND COATING SUPERINTENDENT EXPERIENCE– PROJECT #1

Superintendent’s Name _____

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING SUPERINTENDENT EXPERIENCE- PROJECT #2

Superintendent's Name _____

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING SUPERINTENDENT EXPERIENCE- PROJECT #3

Superintendent's Name _____

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

BRIDGE CLEANING AND COATING SUPERINTENDENT EXPERIENCE- PROJECT #4

Superintendent's Name _____

Job Location(s)/Description(s): _____

Total Square Feet of Surface Area: _____

Owner/Contact Information: _____

Phone Number: _____

Approximate Date(s) of Project: _____

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC – 2018

PROTECTIVE COATING OF STRUCTURES

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that _____
_____, as Principal/Contractor, and
_____, as Surety, legally authorized to do
business in the Commonwealth of Virginia, are held and firmly bounded unto the Richmond
Metropolitan Transportation Authority, as Authority, in the amount of FIVE (5) PERCENT OF
THE DOLLAR VALUE OF THE TOTAL AMOUNT WRITTEN IN THE BID, on which the
Contract is awarded lawful money of the United States of America, for the payment of which, well
and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and
assigns, jointly and severally and firmly by these presents:

WHEREAS, the Contractor is herewith submitting its Bid for Contract No. PC-2018
entitled Protective Coating of Structures, in connection with the Richmond Expressway System;
and

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall be
awarded the Contract upon said Bid and shall, within fifteen (15) calendar days after the date of
written notice of such award, enter into and deliver a Contract and the prescribed Contract Bond
for the faithful performance of the Contract, together with the required proof of proper insurance
coverage and other necessary documents, then this obligation shall be null and void; otherwise, to
remain in full force and effect, and the Contractor and Surety will pay unto the Authority the
difference in money between the amount of the Total Amount written in the Bid of said
Contractor and the amount for which the Authority may legally contract with another party to
perform the said work, if the latter amount be in excess of the former; but in no event shall the

Surety's liability exceed the penal sum hereof.

SIGNED AND SEALED this _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR

Business Name

Address

Witness or Attest:

By: _____ (L.S.)

Title:

(Affix Corporate Seal Here)

SURETY:

Business Name

Address

Witness or Attest:

By: _____ (L.S.)

Title:

(Attach evidence of Power of Attorney)

(Affix Corporate Seal Here)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC - 2018

PROTECTIVE COATING OF STRUCTURES

CONTRACT AGREEMENT

THIS AGREEMENT, made this ____ day of _____, 20 ____, between the Richmond Metropolitan Transportation Authority, 901 East Byrd Street, Suite 1120, Richmond, Virginia, 23219, hereinafter called the Authority and _____, or his, its or their successors, executors, administrators and assigns, hereinafter called the Contractor.

WITNESSETH, that the Contractor agrees with the Authority for the consideration herein mentioned, and at his, its or their own proper cost and expense, to do all the work and furnish all the materials, equipment, teams and labor necessary to prosecute and complete and to extinguish all liens therefore, Contract No. PC - 2018, entitled Protective Coating of Structures, in the manner and to the full extent as set forth in the Special Provisions, Plans, Supplemental Specifications, 2016 Road and Bridge Specifications of the Virginia Department of Transportation, Bid (for the basis of award stated herein below) and other documents related to said Contract which are on file at the office of the Richmond Metropolitan Transportation Authority and which are hereby adopted and made part of this Agreement as completely as if incorporated herein, and to the satisfaction of the Richmond Metropolitan Transportation Authority or its duly authorized representative who shall have at all times full opportunity to inspect the materials to be furnished and the work to be done under this Agreement. In the event of a conflict among the Contract Documents, the Contract Documents shall control one over another in the following descending order of precedence: Special Provisions, Plans, Supplemental Specifications, 2016 Road and Bridge Specifications of the Virginia Department of Transportation, Bid and other documents related to said Contract.

This Contract is awarded on the basis of the Total Bid Price (based on Bid quantities) of _____ dollars and _____ Cents (\$ _____).

In consideration of the foregoing premise, the Authority agrees to pay the Contractor for all items of work performed and materials furnished at the unit and lump sum prices bid therefore in the Bid submitted for this Contract, subject to any percentage reductions in the total Contract amount that may be named in the Bid corresponding to the basis of award stated in the above paragraph, and subject to the conditions set forth in the Specifications.

The Contractor agrees as follows:

Indemnification: The Contractor shall indemnify and hold harmless Richmond Metropolitan Transportation Authority, and all officers, directors and employees of the named entity, (individually and collectively), from any and all liability, loss, damage, expense, cause of action, suits, claims or judgments arising from injury to person or property resulting from activity arising out of this contract; and shall, at its own cost and expense, defend any and all suits which may be brought against such parties, either alone or in conjunction with others upon any such liability or claim or claims and shall satisfy, pay and discharge any and all judgments and fines that may be recovered against such parties in any such action or actions, provided, such indemnity shall not extend to the negligence of such parties and, provided, further, that such parties shall give the Richmond Metropolitan Transportation Authority written notice of any such claim or demand.

Cancellation of Contract: The Authority reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or complete all work tasks in progress prior to the effective date of cancellation.

Term of Contract: Sealed proposals for the above project are due Thursday February 22, 2018, 10:00 a.m. at which time and place the bids will be publicly opened and read. The work under this contract shall be completed no later than September 30, 2019.

Scope of Work: A complete list of all bid items and estimated quantities is included beginning on sheet P-2 in BID FOR GENERAL CONSTRUCTION CONTRACT.

Anti-Discrimination: By submitting their (bids/proposals), (bidders/offerors) certify to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and § 2.2-4311 of the *Virginia Public Procurement Act*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*Code of Virginia*, § 2.2-4343.1 E).

During the performance of this Contract, the Contractor agrees as follows:

- a. I/WE will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor.
- b. I/WE agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- c. I/WE in any solicitations or advertising for employees placed by or on behalf of itself, will state that it is an equal opportunity employer.
- d. Notices and advertisements and solicitations placed in accordance with federal law, rule or regulation, shall be deemed sufficient for the purposes of meeting the requirements of this section.
- e. The Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

To the extent that the Contractor enters into any subcontract or purchase order over Ten Thousand Dollars (\$10,000.00), the provisions of (a), (b) (c) (d) and (e) above shall be binding on each subcontractor or vendor.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement the day and year written above.

RICHMOND METROPOLITAN
TRANSPORTATION AUTHORITY

By: _____
Joi Taylor Dean, CEO

Sworn to and Subscribed
before me this _____
day of _____, 20 _____.

(Authority's Seal)

Notary Public
.My commission expires:

CONTRACTOR:

Business Name

Address

by: _____ (L.S.)
Title

(Affix Corporate Seal Here)

Sworn to and subscribed
before me this _____
day of _____, 20 _____.

Notary Public
My commission expires: _____

EVIDENCE OF CORPORATE AUTHORITY

I, _____, hereby certify that I am Secretary of _____, a Corporation existing under the laws of the State of _____, and that the following resolution was adopted at a meeting of the Board of Directors of the said Corporation duly called and held on the _____ day of _____, 20____, and that the same remains in full force and effect:

(Here insert resolution)

IN WITNESS WHEREOF, I have hereto appended my signature and the seal of the said Corporation on this the _____ day of _____, 20_____.

Secretary

SEAL

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018

PROTECTIVE COATING OF STRUCTURES

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that _____,
_____, as Principal/Contractor, and _____,
as Surety, legally authorized to do business in the Commonwealth of Virginia, are held and firmly
bounded unto the Richmond Metropolitan Transportation Authority (Authority), in the amount
of _____ Dollars
and _____ Cents (\$ _____), lawful money of the United
States of America, for the payment of which, well and truly to be made, we bind ourselves, our
heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these
presents:

WHEREAS, the Contractor has entered into a Contract with the Authority for the faithful
prosecution and completion of a project designated as Contract No. PC - 2018, entitled Protective
Coating of Structures, in connection with the Richmond Expressway System; and

WHEREAS, it was one of the conditions of the Contract award by the Authority pursuant
to which said Contract was entered into, that these presents shall be executed;

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall
faithfully prosecute and complete the entire work prescribed for this project in full compliance with
the terms and conditions of said Contract, including the Plans, Standard Specifications,
Supplemental Specifications, Bid and all other documents pertaining to this Contract, and such
alterations as may be made in said Plans and Specifications as therein provided for, shall indemnify
and save harmless the Authority against or from all costs, expenses; damages injury or loss to which
the Authority may be subjected by reason of any wrongdoing, misconduct, want of care or skill,
negligence or default, including patent infringement, on the part of the Contractor, his agents or
employees, in the execution or performance of said Contract, including errors in drawings
furnished by the Contractor, and shall promptly pay all just claims for damages, for injury to
property, and for labor, materials, equipment rentals, services and other charges incurred by the

Contractor in or about the work contracted for, and extinguish all liens therefore, then this obligation shall be null and void; otherwise, to remain in full force and effect.

SIGNED AND SEALED THIS _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR:

Business Name

Address

Witness or Attest:

By: _____(L.S.)

Title:

(Affix Corporate Seal Here)

SURETY:

Business Name

Address

Witness or Attest:

By: _____ (L.S.)

Title:
(Attach evidence of Power of Attorney)

Countersigned by
Resident Virginia Agent:

(Affix Corporate Seal Here)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018

PROTECTIVE COATING OF STRUCTURES

FINAL RELEASE OF LIABILITY

I/We, _____, hereby certify that all bills, charges and salaries for labor, services, materials and rental of equipment, arising out of the prosecution of the work under Contract/Project No. PC-2018 have been paid, or satisfactory arrangements for payment have been made. I/We further certify that all other just demands and liens relating to this project have been fully satisfied or provided for. I/We hereby release the Richmond Metropolitan Transportation Authority, its Engineers and representatives from all claims demands and liability of whatsoever nature arising from anything done or furnished under this contract except to the extent only as to the following matters for which unresolved claims have been submitted by the Contractor in accordance with Section 105.19 of the Supplemental Specifications of the Contract:

SIGNED AND SEALED THIS _____ day of _____, 20_____.

Business Name

Address

By: _____ (L.S.)

Title: _____

(Affix Corporate Seal Here)

STATE OF VIRGINIA AT LARGE: }
 }
CITY/COUNTY OF } to-wit:

The foregoing instrument was acknowledged before me this ____ day of _____,
20 __, by _____, _____ of
_____ [name] _____ [title]

_____ [business name]

a _____ corporation/partnership, on behalf of said corporation/partnership,
_____ [state]

Notary Public

My Commission expires: _____.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018

PROTECTIVE COATING OF STRUCTURES

SWaM Participation

The Authority strongly encourages the submission of bids by qualified contractors whose principal businesses are located in the Richmond Metropolitan Area and further encourage such contractors to utilize the services of local subcontractors and vendors.

In addition the Authority strongly encourages the submission of bids by qualified contractors certified as Small, Women, and Minority Owned (SWaM) businesses and/or Disadvantaged Business Enterprises (DBE).

Furthermore, the Authority encourages the use of certified Small, Women, and Minority Owned (SWaM) businesses and Disadvantaged Business Enterprises (DBE) as subcontractors or vendors to the fullest extent reasonably possible.

Certification:

The Virginia Department of Small Business and Supplier Diversity is responsible for the certification of eligible small, women, and minority-owned businesses to participate in the SWaM Procurement Initiative. They also certify Disadvantaged Business Enterprises (DBEs) for participation under the Virginia Unified Certification Program (as part of the federal DBE Program). Service Disabled Veterans are also able to obtain SWaM certification upon receipt of their certification by the Department of Veterans Services and by meeting the eligibility requirements of the SWaM Program.

<http://www.dmb.e.virginia.gov/SWaMSearchSub.html>

SWaM Category Type:

(As certified by the Virginia Department of Small Business and Supplier Diversity)

Minority Owned (M)

Small Business (S)

Women Owned (W)

Minority Owned with Small Business Certification (MS)

Women Owned with Small Business Certification (WS)

Other SWaM, DBE, WBE and MBE Programs:

Any contractors, subcontractors or vendors whose principal businesses are located outside the Commonwealth of Virginia must submit information on any business that is qualified as a Small, Women-Owned, Minority Owned and/or Disadvantaged Business Enterprises (DBE) by their home state or any federal program .

SwaM Summary:

As a part of the project closeout process and a prerequisite to final payment, the prime contractor shall submit fully executed pages DBE-3 and DBE-4, along with any additional sheets as needed, to document the actual amounts paid to each SWaM and/or DBE businesses that provided service or products during this execution of the contract.

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____ SWaM Certification Number: _____

Amount Paid: \$ _____

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____ SWaM Certification Number: _____

Amount Paid: \$ _____

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____ SWaM Certification Number: _____

Amount Paid: \$ _____

Contractor shall attach additional sheets if needed.

SIGNED AND SEALED THIS _____ day of _____, 20_____.

Business Name

Address

By: _____ (L.S.)

Title: _____

STATE OF VIRGINIA AT LARGE: }
CITY/COUNTY OF } to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
20____, by _____, _____ of
[name] [title]

[business name]

a _____ corporation/partnership, on behalf of said Corporation/partnership,
[state]

Notary Public

My Commission expires:_____.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC – 2018

PROTECTIVE COATING OF STRUCTURES

RECEIPT OF ADDENDA

I/We hereby acknowledge receipt of the following addenda and have made the necessary revisions to the Contractor's Proposal, plans, and specifications, etc., and agree that these addenda are included in the Contractor's Proposal.

<u>Addenda #</u>	<u>Signature</u>	<u>Date</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

I understand that failure to confirm receipt of addenda may cause the bid to be irregular.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY
SUPPLEMENTAL SPECIFICATIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SPECIFICATIONS

FOR
RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. PC-2018
PROTECTIVE COATING OF STRUCTURES

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SUPPLEMENTAL SPECIFICATIONS

PREFACE:

The 2016 Road and Bridge Specifications of the Virginia Department of Transportation, available from the Virginia Department of Transportation, as amended and augmented by the Supplemental Specifications following, shall govern the construction of this Project and the performance of the Contract. These specifications are hereby made a part of the Contract as fully and with the same effect as if set forth at length herein.

Attention is directed to the fact that any other documents printed by the Virginia Department of Transportation modifying or supplementing said 2016 Road and Bridge Specifications, such as Standard Supplemental Specifications, Special Provisions (by the Department), Notice to Bidders, etc., do not form a part of this Contract nor govern its performance, unless specifically so stated in the Supplemental Specifications herein contained. The 2016 edition of the VDOT "Road and Bridge Standards" are hereby made a part of this contract. The Virginia Erosion and Sediment Control Handbook, Third Edition 1992 Standards and Specifications are hereby made a part of this Contract.

References to "Proposal" have been changed to "Bid" in the Authority's documents for this contract, including many standard VDOT terms such as "Examination of Site of Work and Bid [Proposal]". This shall be accounted for when working contract documents prepared by the Authority with those standards prepared by VDOT.

References made to specific section numbers in these Supplemental Specifications, or in any of the various documents which constitute the complete Contract Documents, shall, unless otherwise denoted, be construed as referenced to the corresponding section of the 2016 Road and Bridge Specifications issued by the Virginia Department of Transportation.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SUPPLEMENTAL SPECIFICATIONS

TO

VIRGINIA DEPARTMENT OF TRANSPORTATION
2016 ROAD AND BRIDGE SPECIFICATIONS

The following provisions represent modifications to the corresponding sections of the Virginia Department of Transportation Specifications, described above, and relate exclusively to the Richmond Metropolitan Transportation Authority Contracts. In case of conflicting requirements between the Virginia Department of Transportation Specifications and these modifications, the modifications shall govern. Any applicable provision in the Virginia Department of Transportation Specifications not amended by and not in conflict with any Supplemental Specifications or Special Provision shall be in full effect.

All modifications contained herein are additions to the provisions of the designated sections of the Virginia Department of Transportation Specifications unless the text specifically identifies a requirement to be an amendment to, deletion of or substitution for a provision in the Virginia Department of Transportation Specifications.

SECTION 101 - DEFINITION OF ABBREVIATIONS, ACRONYMS AND TERMS

101.02 Terms

The following new definitions are added to this section:

ADDENDUM - - A written, fax or e-mail revision or addition to any of the Contract Documents, transmitted in advance of the opening of Bids to all parties who have been recorded by the Authority as having secured full sets of Contract Documents directly from the Authority or their designee.

AUTHORITY - - The Richmond Metropolitan Transportation Authority, a political subdivision and public body corporate and politic of the Commonwealth of Virginia, organized and existing under Virginia Code §§ 33.2-2900 et seq. The Authority's principal office is presently located at 901 East Byrd Street, Suite 1120, Richmond, Virginia, 23219.

AFFILIATE - - Any business entity which is closely associated to another business entity so that one has the power to control the other either directly or indirectly; or, where one business entity systematically shares resources, officers and/or other management with another business entity to the extent that a business relationship legally exists or is publicly perceived to exist; or, when a third party has the power to control both; or, where one business entity has been so closely allied with another through an established course of dealings, including but not limited to the lending of financial wherewithal or engaging in joint ventures, so as to cause a public perception that the two firms are one entity.

AVERAGE ANTICIPATED OPERATING SPEED - - The posted speed of the work zone plus 5 miles per hour as defined in Appendix A of the Virginia Work Area Protection Manual.

MOT - - Maintenance of Traffic

BID BOND - - One of the two permissible means of security offered as the Bid Guaranty, in the form of a surety bond executed by the Bidder and the Contractor's Surety, guaranteeing that if the Authority should award the Contract to the Contractor, the Bidder will execute and deliver the Contract Agreement and Contract Bond, together with other required documents, all within the prescribed time.

STANDARD DRAWINGS - - Whenever the Plans and/or Specifications refer to "Standards" or "Standard Drawings" such reference shall be construed to mean the set of drawings issued by the Location and Design Division, Virginia Department of Transportation, 2016, and entitled "Road and Bridge Standards", Volumes I and II. Only those standards or standard drawings specifically referred to by number on the Plans or in the various Contract Documents are applicable to work on this Contract.

FULL COMPLETION OF ALL WORK (OR TO FULLY COMPLETE ALL WORK) - - The completion of all work specified under this Contract as evidenced by the formal acceptance thereof by the Authority.

WORK AREA PROTECTION MANUAL - - The 2011 Virginia Work Area Protection Manual including Revision 1 (4/2015), and all subsequent revisions.

Whenever in the various Contract Documents the term, "Commission" or "State" appears it shall be replaced by the term, "Richmond Metropolitan Transportation Authority." Similarly, the term, "Commissioner" shall be replaced by the term, "General Manager of the Richmond Metropolitan Transportation Authority," and the term, "Deputy Commissioner" replaced by the term, "Director of Operations of the Richmond Metropolitan Transportation Authority."

Whenever in the Virginia Department of Transportation Specifications and Standard Drawings the term, "Department" or "Virginia Department of Transportation" appears, it shall be replaced by the term, "Richmond Metropolitan Transportation Authority," except in references to said Virginia Department of Transportation as being the author of certain Specifications and Standard Drawings, and in reference to said Department as the agency prequalifying prospective Bidders.

