

CONTRACT DOCUMENTS

FY18 BRIDGE REHABILITATION PROJECT

CITY OF STAUNTON, VIRGINIA

**DEPARTMENT OF PUBLIC WORKS
CITY OF STAUNTON**

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Advertisement for Bids
Staunton, Virginia

Sealed bids for the furnishing of all labor, materials, supervision, and equipment necessary to complete the **FY18 BRIDGE REHABILITATION PROJECT** will be received by the City of Staunton, Virginia, in the City Purchasing Agent's Office, Third Floor, City Hall, 116 W. Beverley Street until **2:00 p.m., November 8, 2017**, at which time they will be publicly opened and read aloud.

The work for which bids are to be submitted consists of rehabilitation of four bridges within the City of Staunton Virginia:

- Bridge 1027 – US Route 250 (WBL Richmond Rd) over CSX Railway
- Bridge 1802 – US Route 11 (Commerce Rd) over State Route 254
(New Hope Rd) and Lewis Creek
- Bridge 1809 – US Routes 11, 250 and State Route 254
(Greenville Ave and Commerce Rd) over Lewis Creek
- Bridge 8001 – State Route 261 (Statler Blvd) over CSX Railway and
Private Road

Specific items of work include, but are not limited to expansion joint replacement, repair of epoxy overlay, concrete patching, zone coating, waterproofing, railroad coordination, HMWM concrete surface treatment, crack repair, jacking and blocking beams, repair of stone masonry substructure, repair of concrete slope protection, and maintenance of traffic.

A more complete description of the work and full information for contract bidders is given in the Specifications and Contract Documents.

Specifications and Contract Documents may be examined at the City Public Works Department, 1911 Craigmont Road, Staunton, Virginia 24402, between the hours of 8:30 a.m. and 5:00 p.m. Monday – Friday. Copies may be obtained upon payment of **\$100.00** for each set. No refunds for the cost of the specifications will be made on this project. Checks should be made payable to the City of Staunton, Virginia.

A pre-bid meeting will be held **November 2 2017 at 10:00 a.m.** in the City Public Works' Conference Room, 1911 Craigmont Road, Staunton, VA 24402.

The envelopes containing the bids must be sealed, addressed to the City of Staunton, City Purchasing Agent's Office, Staunton, Virginia 24401-0034, and designated as Bid for the **FY18 BRIDGE REHABILITATION PROJECT**.

The Bid shall remain subject to acceptance for sixty (60) days.

The attention of bidders is invited to Title 2.2, Chapter 43 of the Code of Virginia. The procedure for withdrawal of bids shall conform to Procedure (A(i)), Section 2.2-4330 of the Code of Virginia.

The City of Staunton does not discriminate against small and minority businesses or faith based organizations.

City of Staunton

INFORMATION FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS

The City of Staunton, Virginia, (hereinafter called the “OWNER”, or “Public Body”) invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the office of the City Purchasing Agent, Third Floor, City Hall, 116 W. Beverley Street, Staunton, Virginia until 2:00 p.m., November 8, 2017.

The envelopes containing the bids must be sealed, addressed to City of Staunton at City Purchasing Agent’s Office, Staunton, Virginia 24401-0034 and designated as bid for:

FY18 BRIDGE REHABILITATION PROJECT

The owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. Bid shall remain subject to acceptance for sixty (60) days.

2. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten and the foregoing certification must be fully completed and executed when submitted.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope continuing the bid must be enclosed in another envelope addressed as specified in the bid form. BIDDER MUST WRITE ON OUTSIDE OF ENVELOPE: “REGISTERED CONTRACTOR, VIRGINIA CERTIFICATE NO.”

3. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner.

4. TELEPHONIC MODIFICATION

Any bidder may modify his bid by telephonic communication at any time prior to the scheduled closing time for receipt of bids, provided such telephonic communication is received by the Owner prior to the closing time, and, provided further, the Owner is satisfied that a written confirmation of the telephonic modification over the signature of the bidder was mailed prior to the closing time. The telephonic communication should not reveal the bid price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received

within two days from the closing time, no consideration will be given to the telephonic modification.

5. METHOD OF BIDDING

This is a **unit price bid** for:

FY18 BRIDGE REHABILITATION PROJECT

(See Bid Schedule)

6. QUALIFICATIONS OF BIDDER

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder indicates that the bidder is not properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

7. BID SECURITY

Each bid must be accompanied by a bid bond in the amount of five percent (5%) of the bid submitted, or a certified check of the Bidder in an amount not less than five percent (5%) of the amount of the bid, payable to the order of the City of Staunton, Virginia. Such bid bonds or checks will be returned to all except the three bidders submitting the most favorable bids, within three (3) days after the formal opening of the bids. The remaining bid bonds or checks will be returned to the three most favorable bidders within forty-eight (48) hours after the Owner and the accepted Bidder have executed the Contract, or if no contract has been so executed, within sixty (60) days after the date of the opening of the bids.

8. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

9. TIME AND COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified on a written "Notice to Proceed" from the OWNER and to **fully complete the work within 120 working days.** Working days refer to Monday through Fridays, excepting weekends and holidays.

OWNER and CONTRACTOR stipulate that delay by the CONTRACTOR in completion would have significant adverse consequences for the PROJECT; that, however, the actual damages to OWNER from such delay are uncertain and would be impossible and not susceptible to reasonable determination; and that liquidated damages of such failure by CONTRACTOR to perform in a timely manner are a reasonable way and not a penalty to address such adverse

consequences. CONTRACTOR also stipulates that it shall not challenge, either directly or indirectly, this liquidated damages provision. OWNER, therefore, may require CONTRACTOR to pay liquidated damages of \$1,000 per day for the CONTRACTOR's failure to perform timely in strict accordance with the CONTRACT. OWNER may deduct any liquidated damages from amounts due to CONTRACTOR and, otherwise OWNER shall be entitled to receive interest at the rate of 5% until deducted or paid. Liquidated damages shall be, other than for delay, in addition to any other entitlement by OWNER to damages and other remedies for any other damage, loss, or injury for which CONTRACTOR may be responsible.

10. CONDITIONS OF WORK

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of this obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible, the contractor, in carrying out his work, must employ such methods or needs as will not cause any interruption of or interference with the work of any other contractor.

11. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing or emailed, addressed to Attention: Steve Yancey, P.O. Box 58, Staunton, Virginia 24402, yanceysc@ci.staunton.va.us, and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of the bids. Any and all such interpretations and any supplemental instructions will be posted on the City website not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under this bid as submitted. All addenda so issued shall become part of the contract document.

12. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under the contract and furnishing materials in connection with this contract. Both payment bond and performance bond shall be in the amount of 100% of the contract price.

All bonds shall be on forms provided in the Contract Documents and written by companies LICENSED TO DO BUSINESS IN VIRGINIA and shall be administered through agent(s) registered in Virginia.

13. POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the contract documents and specifications, which deal with the following:

- a) Inspection and testing of materials
- b) Insurance requirements

15. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the contract will be deemed to be included in the contract as though herein written out in full.

16. METHOD OF AWARD - LOWEST QUALIFIED BIDDER

- 16.1 The contract will be awarded on the basis of the sum of the Base Bid and the accepted Alternates.
- 16.2 The award will be made to the lowest responsible bidder whose bid conforms to the invitation and whose qualifications indicate the award will be most advantageous to the City.
- 16.3 The City reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received.
- 16.4 The City will notify all bidders of the award and return bid sureties to all but the successful bidder.
- 16.5 After notice from the City, the successful bidder has ten (10) days to enter into a contract or forfeit as liquidated damages the security deposit. By executing the contract, the Contractor certifies that he has reviewed the Contract Documents and the project area and accepts the conditions of each.
- 16.6 Should the lowest bid for Base Bid exceed the City's budget, the City may proceed with negotiations with the lowest bidder for the Base Bid in accordance with section 2.2-4318 of the Code of Virginia to obtain a contract price within the funds available to the City. For the purpose of determining when such negotiations may take place, the term "available funds" shall mean those funds which were budgeted by the City for this contract (including all grant funding) prior to issuance of the written Invitation for Bids. Negotiations with the low bidder may include both modifications of the bid price and Scope of Work/Specifications to be performed. The City shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and that the City wishes to negotiate a lower contract price. The times, places, and manner of negotiations shall be agreed to by the City and the lowest responsive bidder.

17. OBLIGATION TO BIDDER

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda).

The failure or omission of any bidder to examine any form instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

Under Section 2.2-4330, Procedure (A(i)) of the Code of Virginia, a bidder for a contract with the State or any department, institution or agency thereof, or with any county, city, town, school board, or any agency thereof for the construction, demolition, alteration, repair or improvement may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid, evidenced by the inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder must give notice in writing of his claim of right to withdraw his bid within two (2) business days after the conclusion of the bid opening procedure.

SCC Requirement: Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized.

18. ADJUSTMENT OF CONTRACT

The Owner reserves the right to expand this contract to include work of the type defined in the project specifications, to other areas of the City. This expansion would be contingent upon the Contractor agreeing to perform the additional work at the same contract prices found in the proposal for the original contract.

The owner reserves the right to make, at any time during the progress of the work, such increases or decreases in quantities as deemed in the best interest of the Owner. Adjustments of contract unit prices will not be considered for overruns or underruns of the original bid quantities. Unit price adjustments will not be made in the event of the elimination of any other associated bid item.

19. PRE-BID MEETING

A pre-bid meeting will be held at **10:00 a.m., November 2, 2017**, in the City Public Works' Conference Room.

BID

FY18 BRIDGE REHABILITATION PROJECT

TO: City of Staunton
City Hall
P.O. Box 58
Staunton, Virginia 24402

Gentlemen:

The undersigned, as Bidder, does hereby declare that the only person, persons, company or parties interested in this Bid are named herein; that this Bid is made and that the Contract will be executed without collusion with any other person or persons presenting any Bid for the same work, labor and materials; that this Bid is in all respects fair and just and that no person prohibited therefrom by law is directly or indirectly interested in this Bid, nor in the labor and materials to which it relates, nor in any portion of the profits thereof.