Whenever in the Virginia Department of Transportation Specifications and Standard Drawings the term, "District Engineer" appears, it shall be replaced by the term, "Engineer."

The definitions for the following terms as they appear in this section are deleted and the following definitions substituted therefore:

CONTRACT TIME - - Each calendar date indicated in the Specifications or Special Provisions as the time allowed for the completion of any designated portion or for all of the work under the Contract, including any extensions thereto that may subsequently be authorized.

ENGINEER - - The authorized representative(s) of the firm of the General Consultant, HNTB Corporation, who have been duly appointed by the Authority to prepare Plans and Specifications for the Contract and to monitor the construction work performed in connection therewith.

The headquarters office of HNTB Corporation for this project is located at 2900 S. Quincy St, Suite 600, Arlington, Virginia 22206, telephone (703) 824-5100.

SPECIFICATIONS (SPEC) - - The general term comprising all the directions, provisions and requirements contained in the Virginia Department of Transportation, 2016 Road and Bridge Specifications, the Authority's Supplemental Specifications and Special Provisions, and in any Addenda and Change Orders or Supplemental Agreements that may be issued, all of which are necessary for the proper performance of the Contract.

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102.01 Prequalification of Bidders

This Section is amended to add the following:

Only contractors who have been prequalified by the Virginia Department of Transportation for bidding on State projects will be permitted to submit Bids for Contracts for Construction of this Project. The foregoing notwithstanding, the Authority reserves the right to reject the bid of any bidder because of reason of unsatisfactory performance or progress on other or prior Authority contracts, as determined by the Authority in its sole discretion.

Contractor shall also see Prequalification requirements in the “Invitation to Bid” (Sheet IB-1 of the Contract Documents). If a Subcontractor is listed in one of the experience forms, that Subcontractor or a different Subcontractor which meets the experience requirements must complete at least 90% of the work in that category.

In order to bid on this project, prospective Bidders must meet the Prequalification requirements at the time specified in the “Invitation to Bid” (Sheet IB-1 of the Contract Documents). The Authority cannot be held liable in the event a party is unable to submit a valid bid due to a delay in the prequalification procedure. Securing prequalification and the timing thereof, shall at all times be the sole responsibility of the Contractor.

If a group of contractors should desire to submit a single bid for a contract or group of contracts, acting under the terms of a joint venture, each such contractor must be prequalified in the proper classification of work and must be registered with the Virginia Department of Transportation. The sum of the maximum pre-qualified classification capacity of the contractors comprising the joint venture must be greater than the estimated dollar value of the contract or group of contracts comprising the bid.

102.02 Contents of Proposal

This section is amended as follows:

The following documents are bound with and are also a part of the Bid Form:

- Non-Collusion Affidavit
- Statement of Contracts Underway
- Joint Venture Statement
- Bridge Cleaning and Coating Bidder Experience
- Bridge Cleaning and Coating Superintendent Experience
- Bid Bond
- Receipt of Addenda
- Proof of SSPC QP-1 & QP-2 Certification
- Railroad Agreement (Schedule I)

102.04 Examination of Site of Work and Proposal

The Section is amended to add the following:

In addition to the mandatory site visit, the Bidders are allowed to visit the Project site to form their own conclusions regarding access requirements, effort required to perform the tasks and

other information needed to prepare their bid. Prior to visiting the site, a Bidder shall notify the Authority and Glen Parker at 804-938-3963 to coordinate the time and date of the Bidder's visit.

Any Addenda that may be issued will be posted on the RMTA website. <http://www.rmaonline.org/> All bidders are required to download any and all addenda from the website. The Authority shall not be responsible for individually delivering addenda to all proposers.

102.05 Preparation of Bid

Sub-Section (a) is amended to add the following:

No electronic bids shall be accepted. All bids shall be submitted on forms furnished by the Authority.

As part of the execution of the Bid, each Bidder shall execute the Statement of Contracts Underway, and the Non-Collusion Affidavit and, in the case of Joint Venture Bidders, the Joint Venture Statement.

The Statement of Contracts Underway shall list the stipulated status information of all other work in which the Bidder is presently engaged, whether as a prime contractor or a subcontractor. Such listings shall include not only contracts which are under construction, but also those awarded to the Contractor but not begun and those on which the contractor is the lowest bidder awaiting formal award. In the case of Joint Venture Bidders, each party involved shall complete, execute and submit a separate Statement of Contracts Underway, as well as the Bidder's portion of the Joint Venture Statement. Additional Statements of Contracts Underway forms are available at the office of the General Manager of the Authority.

The Non-Collusion Affidavit must be executed by the person signing the Bid. In the case of Joint Venture Bidders, only the person signing the Bid on behalf of the Contractors involved need execute the Non-Collusion Affidavit.

The Richmond Metropolitan Transportation Authority may elect to receive bids on more than one construction contract on the same date. When this event occurs, the Authority will award the various contracts after all of the bids for the various contracts are received and analyzed.

Sub-Section (f) is amended as follows:

In the event of a joint venture of a group of Contractors submitting a single Bid, the Bid shall be signed by an individual owner, partner or officer of any one of the Contractors bound in

the joint venture, and the official business address of the joint venture shall be given. In addition, a Joint Venture Statement must be executed by all Contractors involved.

102.06 Irregular Bids

This section is amended as follows:

The following section is deleted:

Section (m)

The following is added:

(p). If the bidder fails to submit the executed Statement of Contracts Underway; in the case of Joint Venture Bidders, failure to submit an executed Statement of Contracts Underway for each Contractor in the joint venture and the Joint Venture Statement.

(q). If the signed bid form is received from a party whose name is not recorded by the Authority as attending both the mandatory pre-bid meeting and site visit.

(r). If the bidder is not pre-qualified by the Virginia Department of Transportation at the time of the mandatory pre-bid meeting.

(s). If the bidder fails to attach proof of their SSPC QP-1 and QP-2 certification. The certification and resume of a Contractor employed Certified Industrial Hygienist (CIH) may be attached in lieu of the QP-2 certification.

(t). If the bidder fails to properly acknowledge receipt of addenda/addendum in the Receipt of Addenda form.

(u). If the bidder fails to submit CSX Schedule I

102.07 Proposal Guaranty (Bid Bond)

Add the following:

If a certified check is submitted as the Bid Guaranty, the check is to be made payable to the Richmond Metropolitan Transportation Authority, and the project name and Contract number shall also appear on the face of the check, as well as the business name of the bidder.

A bid bond will be accepted only if executed on a form which contains the exact wording as the Bid Bond included in these contract documents form. Any bid accompanied by a bond having wording which differs in any respect from the Bid Bond form may be rejected.

102.09 Submission of Bid

This section of the Specifications is completely replaced by the following:

Bids will be accepted at the Authority's office at 901 East Byrd Street, Suite 1120, Richmond, Virginia until scheduled bid opening time and shall be submitted in a sealed envelope. Bids shall be filed prior to the time specified in the Invitation to Bid. Bids received after that time will be returned to the bidder unopened. The date for opening of bids may be deferred by the Authority, in which case the bidders will be notified.

102.12 Public Opening of Bids

This section of the Specifications is completely replaced by the following:

Bids will be opened and read publicly at the time and place specified in the Invitation to Bid. Interested parties are invited to be present.

SECTION 103 - AWARD AND EXECUTION OF CONTRACTS

103.01 Consideration of Bids

Add the following:

In reviewing bids received, the Authority will give full consideration to a Bidder's capacity for undertaking and handling the work included in the bid. The difference in amounts between the maximum capacity stated in the prequalification certification for this classification of work, and the total estimated value of work remaining to be completed by the Bidder's organization as given in the Bidder's Statement of Contract Underway, shall constitute the Bidder's net capacity for handling additional work. Such net capacity will be considered by the Authority in determining the successful Bidders for Contracts on this Project.

103.02 Award of Contract

This section of the Specifications is completely replaced by the following:

The Authority will award a contract within sixty (60) calendar days of the bid opening for said Contract. If a Contract is not awarded within this time period, the Bidder shall have the right to withdraw the Bidder's Bid for the Contract without penalty or prejudice, unless the award date is extended by mutual consent.

The Authority agrees that Award of Contract, if made, will be determined without discrimination on the ground of race, creed, color, sex or national origin.

Basis for Contract Award: The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder, if any, provided his bid is reasonable and it is in the best interest of the Authority to accept it and subject to the Authority's right to reject any and all bids and to waive informality in the bids and in the bidding. Determination of the lowest responsible bidder, if any, will be based on the Total Bid Amount entered on the Bid Tab Form including any properly submitted bid modifications taken in sequence as the Authority in its discretion chooses to Award. **Where the sum of the values entered in the multiple parts do not agree with the Total Bid Amount, the Total Bid Amount entered on the Bid Tab Form, including any properly submitted bid modifications, shall take precedence.**

In the event that the Total Bid Amount from the lowest responsible bidder exceeds available funds, the Authority may negotiate the Total Bid Amount with the apparent low bidder to obtain a contract price within available funds, pursuant to §2.24318 of the Code of Virginia, as amended, and Section 12(c) herein.

Informalities: The Authority reserves the right to waive any informality in the bids when such waiver is in the interest of the Authority.

Negotiation with Lowest Responsible Bidder: If award of a contract to the lowest responsive and responsible bidder is precluded because of limitations on available funds, under the provisions of §2.2-4318 of the Code of Virginia (the Public Procurement Act), the Authority reserves the right to negotiate the Total Bid Amount with the lowest responsive, responsible bidder to obtain a contract price within the available funds. This may involve changes in either the features or scope of the work included in the Contract Documents. Such negotiations with the apparent low bidder may include reducing the quantity, quality, unit prices, or other cost saving mechanisms involving items in the Total Bid Amount. The Authority shall notify the lowest responsive and responsible bidder that such a situation exists and the Authority and bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient. If an acceptable contract can be negotiated, the changes to the Invitation

for Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the contract. If an acceptable contract cannot be negotiated, the Authority reserves the right to terminate negotiations and begin negotiations with the second lowest responsive and responsible bidder or terminate negotiations with all bidders and reject all bids.

Notice of Award: The Notice of Award, the Notice of Intent to Award, or the Notice of Decision to Award will be posted at the Authority's Construction Engineering Inspection Office.

103.06 Contract Documents

Subsection (d) of this section of the Specifications is amended to include:

- All insurance certificates as required in Sec. 103.06 (d), as prescribed in Sec. 107 and as may be required in other sections.

Subsection (e) of this subsection of the Specifications is amended to include the following:

The Contractor shall submit a progress schedule using the Critical Path Method (CPM) format. As a minimum, the schedule shall include:

- The duration of activities.
- The interrelationship of critical activities.
- Maintenance of traffic changes.
- Any temporary work necessary to complete project.
- An easily distinguishable critical path.
- Final completion by the date specified.

SECTION 104 - SCOPE OF WORK

104.02 Changes in Quantities or Alterations in the Work

Subsection (b) of this section of the Specifications is amended to include:

1. Major Items: There are no major items under this contract.
2. Minor Items: All items under this Contract are considered minor items. No adjustment of contract unit prices will be made for overruns or underruns of the original contract quantities, regardless of the extent of such overruns or underruns.

SECTION 105 - CONTROL OF WORK

105.01 Notice to Proceed

Add the following:

Notice to Proceed will be issued within seven (7) calendar days after the execution of the Contract by the Authority.

Contractor shall submit CPM schedule as detailed in Section 103.06 within fourteen (14) days of issuance of Notice to Proceed by the Authority.

105.06 Subcontracting

Add the following:

Except as noted below, the consent to sublet any part of the work, or obtain supplies, shall not be construed to be an approval of the said subcontract, supply contract or any of its terms, but shall operate only as an approval of the making of a subcontract or supply contract between the Contractor and Subcontractor or Supplier. The Subcontractor agrees, as a condition of entering into a subcontract on the project, that the Contractor shall make no claim whatsoever against the Authority, the Engineer, or any of their officers, servants, agents or employees for any work performed or thing done by reason of said subcontract, or for any other cause whatsoever that may arise by reason of the relationship created between the Contractor and Subcontractor unless the proposed Subcontractor furnishes a statement to the effect that said Subcontractor is acquainted with all provisions of the Contract and agrees thereto.

In the case of extra work to be performed on a force-account basis, if any portion of such work is proposed to be sublet on the basis of negotiated unit and/or lump-sum prices instead of on a force-account basis, then such negotiated unit and/or lump-sum prices shall first meet with the approval of the Engineer before consent will be given to sublet the work.

Sublet work shall not begin until approval thereof has been secured from the Engineer. It is understood, however, that any consent by the Engineer for the subletting of any of the work under the Contract in no way relieves the Contractor from the Contractor's full obligations under the Contract. The Contractor shall be responsible for all acts of omissions of any Subcontractor or Supplier.

105.13 State Force Construction Surveying

This Section is deleted in its entirety. All construction surveying shall be the responsibility of the Contractor.

105.15 Removing and Disposing of Structures and Obstructions

This section is amended as follows:

All materials removed by the Contractor as specified therein, shall become the property of the Contractor, except as may be otherwise specifically required, and shall be legally disposed of by the Contractor off of RMTA property.

105.19 Submission and Disposition of Claims

This section of the Specifications is completely replaced by the following:

(a) Alleged Damages and Exceptions. Early or prior knowledge by the Authority of an existing or impending claim for damages might alter the plans, scheduling and other actions of the Authority or result in mitigation or elimination of the effect of the act objected to by the Contractor. Therefore, a written statement describing (1) the act of omission or commission by the Authority or its agents that allegedly caused or will likely cause damage to the Contractor and (2) the nature of the claimed damage must be submitted to the Engineer at the time of occurrence or beginning of the work upon which the claim and subsequent action is based. If such damage is reasonable likely to result from the Contractor's acting upon an order emanating from the Engineer, the Contractor shall take written exception, delivered to the Authority, to such order immediately. Submission of such written statement or exception, as specified, shall be mandatory. Failure to submit such written statement or exception shall be a conclusive waiver of such damages or exception by the Contractor. Mere oral notice or statement will not be sufficient, nor will notice or statement after the event.

(b) Additional Compensation. At the time of occurrence or prior to beginning the work the Contractor shall furnish the Engineer, in writing, an itemized list of materials, equipment, and labor for which additional compensation will be claimed. The contractor shall afford the Engineer every facility for keeping an actual cost record of the work. The Contractor and the Engineer shall compare records and bring them into agreement at the end of each day. Failure on the part of the Contractor to afford the Engineer proper facilities for keeping a record of actual costs will constitute a conclusive waiver of a claim for such extra compensation except to the extent that it is substantiated by the Authority's records. The filing of such notice by the Contractor and the keeping of cost records by the Engineer shall in no way establish the validity of a claim. Failure to submit such written itemized list shall be a conclusive waiver of such claim for additional compensation. Mere oral notice or statement will not be sufficient, nor will notice or statement after the fact.

(c) Verification. If the Contractor's claim contains data furnished by the Contractor that cannot be verified by the Authority's records, the data shall be subject to complete audit by the Authority or its authorized representative if they are to be used as a basis for claim settlement.

(d) Claims Procedure. Upon completion of the Contract, the Contractor may, within 60 calendar days from expiration of the period for review of the Final Estimate by the Contractor as provided in Section 109.10, submit to the Authority a written claim (original plus three legible copies) for such amount as the Contractor deems it is entitled to under the said contract setting forth the facts upon which said claim is based and including all pertinent data and correspondence which may substantiate the claim, provided that written notice of intention to file such claim shall have been given to the Authority at the time of occurrence or beginning of the work upon which claim and subsequent action is based. Failure of the Contractor to furnish any of the items required by Section 109.10 as prerequisite to the issuance of final payment shall not extend the time period in which the Contractor may submit a claim under this or any other section of the Contract. If the claim is not disposed of by agreement, then within 90 calendar days from receipt of said claim, the Authority will make an investigation and notify the Contractor by registered or certified mail, return receipt requested, of its decision; however, the Authority and Contractor may, by mutual agreement, extend such 90 calendar day period for another 30 calendar days. The decision of the General Manager of the Authority shall be final, and failure of the Contractor to comply with the provisions of this section shall constitute a conclusive waiver of any such claim hereunder.

SECTION 106 - CONTROL OF MATERIAL

106.01 Source of Supply and Quality Requirements

This section is amended to add the following:

The Contractor shall not use in preparation of the bid nor on construction of this project any supplier or material person, hereinafter referred to simply as supplier, debarred by the Virginia Department of Transportation as of the date of advertisement.

It shall be the responsibility of the Bidder to determine from the Department's listings which suppliers are debarred as of the date of advertisement of this project. Such listings will be posted in the office of the Contract Engineer, 1401 E. Broad Street, Richmond, Virginia and in each District Office.

The Engineer will not approve for use any material furnished by a supplier debarred by the Department.

If subsequent to award of this contract, a previously debarred supplier is reinstated to eligibility, the Engineer may approve the use of that supplier on this project when requested by the Contractor and after consideration of all relevant factors.

106.02 Material Delivery

This section is amended as follows:

Contractor's invoices for materials delivered to the site shall show actual prices for such materials.

106.04 Disposal Areas.

The entire third paragraph under section (a) of the Specification is deleted.

SECTION 107 - LEGAL RESPONSIBILITY

107.12 Responsibility for Damage Claims

Delete the first line of paragraph (a) and substitute:

"The Contractor shall indemnify and save harmless the Authority, the Engineer and its..."

Add the following statement to the end of paragraph (b):

". . . the contract provided, however, that the Authority and, where applicable, the Engineer are intended beneficiaries of this Contract and shall have standing to enforce the provisions of this Contract including the right to indemnification and the right to ascertain claims for damages.

Add the following after the last paragraph of this section:

In connection with the indemnification assumed by the Contractor by virtue of this section, but without limitation or release of the Contractor's responsibility for such indemnification or any other liability hereunder, the Contractor shall provide the following types and minimum amounts of insurance coverage for this project:

- (a) Contractor's Comprehensive General Bodily Injury and Property Damage Liability Insurance, including Contractor's Protective Liability Insurance and Contractual Liability Insurance:

- (1) One (1) person in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
- (2) Two (2) or more persons in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
- (3) Property Damage in any one (1) occurrence, amount One Million Dollars (\$1,000,000), with aggregate property damage policy limit of One Million Dollars (\$1,000,000).

The portion of the policy dealing with property damage liability shall contain a provision of endorsement providing insurance protection against property damage, including loss of use, caused by explosion and/or collapse, and against damage to existing underground and overhead pipes, cables, ducts and other such facilities, whether or not such facilities appear on available plans and whether or not accurately located on such plans.

The Contractual Liability Insurance policy shall contain an endorsement attesting to the Contractor's responsibilities for indemnification set forth in this section. Insurance certificates shall specifically indicate the inclusion of such an endorsement with particular reference to the Contract number and to "Compliance with Sec. 107.13 of the Specifications."

- (b) Comprehensive Automobile and Truck Liability Insurance including coverage for Contractor's automotive equipment (and including non-owned and hired vehicles):
 - (1) One (1) person in any (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (2) Two (2) or more persons in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (3) Property damage in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
- (c) Workmen's Compensation Insurance - Statutory. Employer's Liability Insurance in the amount of Five-Hundred Thousand Dollars (\$500,000).

If any part of the work is sublet, similar insurance shall be obtained by or on behalf of the Subcontractor to cover the Subcontractor's operation.

The insurance specified shall be with an insurance company acceptable to the parties hereto and licensed to do business in the State of Virginia. All insurance must be obtained before any work is commenced and kept in effect until its completion.

In compliance with Sec. 103.06, satisfactory evidence, in triplicate, of all required insurance coverage, including special endorsements, shall be forwarded to the Authority for approval within fourteen (14) Calendar Days after the date of written notice of Award of Contract. All insurance coverage must be approved by the Authority before the Contract will be executed by the Authority.

The Authority's approval of insurance furnished by the Contractor, or its failure to disapprove such insurance shall not relieve the Contractor of full responsibility for liability, damages and accidents as set forth elsewhere herein.

All policies required above shall include an endorsement requiring thirty (30) calendar days prior written notice to the Authority before any change or cancellation is made effective.

All policies required shall be maintained until completion and acceptance of all work under this Contract.

No separate payment will be made for the cost of the insurance herein specified but the Contractor shall include the cost of such insurance in the prices bid for the various items scheduled in the Bid.

107.19 Railway - Highway Provisions

This section is amended as follows:

CSX Transportation

When performing work on, over or adjacent to CSX Transportation (CSXT) right-of-way or operations, the Contractor must abide by the current CSXT Special Provisions, CSXT Construction Submission Criteria, Construction Requirements, and Insurance Requirements.

All construction related correspondence and submittals will be directed to HNTB, acting as Engineer on behalf of the Richmond Metropolitan Transportation Authority. The Authority and the Engineer will have the sole responsibility and authority for submitting the Contractor's construction submissions and coordinating all reviews with CSX Transportation.

The Contractor shall submit complete Construction Submission packages for all areas that may require a construction agreement within 15 calendar days of Notice to Proceed. The Authority shall have up to 7 calendar days to review all submittals. The Contractor shall address any

comments and submit revised Construction Submission packages for all areas that may require a construction agreement within 30 calendar days of Notice to Proceed.

If any submissions are returned not approved by CSX Transportation, the Contractor shall have 7 calendar days after receipt of comments to address any comments and submit revised Construction Submission package(s).

Failure of the Contractor to meet the time schedules listed above in Section 107.19 shall be considered a Failure to Complete on Time subject to the Liquidated Damages as described in Section 108.06. All construction related correspondence shall be considered “submitted” on the date that it is received by the Authority.

Contractor shall coordinate all work activities in the areas described below with the Richmond Metropolitan Authority or its authorized representative.

Bridge:	Location	Repairs:	Railroad Owner:
B63	Span 23	Coatings	CSX
B64	Spans 2, 9	Coatings	CSX
B65	Span 13	Coatings	CSX
B67	Spans 1, 7, 8,	Coatings	CSX
B68	Spans 1, 4	Coatings	CSX

Contractor hereby agrees to fully execute Schedule I – Contractor’s Acceptance and to abide by and perform all applicable terms of the Construction Agreement between CSXT and the Richmond Metropolitan Transportation Authority, including, but not limited to Exhibits C and F to the Agreement, and Sections 3, 9 and 11 of the Agreement. A copy of this agreement, construction requirements and submission criteria are included in the contract documents.

The cost for flagger or watchperson services near CSXT tracks for work performed under this PC – 2018 Contract will be paid by the Richmond Metropolitan Transportation Authority.

Norfolk Southern Corporation

When performing work on, over or adjacent to Norfolk Southern Corporation. (NS Corp.) right-of-way or operations, the Contractor must abide by the current NS Corp. Special Provisions, Construction Submission Criteria, Construction Requirements, and Insurance Requirements.

All construction related correspondence and submittals will be directed to NS Corp. with a copy to HNTB acting as Engineer on behalf of the Richmond Metropolitan Transportation Authority. The

Contractor will have the sole responsibility and authority for submitting and coordinating all reviews with NS Corp.

The Contractor shall submit complete Construction Submission packages for all areas that may require a construction agreement within 15 calendar days of Notice to Proceed.

The Contractor shall address any comments and submit revised Construction Submission packages for all areas that may require a construction agreement within 30 calendar days of Notice to Proceed.

If any submissions are returned not approved by NS Corp. the Contractor shall have 7 calendar days after receipt of comments to address any comments and submit revised Construction Submission package(s).

Failure of the Contractor to meet the time schedules listed above in Section 107.19 shall be considered a Failure to Complete on Time subject to the Liquidated Damages as described in Section 108.06. All construction related correspondence shall be considered “submitted” on the date that it is sent to NS Corp.

Contractor shall coordinate all work activities in the areas described below with the Richmond Metropolitan Authority or its authorized representative.

Bridge:	Location	Repairs:	Railroad Owner:
65	Span 10	Coatings	NS Corp.
68	Span 7	Coatings	NS Corp.

The cost right of entry permits, and for flagger or watchperson services near NS Corp. tracks for work performed under this Miscellaneous Repairs – 2015 Contract will be paid by the Contractor.

MEASUREMENT AND PAYMENT

The Pay Item Railway Coordination Service will be paid for at the contract lump sum price for each bridge. The Contract Lump Sum Price shall include the preparation of all plans, drawings, schedules, and narratives necessary for describing the contractor’s means and methods required to perform the work. This pay item includes any and all insurance costs incurred by the contractor to work in the railroad easement or right-of-way for work.

Pay Item:	Pay Unit
RAILWAY COORDINATION SERVICE (BRIDGE 63)	Lump Sum

RAILWAY COORDINATION SERVICE (BRIDGE 64)	Lump Sum
RAILWAY COORDINATION SERVICE (BRIDGE 65)	Lump Sum
RAILWAY COORDINATION SERVICE (BRIDGE 67)	Lump Sum
RAILWAY COORDINATION SERVICE (BRIDGE 68)	Lump Sum

SECTION 108 - PROSECUTION AND PROGRESS OF WORK

108.04 Determination and Extension of Completion Date

In the second paragraph of this section, substitute the number "75" for the number "60" wherever it appears.

108.06 Failure To Complete on Time

Sub-section (B) is completely replaced by the following:

CONTRACTOR WAIVES ANY DEFENSE AS TO THE VALIDITY OF ANY LIQUIDATED DAMAGES STATED IN THIS CONTRACT ON THE GROUNDS THAT SUCH LIQUIDATED DAMAGES ARE VOID AS PENALTIES OR ARE NOT REASONABLY RELATED TO ACTUAL DAMAGES.

SECTION 109 - MEASUREMENT AND PAYMENT

109.06 Common Carrier Rates

This Section of the Specifications is deleted in its entirety.

109.08 Partial Payments

This section is completely replaced by the following:

Partial payments will be made once each month covering work performed and materials complete-in-place in accordance with the contract and for materials delivered in accordance with Sec. 109.09 on and between the 5th day of a month and the 4th day of the succeeding month as the work progresses. Partial payments will be made on the value of work performed based on approximate estimates prepared by the Engineer, provided, however, that no estimate shall be certified or payment made where the net amount receivable by the Contractor is less than Five-hundred Dollars (\$500.00). The value of work done on items measured on a unit basis will be determined on a pro rata basis. If the Engineer determines that the Contractor has been overpaid, all further partial payments may be credited against such overpayment.

The Engineer will review the partial payment estimate with the Contractor's representative prior to each partial payment.

From the total of the amounts so determined will be deducted an amount equivalent to five (5) percent of the whole, which will be retained by the Authority until completion of the entire Contract in an acceptable manner and the balance, less all previous payments, shall be certified for payment.

Total Contract value shall be considered to mean the original amount of the Contract, except when the Contract is increased or decreased by a supplemental agreement in which case the adjusted total shall be used.

The Authority reserves the right to withhold the payment of any partial or final estimate voucher or any sum or sums thereof from such vouchers in the event of the failure of the Contractor to promptly make payment to all persons supplying equipment, tools or materials, or for any labor used by the Contractor in the prosecution of the work provided for in the Contract, and for any other cause as determined by the Authority in its sole discretion, including overpayment on previous partial payments.

109.10 Final Payment

This section of the Specifications is completely replaced by the following:

After final inspection and final acceptance of the project has been made by the Engineer, as provided in Sec. 108.09, the Engineer will prepare the final estimate of item quantities and amounts for the completed work. The Contractor will be afforded a period of fifteen (15) calendar days from the date of the final estimate to review the final estimate at the Authority's office.

As a prerequisite to the issuance of final payment, the Contractor will be required to furnish the following items to the Engineer:

- (a) An executed SWaM Participation form (on the Authority's standard form) attesting to actual amounts fully paid to each Small, Women, and Minority Owned (SWaM) businesses and/or Disadvantaged Business Enterprises (DBE).
- (b) An executed Final Release of Liability (on the Authority's standard form) attesting to the fact that all bills, charges and salaries for labor, services, materials and rental of equipment, arising out of the prosecution of work under this Contract have been fully paid or arrangements satisfactory to the Engineer therefore have been made and all other just demands and liens relating to this project fully satisfied or arrangements to the Engineer therefore have been made, and releasing the

Authority and their representatives from all claims, demands and liability of whatsoever nature from anything done or furnished under this Contract, except to the extent only as to such matters for which unresolved claims have been submitted by the Contractor in accordance with Section 105.16 hereof;

- (c) Sworn statements of any property owners or other parties who may have had any claims against the Contractor or liens against the project, evidencing that all their claims and liens are fully satisfied or provided for and the Contractor and Authority are released there from;
- (d) Any other documents, invoices, releases or objects which the Engineer may request in finalizing the Contract.

After the above items have been forwarded to the Engineer, and the final estimate and certificate for final payment sent to the Authority with the Engineer's recommendation for acceptance, the Contractor will be paid the total Contract amount less the amounts of all previous partial payments and less any imposed liquidated damages. This net amount will be subject to any increase or decrease resulting from corrections to any errors in previous partial payments that may be detected at this time and to deductions for unacceptable work not corrected by the Contractor as required hereunder.

This final payment will become due and payable to the Contractor within ninety (90) calendar days after the date when all the above listed documents and tracings have been received by the Engineer and acknowledged in writing by the Contractor. The Contractor will be entitled to interest on the final payment amount at the rate of four (4) percent per annum for the length of time beyond said 90 calendar days period that the final payment should remain unpaid.

SECTION 411—PROTECTIVE COATING OF METAL IN STRUCTURES

411.01 Description

This section is amended to include the following:

Regulatory Agencies

The Contractor shall perform all work in accordance with accepted construction standards and in compliance with Steel Structures Painting Council (SSPC), Occupational Safety and Health Act (OSHA), United States Coast Guard (USCG), United States Environmental Protection Agency (EPA), Virginia Air Pollution Control Board (VAPCB), Virginia Department

of Environmental Quality (VDEQ) and other regulatory agencies' rules, regulations, standards and guidelines currently in effect.

Superintendent

The Contractor shall furnish a competent superintendent who is thoroughly familiar with the above regulations, the specified requirements and the methods needed for proper performance of the work. The superintendent's experience record shall be submitted to the Authority for review and approval. The superintendent shall plan, direct, coordinate, and supervise all of the work.

Quality Control

The Contractor shall be responsible for quality control on this project. The Contractor's site supervisor shall be equipped with thermometers, relative humidity gauges, wet and dry film thickness gauges and shall monitor all of the cleaning and painting operations. The Engineer will monitor work daily.

Classification

All surfaces shall be classified as Type B, unless otherwise noted.

Schedule

Contractor shall coordinate Coatings work schedules and Maintenance of Traffic patterns with adjacent contractors on site for other Authority contracts.

411.02 Materials

This section is amended to include the following:

Soluble Salt Remover: If chloride level is found to be above the threshold level (as described in 411.04), the contractor shall add a commercial soluble salt remover to the Method 7 preparation (pressure wash) as described in Section 411.04. In the first 50 sq. ft., the contractor shall test the worst deteriorated areas to determine the required rate of application, nozzle pressure, nozzle distance from surface, and dilution ration of mixture to achieve the desired level of cleanliness. Testing shall be the CHLOR*TEST method.

The Soluble Salt Remover shall be CHLOR*RID or Engineer approved equal. CHLOR*RID is manufactured by CHLOR RID International, Inc. of Chandler, AZ, PH: 800-422-3217. The material shall meet or exceed the following specifications:

- Material shall contain zero VOC's.
- Material shall have a minimum shelf life of 24 months.

- Material shall be suitable for hand washing spot areas and for application by pressure washer at any pressure.
- Material shall be biodegradable.

The Soluble Salt Remover shall be used in accordance with all manufacturer's recommendations, specifications and directions.

411.04 General Surface Preparation and Application Standards

This section is amended to include the following:

All wash water shall be filtered with a 40 or finer mesh material to catch particles of paint and debris.

The Engineer or Engineer's representative will test the existing coatings for chloride contamination by the CHLOR*TEST (chloride test kit) method. Testing shall be completed at a minimum of one location per pier and one location per span. The maximum allowable level of chloride contamination shall be 5 micrograms/cm². When the chloride test results indicate a chloride level of 5 micrograms/cm² or greater, a soluble salt remover shall be added to the wash water as specified in Section 411.02. CHLOR*TEST results will be made available to the contractor.

If the Engineer allows the Contractor to complete the CHLOR*TEST, the Engineer shall approve and document each test.

If the contractor prefers to forego Engineer's testing of contaminated areas, Contractor shall have the option to include CHLOR*RID in all Method 7 wash water.

Cleaned steel surfaces shall be tested for soluble salt levels after all preparation and cleaning methods are completed but prior to the start of any coating activities. The maximum level of soluble salt shall be 5 micrograms/cm². If test results show a higher level of soluble salt, Contractor shall re-wash surface with Chlor*rid until soluble salt contamination level is less than 5 micrograms/cm².

See Special Provisions for further details on structures and surfaces to be coated.

411.04(B) General Surface Preparation and Application Standards – Physical Application

This section is amended to include the following:

All coating color formula shall be RMTA Green, which is Federal Standard I.D. #595-24227, or as otherwise directed by the Engineer. Contractor shall submit a color sample for review and approval by the Engineer.

All abrasive blast cleaned surfaces shall receive the following three-coat zinc, epoxy and urethane system or engineer approved equal:

- CARBOZINC 859 – Zinc Rich Epoxy Primer 3-5 mils D.F.T.
- CARBOGUARD 893 –High Solids Epoxy 4-6 mils D.F.T.
- CARBOTHANE 133 – Satin Acrylic-Polyester Polyurethane 3-5 D.F.T.

All high-pressure water cleaned and power tool cleaned surfaces shall receive the following three coat sealer, epoxy and urethane system or engineer approved equal:

- CARBOLINE RUSTBOND 1-2 mils D.F.T.
- CARBOGUARD 893 –High Solids Epoxy 4-6 mils D.F.T.
- CARBOTHANE 133 – Satin Acrylic-Polyester Polyurethane 3-5 D.F.T.

411.11 Measurement and Payment

This section is amended to include the following:

Measurement and payment for “Full Bridge Coating”, “Environmental Protection” and “Disposal of Material” shall be paid per individual structure on a lump sum basis per activity and per structure location. Surface preparation effort shall be included in the lump sum price bid for Zone Coating. Structure surfaces to be coated shall be as defined in the Special Provisions.

SECTION 512 - MAINTAINING TRAFFIC

512.01 Description

The following is added to this section:

The Contractor shall schedule the Contractor's operations in a manner as to not adversely affect traffic conditions. At all locations the Contractor shall schedule the Contractor's operations in such a manner that all available traffic lanes are open to traffic on Commonwealth of Virginia holidays, the day preceding holidays and the day after holidays. If a holiday falls on a Sunday, Friday shall be considered the preceding day. If a holiday falls on a Saturday, Monday shall be considered the day after. Ramp traffic (unless otherwise noted) shall be maintained at all times.

The Engineer reserves the right to require the Contractor to provide a proposed maintenance of traffic plan for all lane closures 7 calendar days prior to closure. The Engineer shall coordinate the maintenance of traffic plan with the RMTA and provide any changes and additions required prior to the lane closure. In the event that a detour route is detailed in the contract drawings, the Contractor shall be required to provide a traffic plan for installing and removing the proposed detour route.

The Contractor shall not utilize shoulders, median or similar areas for storage of equipment or material including vehicles used by Contractor's personnel to access the site. Any stored equipment shall be placed behind guardrail or barriers.

The Contractor shall provide continuous monitoring of traffic control devices as part of the effort required to maintain them. Additionally, the Contractor shall possess a minimum of one spare operable electronic arrow on site only when directed by the Engineer.

When night work is in progress, the Contractor shall provide sufficient lighting of the work site(s) to enable the satisfactory completion of the work. Lighting shall be arranged so as not to interfere with or impede traffic approaching the worksite(s). Payment for lighting of the work site shall be covered in other pay items and will not be measured for payment.

See Maintenance of Traffic Special Provision for further information.

512.03 Procedures

Add the following:

See Maintenance of Traffic Special Provision for specific bridge and lane closure restrictions, assessment of damages due to MOT violations and certified personnel requirements.

All maintenance of traffic operations shall be conducted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), the current version of the Virginia Work Area Protection Manual, and subject to the approval of the Engineer, VDOT, City of Richmond, and

the RMTA. The Contractor's signing and MOT shall consider the efforts of adjacent contractors, motorists and pedestrian traffic.

The Contractor shall submit a plan sequenced with a plan of operations, for maintenance of traffic and detours to the Engineer for review and approval prior to commencement of work in a specific area. The plan shall be in accordance with the Virginia Work Area Protection Manual and the MUTCD. Plan shall be submitted at least 7 days prior to proposed work start date. If and when the Engineer provides sequence of construction plans and estimated quantities for maintenance of traffic items, the plans and items are for estimating purposes only.

512.04 Measurement and Payment

This section is replaced with the following:

Maintenance of traffic (Full Coating for Bridge No.63, B64, B65, B66, B67 and B68)

The Contractor's price bid shall include, but not be limited to, furnishing, placing, maintaining, replacing, relocating, adjusting, aligning, removing, flagger service, pilot vehicles, warning lights, electronic arrow, channelizing devices, traffic barrier service, traffic barrier service guardrail terminals, impact attenuator service, temporary detours, Type III barricades, construction signs, variable message boards, truck mounted attenuators, and all labor, material and equipment incidental to completing this work in accordance with the *Virginia Work Area Protection Manual* and traffic engineering principles. Site specific adjustments to maintenance of traffic operations, quantity, location, or spacing of traffic control devices, within construction limits or on any approaches to the project, required by the Engineer to improve traffic operation or safety shall be considered an alteration to the character of work.

Any Maintenance of traffic required for coating locations paid under the "Miscellaneous Coating" bid item or for Various Bridges shall be paid for under the following items:

Flagger Service will be measured in hours as authorized or approved by the Engineer except when used for the Contractor's convenience, such as for ingress and egress for moving construction equipment or materials. In such cases, payment will not be made for flagger service. Flagger service will be paid for at the contract unit price per hour. This price shall include paddles, safety equipment, and portable traffic control signals.

Electronic Arrows will be measured in hours of actual use as required by the Engineer. Electronic arrows will be paid for at the contract unit price per hour. This price shall include arrow panels, fuel, maintenance, and a truck or trailer having flashing amber warning lights. The RMTA reserves the right to substitute their Electronic Arrow in lieu of Contractor's at the RMTA's direction. RMTA Electronic Arrow shall be operated by RMTA staff only. Contractor

shall not submit or be paid for Electronic Arrow hourly pay units for when the RMTA's Electronic Arrow is in service.

Group 2 Channelizing Devices, as required by the Engineer, will be measured in days and will be paid for at the contract unit price per day. This price shall include maintaining devices, removing devices when no longer required, and signs. When Group 2 channelizing devices are moved to a new location or are removed and re-installed at the same location, they will be measured for separate payment. However, when the Group 2 channelizing devices are moved from one lane to another by simply moving the devices across the lane edge line without removal from the roadway, no additional payment will be made.

Truck-Mounted Attenuator (TMA) will be measured in hours of actual use and will be paid for at the contract unit price per hour. This price shall include the truck-mounted attenuator; support vehicle; lights; electronic arrows if allowed but not required; and maintenance. When electronic arrows are used at the option of the Contractor in lieu of the rotating or high-intensity amber strobe light, the cost of the electronic arrow shall be included in the price bid for truck-mounted attenuators. When electronic arrows are required and not only allowed on the truck-mounted attenuator support vehicles, they will be paid for separately. The RMTA reserves the right to substitute their TMA in lieu of contractor's TMA at the RMTA's direction. RMTA TMA shall be operated by RMTA staff only. Contractor shall not submit or be paid for TMA hourly pay units for when the RMTA's TMA is in service.

Payment will be made under:

Pay Item – Full Coat

Maintenance of Traffic, Bridge 63	Lump Sum
Maintenance of Traffic, Bridge 64	Lump Sum
Maintenance of Traffic, Bridge 65	Lump Sum
Maintenance of Traffic, Bridge 66	Lump Sum
Maintenance of Traffic, Bridge 67	Lump Sum
Maintenance of Traffic, Bridge 68	Lump Sum

Pay Item – Miscellaneous Coating

Flagger Service	Hour
Electronic Arrow	Hour
Group 2 Channelizing Device	Day
Truck-Mounted Attenuator	Hour

The RMTA reserves the right to substitute their Portable Changeable Message Sign (PCMS) in lieu of contractor's PCMS at the RMTA's direction. Contractor shall not submit or be paid for PCMS hourly pay units for when the RMTA's PCMS is in service. When Contractor's PCMS is used, PCMS will be measured and paid for in hours of use.

SECTION 514 - FIELD OFFICE

This section of the Specifications is completely replaced by the following:

A field office is not required for this project.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SPECIAL PROVISIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE SPECIFICATIONS 2016

FOR

RICHMOND EXPRESSWAY SYSTEM

CONTENTS

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**SPECIAL PROVISION
TOLL COLLECTION PASS CARDS**

DESCRIPTION

This provision details the disbursement and return of toll collection pass cards.

PROCEDURES

The Contractor shall provide the Engineer and the RMTA with a written request for Toll Collection Pass Cards within 7 days prior to work start. The written request shall contain, but not be limited to, the number of Toll Collection Pass Cards requested, names and addresses of the individuals to whom the Cards shall be assigned, a brief but thorough explanation why each individual requires a Card, and the anticipated time frame for each individual to require the Card.

The Engineer shall review the Request for Cards within 96 hours of receipt of Request. The RMTA, via the Engineer, may provide between zero and the total number of Cards requested.

Cards cannot be used in the Open Road Tolling (ORT), or “Express,” lanes located on northbound and southbound Powhite Parkway. At these Toll Plazas, Contractors vehicles must go through “Cash” Toll Plaza to use Toll Pass Cards.

Prior to the distribution of a Card, the individual designated to receive a Card shall be required to provide a picture ID (driver’s license preferred) of him- or herself, their home phone number, the name of their employer, their employer’s address, and their employer’s phone number. In addition, each person receiving a Card is required to sign a statement of fact that the Card shall be used only for and during the execution of RMTA contract obligations. Misuse of any Card by an individual shall result in the immediate revocation of Card privileges. Engineer shall notify individual’s company and the Contractor of the assumed Card misuse. The Contractor is responsible for returning the misused Card to the Engineer within 48 hours of notification.

In addition, all Cards issued in accordance to this contract shall be returned to the Engineer within 48 hours after completion of work. Failure to return all Cards may result in delays in processing of the final payment.

**SPECIAL PROVISION FOR
MAINTENANCE OF TRAFFIC, LIMITATIONS OF OPERATIONS,
AND PROTECTION OF PROPERTY**

MAINTENANCE OF TRAFFIC

All maintenance of traffic operations shall be conducted in accordance with the most current versions of the Manual on Uniform Traffic Control Devices (MUTCD), the Virginia Work Area Protection Manual (WAPM), VDOT Road and Bridge Specification 512.04, and subject to the approval of the Engineer and RMTA. Additional approvals may be required by VDOT and/or City of Richmond if the requested closure extends onto or affects a public highway. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond or the Land Use Permit (LuP) issued by VDOT. The Contractor's signing and MOT shall consider the efforts of adjacent contractors, motorists and pedestrian traffic.

The Contractor shall provide the Engineer no less than 7 calendar days notice before closing any ramp or bridge. A minimum of 10 calendar days notice is required if the request is to close Boulevard Bridge. A minimum of 14 calendar days notice is required if the request is to close any lane that would impact or extend onto a VDOT/City of Richmond roadway. Approval to close any ramp or bridge is subject to review and consideration of event traffic in the vicinity.

Prior to setting any lane or shoulder closures, the Contractor shall meet with the Engineer to review MOT for each of the lane closures the Contractor intends to perform. The Contractor shall prepare a site specific sketch identifying the signs to be used and their respective locations along with the location, length and spacing of tapers and other traffic control devices. Sketches shall be prepared in accordance with the current version of the WAPM. The Contractor shall coordinate these meetings with the Engineer, so that the RMTA has no less than (7) days after the meeting ends, to advise the motoring public of upcoming traffic restrictions. Maintenance and installation of all lane closures shall be the sole responsibility of the Contractor.

The Contractor shall be aware that no traffic control devices (such as Group II channeling devices, cones, Arrow Boards, etc.), with the exception of advance warning signs shall be placed on any median, roadway or shoulder prior to the time shown. Advance warning signs may be placed not more than thirty (30) minutes prior to the begin time in this special provision.

Pick up operation shall commence no later than 30 minutes prior to closing period(s) referenced herein, such that all traffic control devices including advance warning signs shall be removed, the roadway free of debris, and the lane open to traffic by the end time in this special provision. No work or installation of any MOT devices may commence unless the work can be completed and the area reopened to traffic within the allowable lane closure hours.

The Contractor shall be aware that failure to comply with the times set forth in this special provision may result in liquidated damages as described herein.

After removing any lane closure or other MOT operation, no temporary signs, sign stands, cones, drums or any other traffic control devices may remain on the edge/median/shoulder of the roadway without the permission of the Engineer.

DOWNTOWN EXPRESSWAY (DTE) & BELTLINE EXPWY. CONNECTOR TO DTE

Eastbound DTE/Northbound Connector: The road is to be clear by 6:00 a.m.

Westbound DTE/Southbound Connector: The road is to be clear by 3:00 p.m.

TIMES OF ALLOWABLE SINGLE LANE CLOSURES:

(1) E.B. DTE / N.B. Connector:

A. Weekdays – 10:00 a.m. to 6:00 a.m.

B. Weekends – 10:00 a.m. Friday – 6:00 a.m. Monday

(2) W.B. DTE / S.B. Connector:

A. Weekdays – 6:00 a.m. to 3:00 p.m. & 7:00 p.m. to 6:00 a.m.

B. Weekends – 7:00 p.m. Friday – 3:00 p.m. Monday

TIMES OF ALLOWABLE MULTIPLE LANE CLOSURES: Multiple lane closures which restrict open lanes to (1) one in a single direction.

(1) E.B. DTE / N.B. Connector:

A. Weekdays – 7:00 p.m. to 6:00 a.m.

B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

(2) W.B. DTE / S.B. Connector:

A. Weekdays – 9:00 p.m. to 6:00 a.m.

B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

NUMBER OF LANES CLOSED (ANY DIRECTION)

- All roadways must have a minimum of (1) one lane open at all times. If a full roadway closure is required, the Contractor, the Authority and the Engineer shall schedule a mutually agreeable time. The length of the full closure shall be minimized by the Contractor.

- Where three (3) or more roadway lanes exist, the number of lanes which the Contractor may close is at the Engineer's discretion, based on the geometry of the area where lane/shoulder closures are desired.

DTE TOLL PLAZA (GATED LANES) AND EXPRESS LANES (ORT ZONE) RESTRICTIONS

NUMBER OF LANES CLOSED W.B DTE TOLL PLAZA (GATED LANES)

- No more than one lane closure will be permitted at any time for the cash lanes 43-46.
One (1) Full Service lane must remain open at all times.
No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
Lane 45 (Secure Booth) may not be closed from 11:00 p.m. to 7:00 a.m. any day

NUMBER OF LANES CLOSED E.B DTE TOLL PLAZA (GATED LANES)

- There shall be at least three toll lanes open in a single direction at all times.
- One (1) Full Service lane must remain open at all times.
- No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
- Lane 55 (Secure Booth) may not be closed from 11:00 p.m. to 7:00 a.m. any day
-

NUMBER OF LANES CLOSED W.B DTE EXPRESS (ORT) LANES

- No more than two lane closures will be permitted at any time for the WB express lanes 47- 49.
- No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
-

DOWNTOWN EXPRESSWAY (DTE) RAMP CONNECTIONS TO/FROM I-95

Allowable lane closures times are presented below. All lanes including both shoulders must be open and available to traffic Monday through Friday during peak rush times.

Please note that lane closure times listed herein apply ONLY to RMTA Ramps. All MOT plans and requests for lane closures on Interstate 95 for through lanes or auxiliary lanes must be reviewed and approved by VDOT. The Contractor will submit all lanes closure requests to the Engineer and the Engineer will coordinate with VDOT for their review. All MOT plans, detour plans and requests for lane closures on Interstate 95 must be prepared and submitted in a format acceptable to VDOT which may include providing plans and narratives that are prepared by a Virginia Professional Engineer. Review times for VDOT may vary from the 7 day requirement by RMTA.

RM TA Lane closure times:

<u>Bridge:</u>	<u>Weekday:</u>	<u>Weekend:</u>
B63	9:00 P.M. to 5:00 A.M.	9:00 P.M. Friday to 5:00 A.M. Monday
B64	9:00 P.M. to 5:00 A.M.	9:00 P.M. Friday to 5:00 A.M. Monday
B65	9:00 P.M. to 5:00 A.M.	9:00 P.M. Friday to 5:00 A.M. Monday
B66	9:00 P.M. to 6:00 A.M.	9:00 P.M. Friday to 6:00 A.M. Monday
B67	9:00 P.M. to 6:00 A.M.	9:00 P.M. Friday to 6:00 A.M. Monday
B68	9:00 P.M. to 6:00 A.M.	9:00 P.M. Friday to 6:00 A.M. Monday

Peak rush hour times are defined by:

<u>Bridge:</u>	<u>Weekday Times:</u>
B63	5:00 A.M. to 10:00 A.M.
B64	5:00 A.M. to 10:00 A.M.
B65	5:00 A.M. to 10:00 A.M.
B66	2:00 P.M. to 7:00 P.M.
B67	2:00 P.M. to 7:00 P.M.
B68	2:00 P.M. to 7:00 P.M.

There shall be no total closures of the either the eastbound Downtown Expressway (DTE) or westbound DTE permitted; One lane shall be maintained on Bridge 63 and Bridge 66 at all times. In addition, Contractor shall maintain at least one ramp entering and at least one ramp exiting the city at all times; Bridge 64 shall not be permitted to be closed while Bridge 65 is closed and Bridge 67 shall not be permitted to be closed while Bridge 68 is closed.

All lane closures must be coordinated with VDOT, RM TA and the Engineer for final approval of dates and times. Contractor shall notify VDOT Smart Traffic Center at 804-796-4520 to advice of the lane closure status of these bridges.

POWHITE PARKWAY

Northbound/Eastbound: The road is to be clear by 6:00 am.

Southbound/Westbound: The road is to be clear by 3:00 pm.

TIMES OF ALLOWABLE SINGLE LANE CLOSURES:

- (1) Northbound/Eastbound:
 - A. Weekdays – 10:00 a.m. to 5:00 a.m.
 - B. Weekends – 10:00 a.m. Friday – 5:00 a.m. Monday
- (2) Southbound/Westbound:
 - A. Weekdays – 6:00 a.m. to 3:00 p.m. & 7:00 p.m. to 6:00 a.m.
 - B. Weekends – 7:00 p.m. Friday – 3:00 p.m. Monday

TIMES OF ALLOWABLE MULTIPLE LANE CLOSURES: Lane closures which restrict open lanes to (1) one in a single direction.

- (1) Northbound/Eastbound:
 - A. Weekdays – 9:00 p.m. to 5:00 a.m.
 - B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor
- (2) Southbound/Westbound:
 - A. Weekdays – 9:00 p.m. to 6:00 a.m.
 - B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

LANE RESTRICTIONS (ANY DIRECTION)

- All roadways must have a minimum of (1) one lane open at all times.
- Where three (3) or more roadway lanes exist, the number of lanes which the Contractor may close is at the Engineer's discretion, based on the geometry of the area where lane/shoulder closures are desired.

POWHITE PARKWAY TOLL PLAZA (GATED LANES) AND EXPRESS LANES (ORT ZONE) RESTRICTIONS

NUMBER OF LANES CLOSED POWHITE N.B. AND S.B. TOLL PLAZAS (GATED LANES)

- There shall be at least three toll lanes open in a single direction at all times.
- One (1) Full Service lane must remain open at all times.
- No NB Toll Lane shall be closed from 5:00 a.m. to 10:00 a.m.
- No SB Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
- Lane 3 and Lane 12 (Secure Booths) may not be closed between 11:00 p.m. to 7:00 a.m. any day

NUMBER OF LANES CLOSED POWHITE EXPRESS (ORT) LANES

- No more than two lane closures will be permitted at any time for the NB express lanes 90- 92.

- No more than two lane closures will be permitted at any time for the SB express lanes 93- 95.
- No NB ORT Toll Lane shall be closed from 5:00 a.m. to 10:00 a.m.
- No SB ORT Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.

EXIT AND ENTRANCE RAMP TOLL PLAZAS

TIMES AND NUMBERS OF TOLL LANE CLOSURES (ANY DIRECTION)

No toll lane closures shall be permitted during peak hours each weekday. Peak hours are 6:00 a.m. to 10:00 a.m. for EB or NB ramps and 3:00 p.m. to 7:00 p.m. for WB or SB ramps.

- The number of lanes which the Contractor may close is at the Engineer's discretion, based on the geometry of the area where lane/shoulder closures are desired.
- The Authority and the Engineer shall schedule a mutually agreeable time.
- The length of the full closure shall be minimized by the Contractor.

The Contractor shall provide the Engineer no less than 7 calendar days notice before closing any given toll lane or any exit or entrance ramp. Pick up operation shall commence no later than 30 minutes prior to closing period(s) referenced above.

LANE CLOSURE AND MOT VIOLATIONS

The Authority reserves the right to charge liquidated damages for the Contractor's failure to remove a lane or ramp closure by the prescribed time each day. The liquidated damages shall be established as One Thousand Dollars (\$1,000) per each fifteen (15) minutes, or a portion of 15 minutes, per lane or ramp, for any closure beyond the limits established above. Assessment of liquidated damages will stop when all maintenance of traffic devices are removed from the roadway and lanes or ramps have been safely reopened. Any liquidated damages assessed in this Special Provision will be in addition to those listed in Section 108.

Active work shall be pursued by the Contractor within one (1) hour from the time a lane or ramp closure is placed. The Authority reserves the right to charge liquidated damages, as determined above, after one (1) hour of non-active work from the time the lane or ramp closure placement is completed. If active work has not started within two (2) hours from the time that the lane closure placement is completed, the Engineer shall require the lane closure to be immediately removed. Assessment of liquidated damages will end when lanes or ramps have been safely reopened or active work is pursued. Active work will be on-site activity as determined by the Engineer and the Authority.

In addition, active work must be on-going at all times while a closure is in place. If active work is stopped for one (1) hour while a closure is in place or a closure is not removed within one (1) hour of the completion of active work, the Authority reserves the right to charge liquidated damages as stated above.

CERTIFICATION OF PERSONNEL

FHWA regulations provided in 23 CFR Subpart J state “States shall require that personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control be trained, appropriate to the job decisions each individual is required to make.” In accordance with the FHWA regulation and VDOT regulations, the Contractors foreman, or employee who is directly responsible for placing maintenance of traffic devices, shall be properly trained. The minimum training required for this Contract is the “Basic Work Zone Traffic Control Training” course. This is a one-day course designed by VDOT. For more information on the course, see the following: <http://www.vdot.virginia.gov/business/trafficeng-WZS.asp>

A trained employee must be on-site at all times during the setting up and removal of traffic control devices. In addition, a trained employee must be on-site at all times when any work inside a work zone requiring traffic control is on-going. If the inspector or engineer observes the Contractor without a trained employee on-site during the setting up, maintenance or removal of the work zone traffic control, the Authority reserves the right to charge liquidated damages at the rate of One Thousand Dollars (\$1,000) per day.

RESTRICTED TIME OF WORK AREAS

Portions of the Downtown Expressway and the Beltline Expressway Connection to the Downtown Expressway are adjacent to residential areas. These areas are identified as, but not limited to, the area delineated by 2nd Street to Meadow Street on the Downtown Expressway and the entire Beltline Expressway Connection to the Downtown Expressway. Work in these areas after 11:00 PM shall be restricted. Activities permitted after this time shall include saw-cutting, placement of concrete, and asphalt paving. Any activities that produce unacceptable decibel levels, as determined by the Engineer and the Authority shall not be permitted. Typical activities not permitted after 11:00 PM include, but are not limited to, jack hammering or roto-hammering.

PROTECTION OF PROPERTY

The Contractor shall provide for the Engineer's review and approval the method intended to protect the motoring public from any activity which poses a potential threat to another's property or person (i.e. cars, motorcycles, pedestrians, businesses, etc.).

HOLIDAYS AND SPECIAL EVENTS

The project will be officially shut down for the following holidays during the periods noted:

- Memorial Days: 5/25/18 (Friday) - 5:00 A.M. through 5/29/18 (Tuesday)-10:00A.M.
5/24/19 (Friday) - 5:00 A.M. through 5/28/19 (Tuesday) - 10:00 A.M.
5/22/20 (Friday) - 5:00 A.M. through 5/26/20 (Tuesday) - 10:00 A.M.
- Independence Days: 7/3/18 (Tuesday) - 5:00 A.M. through 7/5/18 (Thursday)-10:00A.M.
7/3/19 (Wednesday) - 5:00 A.M. through 7/5/19 (Friday) - 10:00 A.M.
7/3/20 (Friday) - 5:00 A.M. through 7/6/20 (Monday) - 10:00 A.M.
- Labor Days: 8/31/18 (Friday) - 5:00 A.M. through 9/4/18 (Tuesday) - 10:00 A.M.
8/30/19 (Friday) - 5:00 A.M. through 9/3/19 (Tuesday) - 10:00 A.M.
9/4/20 (Friday) - 5:00 A.M. through 9/8/20 (Tuesday) - 10:00 A.M.
- Thanksgiving Days: 11/21/18 (Wednesday) – 5:00 A.M. through 11/26/18 (Monday) – 10:00 A.M.
11/27/19 (Wednesday) - 5:00 A.M. through 12/2/19 (Monday) - 10:00 A.M.
- Christmas: 12/24/18 (Monday) – 5:00 A.M. through 12/26/16 (Wednesday) – 10:00 A.M.
12/24/19 (Tuesday) - 5:00 A.M. through 12/26/19 (Thursday) - 10:00 A.M.
- New Year’s Days: 12/28/18 (Friday) – 5:00 A.M. through 1/1/19 (Tuesday) – 10:00 A.M.

12/30/19 (Monday) - 5:00 A.M. through
1/1/20 (Wednesday) - 10:00 A.M.

The Authority will not allow any lane closures during special events. The Engineer reserves the right to limit/cancel/modify the lane closure times and/or work that may be performed to accommodate the following special events. The Contractor should be aware of typical increased weekend traffic during these events.

- Any NASCAR Race in Richmond (Typically 2 per year, in April and September)
- Ukrop's Monument Ave. 10K Race (Typically the second weekend in April)
- Dominion River Rock (Weekend in middle of May)
- Slide the City (Typically a Saturday in June)
- Jazz Festival at Maymont Park (Typically a weekend in August).
- Richmond Folk Festival (Weekend in the Middle of October)
- Richmond Marathon (Weekend in the Middle of November)

The Contractor shall prepare and submit a Schedule of Work Activities and Maintenance of Traffic (MOT) Plan for review and approval by the Engineer a minimum of 14 calendar days in advance of any special event.

No allowance shall be made for these periods in determining the contract end date.

MEASUREMENT AND PAYMENT

Standard Maintenance of Traffic pay items will be measured and paid as per VDOT Road and Bridge Specification 2016 Section 512.04.

SPECIAL PROVISION BRIDGE FULL COATING

DESCRIPTION

This work shall consist of cleaning and coating all the structural steel surfaces of each Bridge. The intent is to re-coat all structural members which exhibit corrosion and possible minor section loss. Steel surfaces proposed to be coated include girders, diaphragms, and bearing assemblies.

Structures are assumed to be Type B structures unless otherwise noted. Procedures and regulations for preparing and coating steel surfaces, recommended coating systems, required environmental protection and measurement and payment are provided in the VDOT Specification Sections 231 and 411.

The as-built framing and deck plans of these bridges are provided in the Appendix for Contractor's reference. Vertical Clearances are as shown on the as-built plans in the Appendix.

Estimates of the individual bridge square footage areas proposed to be cleaned and coated and are provided in the subsequent pages of this Special Provision. Please note that the provided square footage quantities are estimates only, and that no claim for extra payment or minimized work scope shall be accepted based on these estimates.

MATERIALS

All abrasive blast cleaned surfaces shall receive the following three coat zinc, epoxy & urethane system or engineer approved equal:

- CARBOZINC 859 – Zinc Rich Epoxy Primer 3-5 mils D.F.T.
- CARBOGUARD 893 –High Solids Epoxy 4-6 mils D.F.T.
- CARBOTHANE 133 – Satin Acrylic-Polyester Polyurethane 3-5 D.F.T.

SCOPE OF WORK

Bridge 63

This bridge is the lower bridge of a double-decker bridge which carries SB I-95 over Virginia Street, South 14th Street and CSX railroad to WB Downtown Expressway (VA 195). The bridge begins with the connection with Bridge 64, has one abutment and nine piers and is a multi-girder structure with 10 simple spans.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

Bridge 64

This bridge is a one lane ramp which carries SB I-95 over CSX Railroad, E Cary St and Dock St to WB Downtown Expressway (VA 195). Bridge 64 transitions from widening of I-95S to clear roadway. The bridge ends with the connection with Bridge 63, has no abutments and 11 piers and is a multi-girder structure with 10 simple spans.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

Bridge 65

This bridge is a one lane ramp which carries NB I-95 over both the CSX and NS Railroad to WB Downtown Expressway (VA 195). The bridge ends with the connection with Bridge 63, has no abutments and 20 piers and is a multi-girder structure with 20 simple spans. In addition, Bridge 65, Spans 10 and 11 cross over the Kanawha Canal.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

Bridge 66

This two-lane bridge is the upper bridge of a double-decker bridge which carries EB Downtown Expressway (VA 195) over Virginia Street, South 14th Street and CSX railroad to NB or SB I-95. The bridge ends with the connections of Bridges 67 and 68, has one abutment and 13 piers and is a multi-girder structure with 22 simple spans.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

Bridge 67

This Bridge is a single lane ramp which carries EB Downtown Expressway (VA 195) over CSX Railroad, E Cary St and E Main St to NB I-95. The bridge starts with the connection from Bridge 66, has one abutment and 17 piers and is a multi-girder structure with 12 simple spans.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

Bridge 68

This Bridge is a single lane ramp which carries EB Downtown Expressway (VA 195) over NS Railroad, CSX Railroad and E Byrd St to SB I-95. The bridge starts with the connection from Bridge 66, has no abutment and 14 piers and is a multi-girder structure with 18 simple spans.

- All Steelwork shall be coated in accordance with SSPC-PA 1.
- Cleaning shall be in accordance with SSPC – SP10 “Near-White Metal Blast” in addition to Section 411.04 – General Surface Preparation and Application Standards. Painting shall be in accordance with Section 411.04(B) – General Surface Preparation and Application Standards – Physical Application.

COORDINATION AND SCHEDULING

Contractor shall coordinate all work activities with the Engineer. Contractor shall provide at least seven days’ notice prior to starting work on any RMTA structure.

To complete work, Contractor may require access from property owned or managed by parties other than the RMTA. Contractor shall coordinate and schedule with appropriate owner, party or agency work activities on non-RMTA property. In addition, Contractor shall secure all necessary permits required for site access to perform work. Contractor shall abide by all permits, regulations and guidelines issued by the governing agency.

The Contractor is required to obtain any and all necessary permits or approvals from VDOT for attaching any containment or staging to a VDOT structure.

Upon completion of the use of properties adjacent to or below bridges for storage or work areas, Contractor shall restore the property to a condition similar or equal to that existing before work started. Any costs related to gaining access to property, stabilizing property, sediment control devices and restoring property shall be incidental to the other work items established for the structure.

Contractor shall protect all utilities on Bridges from all work, specifically abrasive blasting operations.

MEASUREMENT AND PAYMENT

Coating for bridges B63, B64, B65, B66, B67 and B68 will be measured and paid for at the contract lump sum price at each location. This price shall include all materials and labor to complete surface preparation and apply a 3-coat system. Environmental Protection and Health Safety will be measured and paid for at the contract lump sum price for each location. Disposal of Material will be measured and paid for at the contract lump sum price at each location. Maintenance of Traffic will be measured and paid for at the contract lump sum price at each location.

Payment will be made under;

<u>Pay Item</u>	<u>Pay Unit</u>
Coating B63	Lump Sum
Coating B64	Lump Sum
Coating B65	Lump Sum
Coating B66	Lump Sum
Coating B67	Lump Sum
Coating B68	Lump Sum
Environmental Protection B63	Lump Sum
Environmental Protection B64	Lump Sum
Environmental Protection B65	Lump Sum
Environmental Protection B66	Lump Sum

Environmental Protection B67	Lump Sum
Environmental Protection B68	Lump Sum
Disposal of Material B63	Lump Sum
Disposal of Material B64	Lump Sum
Disposal of Material B65	Lump Sum
Disposal of Material B66	Lump Sum
Disposal of Material B67	Lump Sum
Disposal of Material B68	Lump Sum
Maintenance of Traffic B63	Lump Sum
Maintenance of Traffic B64	Lump Sum
Maintenance of Traffic B65	Lump Sum
Maintenance of Traffic B66	Lump Sum
Maintenance of Traffic B67	Lump Sum
Maintenance of Traffic B68	Lump Sum

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-63

***THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR
100% COATING OF***

Girders, End Diaphragms, Interior Diaphragms, and Bearings

<i>GIRDERS</i>	<i>94,540 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>10,327 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>5,578 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>290 Sq. Ft.</i>
<i>TOTAL</i>	<i>110,735 Sq. Ft.</i>

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-64

***THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR
100% COATING OF***

Girders, End Diaphragms, Interior Diaphragms, Bearings, and Floor Beams

<i>GIRDERS</i>	<i>70,153 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>10,581 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>4,008 Sq. Ft.</i>
<i>FLOOR BEAMS -</i>	<i>481 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>217 Sq. Ft.</i>
<i>TOTAL</i>	<i>85,440 Sq. Ft.</i>

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-65

THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR

100% COATING OF

Girders, End Diaphragms, Interior Diaphragms, and Bearings

<i>GIRDERS</i>	<i>92,341 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>17,082 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>6,385 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>409 Sq. Ft.</i>
<i>TOTAL</i>	<i>116,217 Sq. Ft.</i>

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-66

THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR

100% COATING OF

Girders, End Diaphragms, Interior Diaphragms, Bearings, and Box Girders

<i>GIRDERS</i>	<i>129,670 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>14,658 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>9,121 Sq. Ft.</i>
<i>BOX GIRDERS -</i>	<i>14,338 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>802 Sq. Ft.</i>
<i>TOTAL</i>	<i>168,589 Sq. Ft.</i>

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-67

THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR

100% COATING OF

Girders, End Diaphragms, Interior Diaphragms, Bearings, and Box Girders

<i>GIRDERS</i>	<i>124,768 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>19,175 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>5,871 Sq. Ft.</i>
<i>FLOOR BEAMS -</i>	<i>2,729 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>374 Sq. Ft.</i>
<i>TRUSS -</i>	<i>12,844 Sq. Ft.</i>
<i>TOTAL</i>	<i>165,761 Sq. Ft.</i>

**Richmond Metropolitan
Transportation Authority
Paint Estimate
FOR INFORMATION ONLY**

BRIDGE B-68

***THE FOLLOWING DATA SUPPORTS THE PAINT ESTIMATE FOR
100% COATING OF***

Girders, End Diaphragms, Interior Diaphragms, Bearings, and Box Girders

<i>GIRDERS</i>	<i>41,096 Sq. Ft.</i>
<i>INT. DIAPHRAGMS -</i>	<i>5,101 Sq. Ft.</i>
<i>END DIAPHRAGMS -</i>	<i>2,369 Sq. Ft.</i>
<i>BOX GIRDERS -</i>	<i>2,875 Sq. Ft.</i>
<i>BEARINGS -</i>	<i>245 Sq. Ft.</i>
<i>TOTAL</i>	<i>51,685 Sq. Ft.</i>

**SPECIAL PROVISION
MISCELLANIOUS BRIDGE COATINGS**

DESCRIPTION

This work shall consist of cleaning and coating miscellaneous steel surfaces of existing bridge structural members. The intent of this work is to re-coat isolated structural members which exhibit corrosion and possible minor section loss.

Structures are assumed to be Type B structures. Procedures and regulations for preparing and coating steel surfaces, recommended coating systems, required environmental protection and measurement and payment are provided in the VDOT Specification Sections 231 and 411.

MATERIALS

Coating system shall be three coat sealer primer, epoxy & urethane or Engineer approved equal:

- CARBOLINE Rustbond 1-2 mils D.F.T.
- CARBOGUARD 893 –High Solids Epoxy 4-6 mils D.F.T.
- CARBOTHANE 133 – Satin Acrylic-Polyester Polyurethane 3-5 D.F.T.

PROCEDURES

Contractor shall remove deteriorated coating back around the edges of the repair until an area of completely intact and adherent coating film, with no rust or blisters underneath, is attained. Edges of tightly adherent coating remaining around the repair shall be recoated and must be feathered so that the recoated surface can have a smooth appearance to provide a transition from the area of repair to the intact coating.

The remaining existing coating should have sufficient adhesion so that it cannot be lifted as a layer by inserting the blade of a dull putty knife under it using moderate pressure. Unless experience or spot tests show otherwise and to the approval of the Engineer, the Contractor should use the same generic type of coating for this work as is in the existing coating.

The cleaning method required shall be power tool cleaning (SSPC-SP-3). This is Method 3 in Section 411.

LOCATIONS

Possible work areas include:

Bridge 5: Localized fascia girder (areas outside of the zone coating)

Bridge 60: bearings

Bridge 9-10: Localized girders

Additional areas as determined by the Engineer.

MEASUREMENT AND PAYMENT

Miscellaneous Coating will be measured in units of square foot of surface area and will be paid for at the contract unit price. This price shall include costs of any necessary staging for access, equipment required, labor, environmental protection, proper disposal of material offsite, and any incidentals required to complete the work.

The minimum square footage payment for an individual work location shall be 10 square feet. An individual work location shall be defined as a single bridge span.

Payment for MOT required at individual work locations shall be paid for in accordance with Electronic arrow, Group 2 channelizing devices, Flagger Service and Truck mounted attenuator bid items listed in Section 512.

Payment will be made under:

Pay Item

Miscellaneous Coating

Pay Unit

Square Foot

Selection & Specification Data

Generic Type Organic Zinc-Rich Epoxy

Description Low VOC organic zinc epoxy steel primer with extremely fast cure-to-topcoat characteristics for in-shop applications and quick turnaround requirements in the field. Carbozinc 859 has less than 3.0 lbs/gallon VOC (thinned) and is used extensively in virtually all industrial markets.

- Features**
- Meets Class B slip co-efficient and creep testing criteria for use on faying surfaces
 - Rapid cure. Dry to recoat in 30 minutes at 75°F (24°C) and 50% relative humidity.
 - Complies with SSPC Paint 20 (Type II)
 - Low temperature cure down to 35°F (2°C)
 - Excellent adhesion
 - Protects against undercutting corrosion
 - Field proven primer that applies well by spray methods
 - Excellent touch-up primer by brush or roll for small areas.
 - VOC compliant to current AIM regulations

Color Green (0300); Gray (0700)

Finish Flat

Primer Self Priming

Dry Film Thickness 3.0 - 5.0 mils (76 - 127 microns) per coat

Dry film thickness in excess of 10.0 mils (250 microns) per coat is not recommended.

Total Zinc Content in Dry Film 81% by weight

Solids Content By Volume 66% +/- 2%

Tested in accordance with ASTM D2697.

Theoretical Coverage Rate

1059 ft² at 1.0 mils (26.0 m²/l at 25 microns)
 353 ft² at 3.0 mils (8.7 m²/l at 75 microns)
 212 ft² at 5.0 mils (5.2 m²/l at 125 microns)

Allow for loss in mixing and application.

VOC Values

Thinner 2 13 oz/gal: 3.12 lbs./gal (374 g/l)
 Thinner 236 E 13 oz/gal: 2.72 lbs./gal (326 g/l)
 Thinner 33 13 oz/gal: 3.15 lbs./gal (378 g/l)
 As Supplied 2.72 lbs./gal (326 g/l)

These are nominal values.

*Use Thinner 76 for projects requiring non-photochemically reactive solvents.

Dry Temp. Resistance Continuous: 400 °F (204 °C)

Non-Continuous: 425 °F (218 °C)

Topcoats Acrylics, epoxies, polyurethanes and others as recommended by your Carboline sales representative.

Under certain conditions, a mist coat is required to minimize topcoat bubbling.

Substrates & Surface Preparation

General Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other

Substrates & Surface Preparation

contaminants that could interfere with adhesion of the coating.

Steel SSPC-SP6 with a 1.0-3.0 mil (25-75 micron) surface profile.
 SSPC-SP2 or SP3 with a roughened surface for touch-up.

Performance Data

Test Method	System	Results
ASTM D2794 Impact	A. 859 B. 859/ Polyurethane Gardner Impact Tester, Direct (Intrusion), inch- pounds, over 1/8" steel	A. 160 B. 100 min.
ASTM D4541 Adhesion	A. Carbozinc 859 B. 859 / Polyurethane C. 859 / Epoxy/ Polyurethane	A. 841 psi Pneumatic B. 1,100 min. psi Pneumatic C. 602 psi Elcometer
ASTM D522 Flexibility	A. 859 B. 859/ Polyurethane	A. >6% B. >5%
ASTM D970 Immersion	A. Carbozinc 859/ Epoxy/Polyurethane Salt Water (5% sodium chloride) at 75°F, 30 days B. 859 / Epoxy/Polyurethane; Fresh Water @75°F for 30 days	A & B had no rusting in the scribe; and no blistering, softening or discoloration with either environment
Slip Co-efficient	Carbozinc 859 A-490 bolt spec; 6 mils dry film maximum 10% max thinning	Meets requirements for class B rating

Test reports and additional data available upon written request.

Mixing & Thinning

Mixing Power mix Part A completely. Then slowly sift in the zinc filler under agitation. Power mix Part B separately and add slowly to the mixture. Pour mixture through a 30 mesh screen. DO NOT MIX PARTIAL KITS.

Tip: Sifting zinc through a window screen will aid in mixing process by breaking up or catching dry zinc lumps.

Thinning Normally not required but may be thinned up to 13 oz/gal (10%) with Thinner 2, Thinner 76 or Thinner 236E. In hot or windy conditions, may be thinned up to 13 oz/gal with Thinner 33. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied. Use of Carboline Thinner 236E to thin this product will minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance

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To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Carboguard® are registered trademarks of Carboline Company.

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Carbozinc[®] 859

Mixing & Thinning

Ratio .80 Gal. Kit
Part A: .35 gallons
Part B: .20 gallons
Zinc Filler: 14.6 lbs
4.00 Gal. Kit
Part A: 1.77 gallons
Part B: 1 gallon
Zinc Filler: 73 lbs.

Pot Life 4 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating loses body and begins to sag.

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General) The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco. Keep material under mild agitation during application.

Conventional Spray Agitated pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Airless Spray Pump Ratio: 30:1 (min.) with pail agitator*
GPM Output: 3.0 (min.)
Material Hose: 3/8" I.D. (min.)
Tip Size: .017-.023"
Output PSI: 2000-2200
Filter Size: 60 mesh
*Teflon packings are recommended and available from the pump manufacturer

Brush & Roller (General) For small areas and touch-up only. Preferred method for large areas is spray application.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	40 °F (4 °C)	35 °F (2 °C)	35 °F (2 °C)	0%
Maximum	90 °F (32 °C)	120 °F (49 °C)	110 °F (43 °C)	95%

Industry standards are for the substrate temperatures to be 5°F (3°C) above the dew point. This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions which are as follows: material 60°F-85°F (16°C-29°C), surface & ambient 60°F-90°F (16°C-32°C) and humidity 0% - 90%.

Curing Schedule

Surface Temp.*	Dry to Handle	Dry to Recoat & Topcoat w/ other finishes
35 °F (2 °C)	8 Hours	6 Hours
50 °F (10 °C)	5 Hours	2 Hours
75 °F (24 °C)	2 Hours	30.0 Minutes
100 °F (38 °C)	1 Hours	30.0 Minutes

These times are based on a 3.0 mil (75 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

The general requirement is a 24 hour cure for Carboline epoxy intumescent applications. Maximum recoat time is unlimited. Must have a clean, dry surface free of chalk, zinc salts, etc. per typical good painting practices. Consult Carboline Technical Service for specific information.

Cleanup & Safety

Cleanup Use Thinner 2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. In addition to ensuring proper ventilation, appropriate respirators must be used by all application personnel.
This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Packaging, Handling & Storage

Shelf Life Part A: 36 months at 75°F (24°C)
Part B: 24 months at 75°F (24°C)
Part C: 24 months at 75°F (24°C)

*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.

Shipping Weight (Approximate) .80 Gallon Kit - 22 lbs (10 kg)
4.00 Gallon Kit - 105 lbs (48 kg)

Storage Temperature & Humidity 40° - 120°F (4°-49°C) Store indoors
Can be stored down to 20°F (-7°C) for no longer than 30 days
0-100% Relative Humidity

Flash Point (Setaflash) Part A: 49°F (9°C)
Part B: 38°F (3°C)
Zinc Filler: NA

Storage Store Indoors



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To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline[®] and Carboguard[®] are registered trademarks of Carboline Company.

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Selection & Specification Data

Generic Type	Cycloaliphatic Amine Epoxy
Description	High solids corrosion resistant primer and intermediate. Used either as a primer or an intermediate coat over steel and inorganic zinc primers. Can be topcoated with a broad variety of high performance finish coats.
Features	<ul style="list-style-type: none"> • Excellent corrosion protection • Excellent film build and edge protection • Used as a primer or an intermediate coating • Good abrasion resistance • Cures down to 40°F • VOC compliant to current AIM regulations
Color	Red (0500); Gray (0700); White (0800); Yellow (0600)
Finish	Eggshell
Primer	Self-priming. May be applied over organic and inorganic zinc rich primers. A mist coat may be required to minimize bubbling over zinc rich primers.
Dry Film Thickness	3.0 mils (76 microns) per coat 4.0 - 6.0 mils (102 - 152 microns) per coat 3.0 mils for mild environments and as an intermediate coat over inorganic zincs. 4-6 mils for more severe environments. Do not exceed 10.0 mils (250 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.
Solids Content	By Volume 77% +/- 2%
Theoretical Coverage Rate	1235 ft ² at 1.0 mils (30.3 m ² /l at 25 microns) 412 ft ² at 3.0 mils (10.1 m ² /l at 75 microns) 206 ft ² at 6.0 mils (5.1 m ² /l at 150 microns) Allow for loss in mixing and application.
VOC Values	Thinner 2 16 oz/gal = 2.2 lbs/gal (261 g/l) Thinner 230 13 oz/gal = 2.1 lbs/gal (252 g/l) Thinner 33 32 oz/gal = 2.7 lbs/gal (329 g/l) As Supplied 1.6 lbs/gal (195 g/l) These are nominal values and may vary slightly with color. *Maximum thinning for 250 g/l restricted areas is 12 oz/gal with Thinner 2, and 11 oz/gal with Thinner 33 or 230. Use Thinner 76 where non-photochemically reactive solvents are required (up to 11 oz/gal)
Dry Temp. Resistance	Continuous: 200 °F (93 °C) Non-Continuous: 250 °F (121 °C) Discoloration and loss of gloss is observed above 200 F (93 C).
Limitations	Not recommended for immersion service
Topcoats	May be coated with Acrylics, Epoxies, Alkyds, or Polyurethanes depending on exposure and need.

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	SSPC-SP6 with a 1.0-2.0 mil (25-50 micron) surface profile.

Substrates & Surface Preparation

Galvanized Steel	Prime with specific Carboline primers as recommended by your Carboline Sales Representative. Refer to the specific primer's Product Data Sheet for substrate preparation requirements.
Concrete or CMU	Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D42582 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

Performance Data

Test Method	System	Results
ASTM B117 Salt Fog	Blasted Steel 1ct. IOZ 1 ct. 893	No blistering, rusting and no creepage at scribe after 4000 hours
ASTM D 1735 Water Fog	Blasted Steel 1ct. IOZ 1 ct. 893	No blistering softening or rusting after 5000 hours
ASTM D2583 Hardness	Blasted Steel 1 ct. 893	73, Barcol Test, 1 week cure, 5 mils DFT
ASTM D4060 Abrasion	Blasted Steel 1ct. 893	88 mg. loss after 1000 cycles, CS17 wheel, 1000 gm. load
ASTM G26 Weatherometer	Blasted Steel 1ct. IOZ 1 ct. 893	No blistering softening or rusting after 4000 hours

Test reports and additional data available upon written request.

Mixing & Thinning

Mixing	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS. A 30-minute "sweat-in" time is highly recommended for applications below 50°F and will improve cure response.
Thinning	<p>Spray: Up to 16 oz/gal (12%) w/ Thinner 2 or up to 13 oz/gal (10%) w/ Thinner 230 Brush: Up to 32 oz/gal (25%) w/ Thinner 33 Roller: Up to 32 oz/gal (25%) w/ Thinner 33 Mist coating: Thin up to 32 oz/gal with Thinner 2 or 33 in VOC restricted (2.8lb/gal) areas. May thin up to 48 oz/gal where VOC restricted levels are at 3.5 lb/gal for mist coat only. If necessary, use Thinner 230 only in hot (above 100°F/38°C) and windy conditions, to slow down the evaporation rate. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied. *See VOC values for thinning limits. Carboline Thinner 236E or 225E (up to 10% or 13 oz/gal) may also be used to thin this product to minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance.</p>
Ratio	1:1 Ratio (A to B)
Pot Life	4 Hours at 75°F (24°C) Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures. Thinning rates above 16 oz/gal will shorten the working time to 2 hours.

Carboguard® 893

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

- Spray Application (General)** This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
- Conventional Spray** Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.
- Airless Spray** Pump Ratio: 30:1 (min.)
GPM Output: 3.0 (min.)
Material Hose: 3/8" I.D. (min.)
Tip Size: .017-.021"
Output PSI: 2100-2300
Filter Size: 60 mesh
Teflon packings are recommended and available from the pump manufacturer.
- Brush & Roller (General)** Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).
- Brush** Use a medium bristle brush.
- Roller** Use a short-nap synthetic roller cover with phenolic core.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	40 °F (4 °C)	40 °F (4 °C)	40 °F (4 °C)	0%
Maximum	90 °F (32 °C)	135 °F (57 °C)	110 °F (43 °C)	90%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp. *	Dry to Handle	Dry to Topcoat	Dry to Touch	Maximum Recoat Time w/ Acrylics	Maximum Recoat Time w/ Epoxies	Maximum Recoat Time w/ Polyurethanes
40 °F (4 °C)	24 Hours	72 Hours	6 Hours	14 Days	30 Days	90 Days
50 °F (10 °C)	16 Hours	24 Hours	5 Hours	14 Days	30 Days	90 Days
60 °F (16 °C)	12 Hours	16 Hours	4 Hours	14 Days	30 Days	90 Days
75 °F (24 °C)	6 Hours	8 Hours	3 Hours	14 Days	30 Days	90 Days
90 °F (32 °C)	3 Hours	4 Hours	2 Hours	14 Days	15 Days	30 Days

These times are based on a 4.0 mil (100 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting or sanding before the application of additional coats. When cured below 50 F a slight softening is typically observed as the temperature rises above 50 F and is considered normal.

Cleanup & Safety

- Cleanup** Use Thinner 2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
- Safety** Read and follow all caution statements on this product data sheet and on the MSDS for this product. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
- Ventilation** When used in enclosed areas and product is thinned, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, Use MSHA/NIOSH approved supplied air respirator.

Packaging, Handling & Storage

- Shelf Life** Part A: Min. 36 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)
*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
- Shipping Weight (Approximate)** 2 Gallon Kit - 29 lbs (13 kg) 10 Gallon Kit - 143 lbs (65 kg)
- Storage Temperature & Humidity** 40° - 110°F (4°-43°C)
0-90% Relative Humidity
- Flash Point (Setaflash)** Carboguard 893 Part A: 61°F (16°C)
Carboguard 893 Part B: 59°F (15°C)
- Storage** Store Indoors.

This product is solvent based and not affected by excursions below these published storage temperatures, down to 10°F, for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.



June 2015

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0988

Selection & Specification Data

Generic Type	Aliphatic Acrylic-Polyester Polyurethane
Description	High solids, high build, satin finish that provides a tough attractive finish while exhibiting outstanding performance properties. Demonstrates extremely good resistance to abrasion, corrosion and chemical exposure when applied over recommended Carboline primers and/or intermediate coats.
Features	<ul style="list-style-type: none"> Compliant to AWWA D102-11, OCS-4 & OCS-6 Outstanding performance properties in virtually all industrial markets High build; suitable for many two-coat systems High solids formulation allows for improved edge protection Suitable for application direct to inorganic and organic zinc primers Indefinite recoatability VOC compliant to current AIM regulations
Color	Refer to Carboline Color Guide. Certain colors require multiple coats to hide.
Finish	Satin to Semi-Gloss
Primer	Inorganic zinc primers, organic zinc primer, or epoxy primers
Dry Film Thickness	3 - 5 mils (76 - 127 microns) per coat

Dry film thickness in excess of 7.0 mils (175 microns) per coat is not recommended.

Solids Content	By Volume 72% +/- 2%
Theoretical Coverage Rate	1155 ft ² /gal at 1.0 mils (28.3 m ² /l at 25 microns) 385 ft ² /gal at 3.0 mils (9.4 m ² /l at 75 microns) 231 ft ² /gal at 5.0 mils (5.7 m ² /l at 125 microns)

Allow for loss in mixing and application.

VOC Values	Thinner 2 16 oz/gal 2.05 lbs/gal (246 g/l) Thinner 214 16oz/gal. 1.92 lbs./gal (230 g/l) Thinner 215 16 oz/gal 2.07 lbs/gal (249 g/l) Thinner 236 E 16 oz/gal.1.31 lbs./gal (157 g/l) Thinner 242 E 16 oz/gal: 1.31 lbs/gal (157 g/l) Thinner 25 16 oz/gal 2.07 lbs/gal (248 g/l) As Supplied 1.31 lbs/gal (157 g/l)
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These are nominal values and may vary slightly with color.

NOTE: Thinner 242 E contains VOC-exempt t-butyl acetate. Check local regulations regarding product usage.

Dry Temp. Resistance	Continuous: 200 °F (93 °C) Non-Continuous: 250 °F (121 °C)
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Limitations
*The alignment of aluminum flakes in aluminum-filled finishes is very dependent on application conditions and techniques. Care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Carboline Technical Service Department.

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. For all surfaces, prime with specific Carboline primers as recommended by your Carboline sales representative.
Steel	SSPC-SP6 with a 1.5-2.5 mil (37.5-62.5 microns) surface profile for maximum protection. SSPC-SP2 or SP3 as minimum requirement.
Previously Painted Surfaces	Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 "X-Scribe" adhesion test.

Performance Data

Test Method	System	Results
ASTM B117 Salt Fog for 4,000 hours	1ct. Carbozinc 11/1ct. Carbothane 133 VOC	No effect to plane, very slight rust in scribe

Mixing & Thinning

Mixing	Power mix separately Part A, then combine with Part B and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Spray: Up to 16 oz/gal (12%) w/ Thinner 2 Spray: Up to 16 oz/gal (12%) w/ Thinner 25 Spray: Up to 16 oz/gal (12%) w/ Thinner 236E Spray: Up to 16 oz/gal (12%) w/ Thinner 242E Brush: Up to 16 oz/gal (12%) w/ Thinner 215 Roller: Up to 16 oz/gal (12%) w/ Thinner 215 Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
Ratio	5:1 Ratio (A to B)
Pot Life	6 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION.

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General)	This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Carbothane[®] 133 VOC

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray Pump Ratio: 30:1 (min.)*
GPM Output 2.5 (min.)
Material Hose: 3/8" I.D. (min.)
Tip Size: 0.013-0.015"
Output PSI: 2100-2400
Filter Size: 60 mesh
*PTFE packings are recommended and available from the pump manufacturer.

Brush & Roller (General) Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F.

Brush Recommended for touch-up only. Use a medium, natural bristle brush.

Roller Use a medium-nap mohair roller cover with solvent resistant core.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	50 °F (10 °C)	35 °F (2 °C)	35 °F (2 °C)	0%
Maximum	100 °F (38 °C)	120 °F (49 °C)	95 °F (35 °C)	80%

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. **Caution:** This Product is moisture sensitive in the liquid stage and until fully cured. Protect from heavy humidity, dew and direct moisture contact until fully cured. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or micro-bubbling of the product.

Curing Schedule

Surface Temp.*	Dry to Handle	Dry to Recoat	Final Cure General
35 °F (2 °C)	36 Hours	36 Hours	14 Days
50 °F (10 °C)	16 Hours	16 Hours	10 Days
75 °F (24 °C)	8 Hours	8 Hours	7 Days
90 °F (32 °C)	4 Hours	4 Hours	5 Days

These times are based on a 4.0 mil (100 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

***Maximum recoat times are indefinite.** Surface must be clean and dry. As part of good painting practice it is recommended to test for adhesion by wiping the surface with Thinner 25. If the film shows a slight "tack" the surface is suitable for recoating without extensive surface preparation such as abrading.

Carboline Additive 101 can be used to accelerate the film forming process in this product for conditions outside of the parameters of this data sheet. Carboline Additive 101 is added at a rate of 1.0-2.0 oz per mixed gallon or a maximum of 6 oz per mixed five gallons. At this addition rate, Additive 101 will accelerate the cure rate of the urethane product between 25-40% depending on the substrate temperature range and reduce the pot life of the product by approximately 40-50% of that stated on the product data sheet. With the use of Additive 101, this product will continue to cure at temperatures as low as 20°F (-7°C).

Cleanup & Safety

Cleanup Use Thinner 2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product and use personal protective equipment as directed.

Cleanup & Safety

Ventilation

When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

Caution

This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Packaging, Handling & Storage

Shelf Life

Part A: Min. 36 months at 75°F (24°C)
Part B (Converter 811): Min. 24 months at 75°F (24°C)

*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.

Shipping Weight (Approximate)

1.2 Gallon Kit - 17 lbs (8 kg)
6 Gallon Kit - 80 lbs (36 kg)

Storage Temperature & Humidity

40° - 110°F (4°-43°C)
0-80% Relative Humidity

Flash Point (Setaflash)

71°F (22°C)

Storage

Store Indoors.

This product is solvent based and not affected by excursions below these published storage temperatures, down to 10°F, for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.

September 2017

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Carboline® and Carboguard® are registered trademarks of Carboline Company.



0863

Selection & Specification Data

Generic Type	Polymeric epoxy amine.
Description	Rustbond is a cross-linked penetrating primer/sealer with excellent wetting properties. It is highly flexible with good chemical and solvent resistance, and accept a variety of topcoats. Recommended use as primer/sealers for marginally prepared steel and over old coatings. Its excellent wetting properties allows it to penetrate rust and discontinuities in existing coatings and provide a firm anchorage for a variety of topcoats. Its thixotropic character reduces run off, ensuring that the edges of existing coatings are encapsulated thus reducing undercutting and peeling. It may also be used as a tie-coat for coatings that exceed their "recoat window." Consult Carboline Technical Services Department for specific recommendations.
Features	<ul style="list-style-type: none"> • Universal primer and tie-coat • Excellent adhesion to SSPC-SP 2 prepared steel, galvanizing, aluminum, stainless steel and copper • Low stress, highly flexible film • Extremely high solids • Low odor • Contains corrosion inhibitors • Compatible with a variety of topcoats • User friendly brush and roller application • VOC compliant to current AIM regulations
Color	Translucent Green (0300)
Finish	High Gloss Chalks rapidly in sunlight.
Primer	Self-priming. May be applied over most generic types of coatings.
Topcoat	Acrylics, alkyds, epoxies, polyurethanes
Dry Film Thickness	1.0 - 2.0 mils (25 - 51 microns) per coat
Solids Content	By Volume 99% +/- 1%
Theoretical Coverage Rate	1588 ft ² at 1.0 mils (39.0 m ² /l at 25 microns) 794 ft ² at 2.0 mils (19.5 m ² /l at 50 microns) Allow for loss in mixing and application.
VOC Values	Thinner 76 12 oz/gal; 1.22 lbs/gal (147 g/l) As Supplied 0.7 lbs./gal (85 g/l) EPA Method 24 These are nominal values
Dry Temp. Resistance	Continuous: 175 °F (79 °C) Non-Continuous: 200 °F (93 °C) Discoloration and loss of gloss is observed above 175°F (80°C)
Limitations	<ul style="list-style-type: none"> • Epoxies lose gloss, discolor and eventually chalk in sunlight exposure • Do not use for immersion service • Rustbond sealers must be topcoated

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	SSPC-SP2 or SP3
Previously Painted Surfaces	A test patch is recommended to verify compatibility with existing coating. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 "X-Scribe" adhesion test.

Mixing & Thinning

Mixing	Power mix components separately to break down any gel. Keep the mixing blade at slow speed and submerged in the product to minimize whipping of air into the material. Scrape the sides of the container occasionally to insure uniformity. Continue to mix for 1-2 minutes. DO NOT MIX PARTIAL KITS , and do not intermix unpaired components.
Thinning	Thinning not normally required but may be thinned up to 9% (12 oz/gal) with Thinner #76. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether express or implied.
Ratio	.5 Gallon Kit Part A: 1 Quart (0.25 gal) Part B: 1 Quart (0.25 gal) 2 Gallon Kit Part A: 1 Gallon Part B: 1 Gallon
Pot Life	<ul style="list-style-type: none"> • For 1/2 gal units: • 80 minutes at 70°F (21°C) • 50 minutes at 80°F (27°C) • 40 minutes at 90°F (32°C) • 30 minutes at 100°F (38°C) • Pot life ends when material begins to thicken and exotherm.

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General)	Contact Carboline Technical Service for specific application instructions.
Brush & Roller (General)	Avoid excessive re-brushing or re-rolling. Apply enough material to uniformly wet the surface. Any puddles formed must be brushed out.
Brush	Use a medium bristle brush and distribute evenly using full brush strokes.
Roller	Use a medium to long nap roller suitable for solvent base materials to evenly distribute the material.

Rustbond®

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	60 °F (16 °C)	70 °F (21 °C)	70 °F (21 °C)	0%
Maximum	100 °F (38 °C)	130 °F (54 °C)	110 °F (43 °C)	90%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp.*	Dry to Handle	Dry to Topcoat	Final Cure General
70 °F (21 °C)	34 Hours	18 Hours	9 Days
80 °F (27 °C)	22 Hours	12 Hours	6 Days
90 °F (32 °C)	14 Hours	9 Hours	4 Days
100 °F (38 °C)	11 Hours	4 Hours	3 Days

* These times are based on 50% relative humidity and 1.0–2.0 mils (25-50 microns) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush **must** be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing.

Surface Temp.*	Maximum Recoat Time	
	Acrylics & Alkyds	Epoxies & Urethanes
70 °F (21 °C)	14 Days	30 Days
75 °F (24 °C)	14 Days	30 Days
90 °F (32 °C)	7 Days	15 Days

* These times are based on 50% relative humidity and 1-2 mils (25-50 microns) dry film thickness. If the maximum recoat time is exceeded the surface must be abraded by sweep blasting or by the application of another coat of Rustbond before applying any additional coatings.

Cleanup & Safety

Cleanup	Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions.
Ventilation	When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.
Caution	<u>THIS PRODUCT EXOTHERMS AT THE END OF ITS POT LIFE.</u> Any unused quantities will become extremely hot. Immediately spread out on an appropriate surface or add sand or other suitable heat sink to the unused material to reduce the severity of exotherm. Take appropriate precautions against breathing fumes. This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Packaging, Handling & Storage

Shelf Life	Part A & B: Min. 36 months at 75°F (24°C)* <small>*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.</small>
Shipping Weight (Approximate)	0.5 Gallon Kit - 6 lbs. (3 kg) 2 Gallon Kit - 22 lbs. (10 kg)
Storage Temperature & Humidity	40° - 110°F (4°-43°C) 0-90% Relative Humidity
Flash Point (Setaflash)	• Part A: 205°F (96°C) • Part B: 176°F (80°C)
Storage	Store Indoors.



October 2016

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0922

SPECIAL PROVISION PARAPET WALL COATINGS

DESCRIPTION

This work shall consist of cleaning, patching and coating the outside face of the parapet walls. The intent of this work is to provide a properly prepared concrete surface that is suitable for application and adhesion of the specified protective coating system.

MATERIALS

All cleaned surfaces shall receive the following coating system, or Engineer approved equal:

- A. PPG Amercoat 385 Polyamide Epoxy at 3.0 -8.0 mils DFT. A multi-purpose high build epoxy compatible with a wide range of substrates and surface preparations that cures down to 40°.
- B. PPG Amercoat 114A Epoxy Filler Compound for bug holes and surface cracks in concrete.
- C.

PROCEDURES

Contractor shall repair all delaminations, spalls and significant cracks and allow proper curing as per manufacturer's recommendations before applying coating. Surface Preparation will be in accordance with SSPC SP-13 guidelines with minimum high-pressure water cleaning of 3000 PSI. Detergent water cleaning and steam cleaning may be used to remove oils and grease from concrete. After pressure cleaning the surface of the parapet wall must dry for a minimum of 24 hours before applying the coating.

Coating application must be in accordance with the approved manufactures recommendation. Application will be by brush and roller only. No spraying will be permitted. A minimum of two coats will be necessary to achieve adequate film-build. One coat application will not be allowed.

QUANTITIES

<u>Bridge:</u> <u>No.</u>	Parapet Wall Coatings
	(SY)
63	598
64	493
65	964
66	1096
67	959
68	445

MEASUREMENT AND PAYMENT

Parapet Wall Coating will be measured by square yards and paid for at the contract price. This price shall be full compensation for any necessary patching/crack sealing, surface preparation, environmental protection, proper disposal of waste material offsite, furnishing and installing coatings per manufacturer's recommendations, all equipment, labor, materials, and incidentals required to complete the work.

Maintenance of Traffic items for Parapet Wall Coatings will be paid as per MOT Special Provision SP-B and the Supplemental Specifications.

Payment will be made under:

Pay Item

Parapet Wall Coating

Pay Unit

Square Yards

CSX CONSTRUCTION AGREEMENT

Project: Richmond, Virginia - Proposed coating replacement on RMTA Structures at the following locations:

Bridge 63 Span 23 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.

Bridge 64 Span 2 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence Division. RMTA Bridge 64 Span 9 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.

RMTA Bridge 65 Span 13 over and adjacent to CSXT; Milepost CAB-0.01, in the Rivanna Subdivision, within the Florence Division.

RMTA Bridge 67 Span 1 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division. RMTA Bridge 67 Spans 7 and 8 adjacent to CSXT; Milepost CA-84.65, in the Peninsula Subdivision, within the Florence Division. RMTA Bridge 67 Span 10 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence Division.

RMTA Bridge 68 Span 1 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division. RMTA Bridge 68 Span 4 over and adjacent to CSXT; Milepost CAB-0.03, in the Rivanna Subdivision, within the Florence Division.

CSXT OP# (TBD),

CONSTRUCTION AGREEMENT

This Construction Agreement ("**Agreement**") is made as of _____, 2018, by and between CSX TRANSPORTATION, INC., a Virginia corporation with its principal place of business in Jacksonville, Florida ("**CSXT**"), and the RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY, a body corporate and political subdivision of the Commonwealth of Virginia ("**Agency**" and "RMTA").

EXPLANATORY STATEMENT

1. Agency has proposed to repair, or to cause to be repaired, RMTA I-95 Ramps in Richmond, Virginia (the "Project").
 - B63 Ramp from westbound Downtown Expressway (RTE. 195) over Virginia Street, South 14th Street (US Route 360) and CSX Railroad.
 - Span 23 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.

- B64 Ramp from southbound I-95 to westbound Downtown Expressway (RTE.195) over east Cary Street, Dock Street and CSX Railroad
 - Span 2 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence Division.
 - Span 9 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.
 - B65 Ramp from northbound I-95 to westbound Downtown Expressway (RTE. 195) over CSX and Norfolk Southern Railroads, James River and Kanawha Canal.
 - Span 13 over and adjacent to CSXT; Milepost CAB-0.01, in the Rivanna Subdivision, within the Florence Division.
 - B67 Ramp from eastbound Downtown Expressway (RTE.) to northbound I-95 over Dock Street, East Cary Street, East Main Street (RTE. 60) and CSX Railroad.
 - Span 1 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.
 - Spans 7 and 8 adjacent to CSXT; Milepost CA-84.65, in the Peninsula Subdivision, within the Florence Division.
 - Span 10 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence Division.
 - B68 Ramp eastbound Downtown Expressway (RTE. 195) to southbound I-95 over James River, Kanawha Canal and CSX Railroad.
 - Span 4 over and adjacent to CSXT; Milepost CAB-0.03, in the Rivanna Subdivision, within the Florence Division.
2. Agency has obtained, or will obtain, all authorizations, permits and approvals from all local, state and federal agencies (including Agency), and their respective governing bodies and regulatory agencies, necessary to proceed with the Project and to appropriate all funds necessary to construct the Project.
 3. Agency acknowledges that: (i) by entering into this Agreement, CSXT will provide services and accommodations to promote public interest in this Project, without profit or other economic inducement typical of other Agency contractors; (ii) neither CSXT nor its affiliates (including their respective directors, officers, employees or agents) will incur any costs, expenses, losses or liabilities in excess of payments made to CSXT, by or on behalf of Agency or its contractors, pursuant to this Agreement; and (iii) CSXT retains the paramount right to regulate all activities affecting its property and operations.

NOW, THEREFORE, in consideration of the foregoing Explanatory Statement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the parties, the parties agree as follows:

1. Project Plans and Specifications

- 1.1. Preparation and Approval. Pursuant to Exhibit A of this Agreement, all plans, specifications, drawings and other documents necessary or appropriate to the design and construction of the Project shall be prepared, at Agency's sole cost and expense, by Agency or CSXT or their respective contractors. Project plans, specifications and drawings prepared by or on behalf of Agency shall be subject, at CSXT's election, to the review and approval of CSXT. Such plans, specifications and drawings, as prepared or approved by CSXT, are referred to as the "Plans", and shall be incorporated and deemed a part of this Agreement. Plans prepared or submitted to and approved by CSXT as of the date of this Agreement are set forth in Exhibit B to this Agreement.
- 1.2. Effect of CSXT Approval or Preparation of Plans. By its review, approval or preparation of Plans pursuant to this Agreement, CSXT signifies only that such Plans and improvements constructed in accordance with such Plans satisfy CSXT's requirements. CSXT expressly disclaims all other representations and warranties in connection with the Plans, including, but not limited to, the integrity, suitability or fitness for the purposes of Agency or any other persons of the Plans or improvements constructed in accordance with the Plans.
- 1.3. Compliance with Plans. The Project shall be constructed in accordance with the Plans.

2. Allocation and Conduct of Work

Work in connection with the Project shall be allocated and conducted as follows:

- 2.1. CSXT Work. Subject to timely payment of Reimbursable Expenses as provided by Section 4, CSXT shall provide, or cause to be provided, the services as set forth by Exhibit A to this Agreement. Agency agrees that CSXT shall provide all services that CSXT deems necessary or appropriate (whether or not specified by Exhibit A) to preserve and maintain its property and operations, without impairment or exposure to liability of any kind and in compliance with all applicable federal, state and local regulations and CSXT's contractual obligations, including, but not limited to, CSXT's existing or proposed third party agreements and collective bargaining agreements.
- 2.2. Agency Work. Agency shall perform, or cause to be performed, all work as set forth by Exhibit A, at Agency's sole cost and expense.
- 2.3. Conduct of Work. CSXT shall commence its work under this Agreement following: (i) delivery to CSXT of a notice to proceed from Agency; (ii) payment of Reimbursable Expenses (as provided by Section 4.1) as required by CSXT prior to the commencement of work by CSXT; (iii) issuance of all permits, approvals and authorizations necessary or appropriate for such work; and (iv) delivery of proof of insurance acceptable to CSXT, as required by Section 9. The initiation of any services by CSXT pursuant to this Agreement, including, but not limited to, the issuance of purchase orders or bids for materials or

services, shall constitute commencement of work for the purposes of this Section. The parties intend that all work by CSXT or on CSXT property shall conclude no later than March 1, 2020, unless the parties mutually agree to extend such date.

3. Special Provisions. Agency shall observe and abide by, and shall require its contractors ("**Contractors**") to observe and abide by the terms, conditions and provisions set forth in Exhibit C to this Agreement (the "Special Provisions"). To the extent that Agency performs Project work itself, Agency shall be deemed a Contractor for purposes of this Agreement. Agency further agrees that, prior to the commencement of Project work by any third party Contractor, such Contractor shall execute and deliver to CSXT Schedule I to this Agreement to acknowledge Contractor's agreement to observe and abide by the terms and conditions of this Agreement.
4. Cost of Project and Reimbursement Procedures
 - 4.1. Reimbursable Expenses. Agency shall reimburse CSXT for all costs and expenses incurred by CSXT in connection with the Project, including, without limitation: (1) all out of pocket expenses, (2) travel and lodging expenses, (3) telephone, facsimile, and mailing expenses, (4) costs for equipment, tools, materials and supplies, (5) sums paid to CSXT's consultants and subcontractors, and (6) CSXT labor in connection with the Project, together with CSXT labor overhead percentages established by CSXT pursuant to applicable law (collectively, "**Reimbursable Expenses**"). Reimbursable Expenses shall also include expenses incurred by CSXT prior to the date of this Agreement to the extent identified by the Estimate provided pursuant to Section 4.2.
 - 4.2. Estimate. CSXT has estimated the total Reimbursable Expenses for the Project as shown on Exhibit D (the "**Estimate**", as amended or revised). In the event CSXT anticipates that actual Reimbursable Expenses for the Project may exceed such Estimate, it shall provide Agency with the revised Estimate of the total Reimbursable Expenses, together with a revised Payment Schedule (as defined by Section 4.3.1), for Agency's approval and confirmation that sufficient funds have been appropriated to cover the total Reimbursable Expenses of such revised Estimate. CSXT may elect, by delivery of notice to Agency, to immediately cease all further work on the Project, unless and until Agency provides such approval and confirmation.
 - 4.3. Payment Terms.
 - 4.3.1. Agency shall pay CSXT for Reimbursable Expenses as set forth in the Payment Schedule as shown on Exhibit E (the "Payment Schedule", as revised pursuant to Section 4.2). CSXT agrees to submit invoices to Agency for such amounts and Agency shall remit payment to CSXT at the later of thirty (30) days following delivery of each such invoice to Agency or, the payment date (if any) set forth in the Payment Schedule.

4.3.2. Following completion of the Project, CSXT shall submit to Agency a final invoice that reconciles the total Reimbursable Expenses incurred by CSXT against the total payments received from Agency. Agency shall pay to CSXT the amount by which Reimbursable Expenses exceed total payments as shown by the final invoice, within thirty (30) days following delivery of such invoice to Agency. In the event that the payments received by CSXT from Agency exceed the Reimbursable Expenses, CSXT shall remit such excess to Agency.

4.3.3. In the event that Agency fails to pay CSXT any sums due CSXT under this Agreement: (i) Agency shall pay CSXT interest at the lesser of 1.0% per month or the maximum rate of interest permitted by applicable law on the delinquent amount until paid in full; and (ii) CSXT may elect, by delivery of notice to Agency: (A) to immediately cease all further work on the Project, unless and until Agency pays the entire delinquent sum, together with accrued interest; and/or (B) to terminate this Agreement.

4.3.4. All invoices from CSXT shall be delivered to Agency in accordance with Section 16 of this Agreement. All payments by Agency to CSXT shall be made by certified check and mailed to the following address or such other address as designated by CSXT's notice to Agency:

CSX Transportation, Inc.
P. O. Box 116651
Atlanta, GA 30368-6651

4.4. Effect of Termination. Agency's obligation to pay to CSXT Reimbursable Expenses in accordance with Section 4 shall survive termination of this Agreement for any reason.

5. Appropriations. Agency represents to CSXT that: (i) Agency has appropriated funds sufficient to reimburse CSXT for the Reimbursable Expenses encompassed by the Estimate attached as Exhibit D; (ii) Agency shall use its best efforts to obtain appropriations necessary to cover Reimbursable Expenses encompassed by subsequent Estimates approved by Agency; and (iii) Agency shall promptly notify CSXT in the event that Agency is unable to obtain such appropriations.

6. Easements and Licenses

6.1. Agency Obligation. Agency shall acquire all necessary licenses, permits and easements required for the Project.

6.2. Temporary Construction Licenses. Insofar as it has the right to do so, CSXT hereby grants Agency a nonexclusive license to access and cross CSXT's property, to the extent necessary for the construction of the Project (excluding ingress or egress over public grade crossings),

along such routes and upon such terms as may be defined and imposed by CSXT and such temporary construction easements as may be designated on the Plans approved by CSXT.

7. Permits At its sole cost and expense, Agency shall procure all permits and approvals required by any federal, state, or local governments or governmental agencies for the construction, maintenance and use of the Project, copies of which shall be provided to CSXT.
8. Termination
 - 8.1. By Agency. For any reason, Agency may, as its sole remedy, terminate this Agreement by delivery of notice to CSXT. Agency shall not be entitled to otherwise pursue claims for consequential, direct, indirect or incidental damages or lost profits as a consequence of CSXT's default or termination of this Agreement or Work on the Project by either party.
 - 8.2. By CSXT. In addition to the other rights and remedies available to CSXT under this Agreement, CSXT may terminate this Agreement by delivery of notice to Agency in the event Agency or its Contractors fail to observe the terms or conditions of this Agreement and such failure continues more than ten (10) business days following delivery of notice of such failure by CSXT to Agency.
 - 8.3. Consequences of Termination. If the Agreement is terminated by either party pursuant to this Section or any other provision of this Agreement, the parties understand that it may be impractical for them to immediately stop the Work. Accordingly, they agree that, in such instance a party may continue to perform Work until it has reached a point where it may reasonably and safely suspend the Work. Agency shall reimburse CSXT pursuant to this Agreement for the Work performed, plus all costs reasonably incurred by CSXT to discontinue the Work and protect the Work upon full suspension of the same, the cost of returning CSXT's property to its former condition, and all other costs of CSXT incurred as a result of the Project up to the time of full suspension of the Work. Termination of this Agreement or Work on the Project, for any reason, shall not diminish or reduce Agency's obligation to pay CSXT for Reimbursable Expenses incurred in accordance with this Agreement. In the event of the termination of this Agreement or the Work for any reason, CSXT's only remaining obligation to Agency shall be to refund to Agency payments made to CSXT in excess of Reimbursable Expenses in accordance with Section 4.
9. Insurance. In addition to the insurance that Agency requires of its Contractor, Agency shall acquire or require its Contractor to purchase and maintain insurance in compliance with CSXT's insurance requirements attached to this Agreement as Exhibit F. Neither Agency nor Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by CSXT's Risk Management Department.

10. Ownership and Maintenance

10.1. By Agency. Agency shall own and, without cost to CSXT, shall maintain, repair, replace and renew, or cause same to be done, in good condition and repair to CSXT's satisfaction, the Bridge #I OS railroad bridge structure (excluding only those components which CSXT owns and has agreed to maintain, repair and replace pursuant to this Section}, the highway underpass structure, the roadway surfacing, the roadway slopes, the retaining walls, the roadway drainage facilities, sidewalks and lighting. In the event that Agency fails to properly maintain such structures and improvements, and such failure, in the opinion of CSXT, jeopardizes the safe and efficient operation of its property, CSXT shall be entitled to remedy such failure and recover from Agency the costs incurred by CSXT in doing so.

Agency shall own and, without cost to CSXT, maintain, repair, replace and renew, or cause same to be done, in good condition and repair to CSXT's satisfaction, the RMTA Bridge #65 highway overpass structures, the roadway surfacing, the roadway slopes, the retaining walls, and the highway drainage facilities. In the event that Agency fails to properly maintain such structures and improvements and such failure, in the opinion of CSXT, jeopardizes the safe and efficient operation of its property, CSXT shall be entitled to remedy such failure and recover from Agency the costs incurred by CSXT in doing so. Upon the cessation of use of the Project by Agency, Agency shall remove the bridge structures and restore CSXT's property to its original condition, at Agency's sole cost and expense, to CSXT's satisfaction.

10.2. By CSXT. CSXT shall own and, at its sole cost and expense, maintain, repair, replace and renew its tracks, ballast and approach embankments, and railroad signal and communication systems, and CSXT shall be permitted to install, maintain, repair and replace other utilities, facilities and cable, or cause same to be done, as CSXT authorizes from time to time on or within the railroad bridge structure.

10.3. Alterations. Agency shall not undertake any alteration, modification or expansion of the Project, without the prior approval of CSXT, which may be withheld for any reason, and the execution of such agreements as CSXT may require.

11. Indemnification

11.1. Generally. To the maximum extent permitted by applicable law, Agency and its Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of CSXT, its affiliates, Agency or its Contractors), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of CSXT, its affiliates, Agency or its Contractors, and environmental

damages and any related remediation brought or recovered against CSXT and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Contractors, Agency, and their respective agents, employees, invitees, contractors, or its contractors' agents, employees or invitees in the performance of work in connection with the Project or activities incidental thereto, or from their presence on or about CSXT's property . The foregoing indemnification obligation shall not be limited to the insurance coverage required by this Agreement, except to the extent required by law or otherwise expressly provided by this Agreement.

11.2. Compliance with Laws. Agency shall comply, and shall require its Contractors to comply, with any federal, state, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its construction and maintenance of the Project. Agency's Contractors shall indemnify, defend, and hold CSXT and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this Section.

11.3. "CSXT Affiliates". For the purpose of this Section 11, CSXT's affiliates include CSX Corporation and all entities, directly or indirectly, owned or controlled by or under common control of CSXT or CSX Corporation and their respective officers, directors, employees and agents.

11.4. Notice of Incidents. Agency and its Contractor shall notify CSXT promptly of any loss, damage, injury or death arising out of or in connection with the Project work.

11.5. Survival. The provisions of this Section 11 shall survive the termination or expiration of this Agreement.

12. Independent Contractor The parties agree that neither Agency nor its Contractors shall be deemed either agents or independent contractors of CSXT. Except as otherwise provided by this Agreement, CSXT shall exercise no control whatsoever over the employment, discharge, compensation of, or services rendered by Agency or Agency's Contractors, or the construction practices, procedures, and professional judgment employed by Agency or its Contractor to complete the Project. Notwithstanding the foregoing, this Section 12 shall in no way affect the absolute authority of CSXT to prohibit Agency or its Contractors or anyone from entering CSXT's property, or to require the removal of any person from its property, if it determines, in its sole discretion, that such person is not acting in a safe manner or that actual or potential hazards in, on or about the Project exist.

13. "Entire Agreement " This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter. In the event of any inconsistency between this Agreement and the Exhibits, the more specific terms of the Exhibits shall be deemed controlling.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate, each by its duly authorized officers, as of the date of this Agreement.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

By: _____

Print Name: _____

Title: _____

CSX TRANSPORTATION, INC.

By: _____

Print Name : Dale W. Oplfardt

Title: Assistant Vice President – Engineering

EXHIBIT A

ALLOCATION OF WORK

Subject to Section 2.1, work to be performed in connection with the Project is allocated as follows:

A. Agency shall let by contract to its Contractors:

1. Coatings Replacement for RMTA Ramps at I-95.
 - a. Southbound I-95 ramp to westbound Downtown Expressway (RTE. 195)
 - b. Northbound I-95 ramp to westbound Downtown Expressway (RTE. 195)
 - c. Eastbound Downtown Expressway (RTE. 195) ramp to northbound I-95
 - d. Eastbound Downtown Expressway (RTE. 195) ramp to southbound I-95

Subject to Section 2.1, work to be performed in connection with the Project is allocated as follows:

B. CSXT shall perform or cause to be performed :

1. Preliminary Engineering Services
2. Railroad Flagging Services
3. Construction Monitoring

EXHIBIT B

PLANS AND SPECIFICATIONS

Plans, Specifications and Drawings:

As of the date of this Agreement, the following plans, specifications and drawings have been submitted by Agency to CSXT for its review and approval:

Miscellaneous As-Built Plans for Bridges 63, 64, 65 and Bridges 67 and 68; Titled: Richmond Expressway System, Downtown Expressway; Prepared by Howard, Needles, Tammen & Bergendoff

NOTE: In the event subsequent plan submissions are made by Agency to CSXT for review and approval, once approved, said plans shall be considered to be incorporated into this Exhibit B as of the date of CSXT's written approval

EXHIBIT C

CSXT SPECIAL PROVISIONS

DEFINITIONS:

As used in these Special Provisions, all capitalized terms shall have the meanings ascribed to them by the Agreement, and the following terms shall have the meanings ascribed to them below:

"CSXT" shall mean CSX Transportation, Inc., its successors and assigns.

"CSXT Representative" shall mean the authorized representative of CSX Transportation, Inc.

"Agreement" shall mean the Agreement to which this Exhibit C is made a part thereof and as may be amended from time to time.

"Agency" shall mean the Richmond Metropolitan Transportation Authority.

"Agency Representative" shall mean the authorized representative of Richmond Metropolitan Transportation Authority.

"Contractor" shall have the meaning ascribed to such term by the Agreement.

"Work" shall mean the Project as described in the Agreement.

I. AUTHORITY OF CSXT ENGINEER

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Agency or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

II INTERFERENCE WITH CSXT OPERATIONS

- A. Agency or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including train, signal, telephone and telegraphic services, or damage to CSXT's property, or to poles, wires, and other facilities of tenants on CSXT's Property or right-of-way. Agency or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve Agency or its Contractor from liability in connection with such Work.

- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT's property, Agency or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of Agency or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.

III NOTICE OF STARTING WORK. Agency or its Contractor shall not commence any work on CSXT Property or right-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten (10) business days in advance of the date Agency or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization from the CSXT Representative to begin Work on CSXT property, such authorization to include an outline of specific conditions with which it must comply.
- C. Obtain from CSXT the names, addresses and telephone numbers of CSXT's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

IV WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Agency, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or Agency, but must be approved by both CSXT and Agency. Agency or Contractor shall be responsible for arranging for the relocation of the third party fiber optic cable transmission systems, at no cost or expense to CSXT.
- B. Should Agency or Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Agency or Contractor's expense.

V HAUL ACROSS RAILROAD

- A. If Agency or Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Agency or Contractor must first obtain the permission of CSXT and shall execute a license

agreement or right of entry satisfactory to CSXT, wherein Agency or Contractor agrees to bear all costs and liabilities related to such access.

- B. Agency and Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

VI COOPERATION AND DELAYS

- A. Agency or Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by CSXT. In arranging its schedule, Agency or Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor
- B. Agency or Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. Agency and Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. Agency and Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection with the Project. Agency and Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by Agency or Contractor on account of operations by others.

VII STORAGE OF MATERIALS AND EQUIPMENT

Agency and Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless Agency or Contractor has received CSXT Representative's prior written permission. Agency and Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require Agency or Contractor to move, such material and equipment at Agency's or Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

VIII CONSTRUCTION PROCEDURES

A. General

1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
2. Construction work on CSXT property shall be in accord with CSXT's written outline of specific conditions and with these Special Provisions.
3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which Agency and Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative.

B. Blasting

1. Agency or Contractor shall obtain CSXT Representative's and Agency Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, Agency or Contractor must comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Agency or Contractor.
 - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
 - c. No blasting shall be done without the presence of an authorized representative of CSXT. At least thirty (30) days advance notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
 - d. Agency or Contractor must have at the Project site adequate equipment, labor and materials, and allow sufficient time, to (i) clean up (at Agency's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Agency's expense) any track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If Agency's or Contractor's actions result in delay of any trains, including Amtrak passenger trains, Agency shall bear the entire cost thereof.
 - e. Agency and Contractor shall not store explosives on CSXT property.

2. CSXT Representative will:

- a. Determine the approximate location of trains and advise Agency or Contractor of the approximate amount of time available for the blasting operation and clean-up.
- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

IX MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS

Agency or Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. Agency or Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Agency's or Contractor's operations shall be performed at Agency's expense.

X FLAGGING / INSPECTION SERVICE

- A. CSXT has sole authority to determine the need for flagging required to protect its operations and property . In general, flagging protection will be required whenever Agency or Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. Agency shall reimburse CSXT directly for all costs of flagging that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement or change order.
- C. Agency or Contractor shall give a minimum of thirty (30) days advance notice to CSXT Representative for anticipated need for flagging service. No work shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for bid, it may take up to ninety (90) days to obtain this service, and CSXT shall not be liable for the cost of delays attributable to obtaining such service.
- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. Agency shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve Agency or Contractor from liability for its Work.

- E. CSXT shall render invoices for, and Agency shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by Agency using the new rates. Agency and Contractor shall perform their operations that require flagging protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

XL UTILITY FACILITIES ON CSXT PROPERTY

Agency shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

XII CLEAN-UP

Agency or Contractor, upon completion of the Project, shall remove from CSXT's Property any temporary grade crossings, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Agency or Contractor. Agency or Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to CSXT Representative.

XIII FAILURE TO COMPLY

If Agency or Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require Agency and/or Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due Agency and/or Contractor; (c) CSXT may require Agency to withhold monies due Contractor; and (d) CSXT may cure such failure and the Agency shall reimburse CSXT for the cost of curing such failure.

EXHIBIT D

INITIAL ESTIMATE
ATTACHED

EXHIBIT E

PAYMENT SCHEDULE

Agency shall remit payment to CSXT for its Reimbursable Expenses within thirty (30) days following delivery to Agency of an invoice.

EXHIBIT F

INSURANCE REQUIREMENTS

Insurance Policies:

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional insured.
2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates [if permitted by state law].
3. Commercial automobile liability insurance with limits of not less than \$1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional insured.
4. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
 - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance- Insurance Services Office (ISO) Form CG 00 35.
 - b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.
 - c. Name and Address of Contractor and Agency must be shown on the Declarations page.
 - d. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.
 - e. Authorized endorsements must include the Pollution Exclusion Amendment-CG 28 31, unless using form CG 00 35 version 96 and later.
 - f. Authorized endorsements may include:
 - i. Broad Form Nuclear Exclusion- IL 00 21
 - ii. 30-day Advance Notice of Non-renewal or cancellation
 - iii. Required State Cancellation Endorsement
 - iv. Quick Reference or Index- CLIL 240
 - g. Authorized endorsements may not include:
 - i. A Pollution Exclusion Endorsement except CG 28 31
 - ii. A Punitive or Exemplary Damages Exclusion

- iii. A "Common Policy Conditions" Endorsement
 - iv. Any endorsement that is not named in Section 4 (e) or (f) above.
 - v. Policies that contain any type of deductible
5. All insurance companies must be A.M. Best rated A- and Class VII or better.
6. Such additional or different insurance as CSXT may require.

Additional Terms

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:

Jonathan MacArthur
Insurance Department
CSX Corporation
500 Water Street- C907
Jacksonville, FL 32202
904.359.3394 (Phone)
904.306.5325 (Fax)
Jonathan_MacArthur@csx.com

2. Neither Agency nor Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance.

Project: Richmond, Virginia - Proposed coating replacement on RMTA Structures at the following locations:

Bridge 63 Span 23 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.

Bridge 64 Span 2 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence. RMTA Bridge 64 Span 9 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division.

RMTA Bridge 65 Span 13 over and adjacent to CSXT; Milepost CAB-0.01, in the Rivanna Subdivision, within the Florence Division.

RMTA Bridge 67 Span 1 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division. RMTA Bridge 67 Spans 7 and 8 adjacent to CSXT; Milepost CA-84.65 in the Peninsula Subdivision, within the Florence Division. RMTA Bridge 67 Span 10 over and adjacent to CSXT; Milepost CAB-0.02, in the Rivanna Subdivision, within the Florence Division.

RMTA Bridge 68 Span 1 over and adjacent to CSXT; Milepost S-0.15, in the Bellwood Subdivision, within the Florence Division. RMTA Bridge 68 Span 4 over and adjacent to CSXT; Milepost CAB-0.03, in the Rivanna Subdivision, within the Florence Division.

CSXT OP# (TBD),

SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of CSX Transportation, Inc. ("CSXT") and to induce CSXT to permit Contractor on or about CSXT's property for the purposes of performing work in accordance with the Agreement dated _____ between the RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY and CSXT, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to Exhibits C and F to the Agreement, and Sections 3, 9 and 11 of the Agreement.

Contractor: _____

By: _____

Name: _____

Title: _____

APPENDIX

CSX Transportation

CONSTRUCTION SUBMISSION CRITERIA

Public Projects Group
Jacksonville, FL
Date Issued: May 8, 2009

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- SECTION I: Definitions
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INTRODUCTION

The information in this document is intended to improve communication and clarify the CSXT criteria related to construction submissions that may involve CSXT property. All work must be performed in a manner as to not adversely impact existing CSXT operations. Please note that there are other standards associated with construction that must be adhered to including but not limited to the CSXT Special Provisions, CSXT Insurance Requirements as well as governing local, county, state and federal requirements. This document and other CSXT standards are subject to change without notice, and future revisions will be available at the CSXT website www.csx.com.

I. DEFINITIONS

Agency – The project sponsor.

AREMA – American Railway Engineering and Maintenance Association – the North American railroad industry standards group.

Construction Submission – The Agency or its representative shall submit six (6) sets of plans, supporting calculations, and detailed means and methods procedures for the specific proposed activity. All plans and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.

Controlled Demolition – Removal of the existing structure or subcomponents in a manner that prevents any portions from falling onto CSXT employees, equipment or property. The proposed procedures shall be detailed in the means and methods submission for CSXT review and acceptance.

Contractor – The Agency's or CSXT's representative retained to perform the project work.

Engineer – CSXT Engineering Representative or a GEC authorized to act on the behalf of CSXT.

GEC – General Engineering Consultant who has been authorized to act on the behalf of CSXT.

Professional Engineer – An engineer who is licensed in state or commonwealth (if required by the Agency) in which the project is to occur. The drawings and calculations shall be prepared by the Professional Engineer and shall bear his seal and signature.

Submission Review Period – a minimum of 30 days in advance of start of work. Up to 30 days will be required for the initial review response. Up to an additional 30 days may be required to review any/all subsequent submissions or resubmission.

Theoretical Railroad Live Load Influence Zone – A 1½ horizontal to 1 vertical theoretical slope line starting 1'-6" below top of rail elevation and 12'-0" from the centerline of the nearest track.

II. DEMOLITION PROCEDURE

The Agency or its contractor shall submit, as defined above, a detailed procedure for demolition of the structure over railroad tracks.

- A. The Agency or its Contractor shall submit the detailed procedure for demolition of existing structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with loading or disposal locations shown, with all dimensions referenced from the center line of the near track, including beam placement on ground or truck loading staging plan. The plan shall also include the location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions. No crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.

B. Also included with this submittal the following information:

1. Computations showing weight of picks must be submitted. Computations shall be made from field verified plans of the existing structure beams being removed and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
2. If the sponsor can prove to CSXT that plans do not exist and weights must be calculated from field measurements, the field measurements are to be made under the supervision of the Professional Engineer submitting the procedure and shall include sketches and estimated weight calculations with the procedure. If possible, field measurements shall be taken with a CSXT representative present.
3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.
4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track. The guardrail will be installed by CSXT forces at the expense of the Agency or its contractor.
9. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.
10. A minimum quantity of 25 tons of CSXT approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.
11. CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.

NOTE: On-track or ground level debris shields such as crane mats are prohibited for use by CSXT.

C. Overhead Demolition Debris Shield - Shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure.

1. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.
2. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.
3. The demolition debris shield shall provide 23'-0" minimum vertical clearance or maintain the existing vertical clearance if the existing clearance is less than 23'-0" as approved by CSXT. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
4. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.
5. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
6. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.
7. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
8. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.

D. Vertical Demolition Debris Shield - This type of shield may be required for substructure removals in close proximity to CSXT track and other facilities, as determined by the Engineer.

1. Prior to commencing the demolition activity, the Contractor shall install a ballast protection system consisting of geotextile to keep the railroad ballast from becoming fouled with construction or demolition debris and fines. The geotextile ballast protection system shall be installed and maintained by the Contractor for the project duration in accordance with the attached plan, or with additional measures as directed by the Engineer.
2. The Agency, or its Contractor, shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.
3. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way.

E. The Controlled Demolition procedure must be approved by the Engineer prior to undertaking work on the project.

F. The Contractor shall provide timely communication to the Engineer when scheduling the demolition-related work so that the Engineer may be present during the entire demolition procedure.

G. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

III. ERECTION PROCEDURE

The Agency or its Contractor shall submit a detailed procedure for performing erection on/about CSXT property, as defined above.

- A. The Agency or its Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions. No crane or equipment may be set on the CSXT rails or track structure.
- B. Also included with this submittal the following information:
 - 1. As-built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 - 2. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected, and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
 - 3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.
 - 4. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
 - 5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
 - 6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
 - 7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
 - 8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.
- C. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.
- D. The Contractor shall provide timely communication to the Engineer when scheduling the erection-related work so that the Engineer may be present during the entire erection procedure.

- E. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

IV. EXCAVATION AND SHORING

The Agency or its contractor shall submit, as defined above, a detailed procedure for the installing sheeting/shoring adjacent to Railroad Tracks.

- A. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by CSXT. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering*, Chapter 8, Part 28, except as noted below.
- B. Shoring may not be required if all of the following conditions are satisfied:
1. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).
 2. Track is on level ground or in a cut section and on stable soil.
 3. Excavation does not adversely impact the stability of a CSXT facility (i.e., signal bungalow, drainage facility, undergrade bridge, building, etc.).
 4. Shoring is not required by any governing construction code.
- C. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.
- D. Trench boxes are prohibited for use on CSXT within the theoretical railroad live load influence zone.
- E. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling, or when approved by the Engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:
1. Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'-6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA *Manual for Railway Engineering*, Chapter 8, Part 20.
 2. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.
 3. A construction procedure for temporary shoring shall be shown on the drawing.
 4. All shoring systems on or adjacent to CSXT right-of-way shall be equipped with railings or other approved fall protection.
 5. A minimum horizontal clearance of 10'-0" from centerline of the track to face of nearest point of shoring shall be maintained, provided a 12'-0" roadbed is maintained with a temporary walkway and handrail system.

F. The contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for CSXT's review and approval.

1. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.
2. Six (6) sets of calculations of the shoring design.

The drawings and calculations shall be prepared by a Licensed Professional Engineer in the state (if required by the Agency) where the shoring is to be constructed and shall bear his seal and signature. Shoring plans shall be approved by CSXT's construction engineering and inspection representative.

3. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the contractor shall use interlocked steel sheeting (sheet pile).
4. Sheet pile installed in slopes or within 18'-0" of the centerline of track shall not be removed.
5. Sheet piles shall be cut off a minimum of 3'-0" below the finished grade, ditch line invert, or as directed by the Engineer. The ground shall be backfilled and compacted immediately after sheet pile is cut off.
6. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

G. Blasting is not permitted on or adjacent to CSXT right-of-way without prior written approval from the Engineer. Mechanical and chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the Agency or Contractor must comply with all of the following:

1. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Agency or Contractor.
2. Electronic detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
3. No blasting shall be done without the presence of an authorized representative of CSXT. Advance notice to the Engineer as required by the CSXT Special Provisions is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
4. Agency or Contractor must have at the project site adequate equipment, labor and materials, and allow sufficient time, to clean up debris resulting from the blasting and correct any misalignment of tracks or other damage to CSXT property resulting from the blasting. Any corrective measures required must be performed as directed by the Engineer at the Agency's or Contractor's expense without any delay to trains. If Agency's or Contractor's actions result in the delay of any trains including passenger trains, the Agency or Contractor shall bear the entire cost thereof.
5. The Agency or Contractor may not store explosives on CSXT property.
6. At any time during blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

V. TRACK MONITORING

The Agency or its Contractor shall submit, for CSXT review and approval, a detailed track monitoring program to detect both horizontal and vertical movement of the CSXT track and roadbed, a minimum of 30 days in advance of start of work.

- A. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to CSXT's right-of-way, the contractor may be required to submit a detailed track monitoring program for CSXT's approval prior to performing any work near CSXT's right-of-way.
- B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT reserves to the right to modify the survey locations and monitoring frequency as necessary during the project.
- C. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.
- D. If any movement has occurred as determined by the Engineer, CSXT will be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.