The undersigned does further declare that he has personally examined the site of the proposed work and made such investigation as is necessary to determine the general and local conditions and the character of the work to be encountered; that he was carefully examined each and every item of the annexed Contract Documents and the Plans and Specifications pertaining hereto, and that he fully understands the same, and will make no claim, other than as stated therein, because of any misunderstanding or misconception concerning the nature, charter or amount of work to be done.

The undersigned does hereby offer and agree to execute and perform the Contract attached hereto, and of which this Bid forms a part; and to furnish all of the labor, materials, tools, equipment, transportation and superintendence for the construction; in strict conformity with the drawings and specifications. The undersigned further proposes to perform the work at the prices set opposite each item, it being understood that the quantities given are estimates only and payment will be made on the basis of actual quantities as developed during the construction.

BID SCHEDULE**Structure 1027
US Route 250 (WBL Richmond Rd) over CSX Railway**

BID NO.	ITEM	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1a	Preformed Elastomeric Joint Sealer – 2 1/2" *	LF	189		
1b	Preformed Elastomeric Joint Sealer – 3" *	LF	63		
2	Epoxy Mortar Joint Repair	LF	20		
3	Repair Epoxy Overlay	SY	4		
4	Type B Patching (HES)	SY	1		
5	Concrete Superstructure Surface Repairs	SY	4		
6	Concrete Substructure Surface Repairs	SY	15		
7	Zone Coating of Beam Ends, Diaphragms, and Bearings	LS	1		
8	Replace Anchor Bolt	EA	1		
9	Waterproofing – Parapets *	LF	390		
10	Waterproofing – (Epoxy Resin EP-3B / EP-3T) – Pier Bearing Seats *	SY	46		
11	Railroad Coordination	LS	1		
12	Maintenance of Traffic	LS	1		
13	Mobilization	LS	1		
	SUBTOTAL – STRUCTURE NO. 1027				

BID SCHEDULE

Structure 1802

US Route 11 (Commerce Rd) over State Route 254 (New Hope Rd) and Lewis Creek

BID NO.	ITEM	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	(HMWM) Concrete Surface Treatment *	SY	1026		
1a	Type B Patching (HES)	SY	1		
2	Concrete Substructure Surface Repairs	SY	40		
3	Waterproofing – Parapets *	LF	324		
4	Waterproofing – Pier Wall	LS	1		
5	Waterproofing – Penetrant Sealer For Median and Curbs *	SY	90		
6	Maintenance of Traffic	LS	1		
7	Mobilization	LS	1		
	SUBTOTAL – STRUCTURE NO. 1802				

BID SCHEDULE

**Structure 1809
US Routes 11, 250 and State Route 254
(Greenville Ave and Commerce Rd) over Lewis Creek**

BID NO.	ITEM	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	Repair Stone Masonry Abutments	SF	120		
2	(HMWM) Concrete Surface Treatment *	SY	217		
3	Crack Repair (Type A) in Longitudinal Construction Joint *	LF	33		
4	Zone Coating of Beam 14	LS	1		
5	Concrete Superstructure Surface Repairs	SY	5		
6	Concrete Substructure Surface Repairs	SY	4		
7	Jacking and Blocking Beams	EA	3		
8	Maintenance of Traffic	LS	1		
9	Mobilization	LS	1		
	SUBTOTAL – STRUCTURE NO. 1809				

BID SCHEDULE

Structure 8001 State Route 261 (Statler Blvd) over CSX Railway and Private Road

BID NO.	ITEM	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	Concrete Substructure Surface Repairs	SY	10		
2	Concrete Superstructure Surface Repairs	SY	2		
3	Type B Patching (HES)	SY	2		
4	Replace Concrete Slope Protection	SY	6		
5	Waterproofing – Penetrant Sealer For Top of Deck, Median, Sidewalks, and Curbs *	SY	1964		
6a	Preformed Elastomeric Joint Sealer – 1 3/4" *	LF	172		
6b	Preformed Elastomeric Joint Sealer – 2" *	LF	258		
7	Epoxy Mortar Joint Repair	LF	100		
8	Replace Joint Sealant *	LF	116		
9	Waterproofing – (Epoxy Resin EP-3B / EP-3T) – Pier Bearing Seats *	SY	92		
10	Waterproofing – Parapets *	LF	388		
11	Railroad Coordination	LS	1		
12	Maintenance of Traffic	LS	1		
13	Mobilization	LS	1		
	SUBTOTAL – STRUCTURE NO. 8001				

* ITEM SHALL BE MEASURED AND PAID FOR ON THE BASIS OF PLAN QUANTITIES.
NO ADDITIONAL MEASUREMENT SHALL BE MADE.

TOTAL BASE BID (SUM OF SUBTOTALS FOR STRUCTURES 1027, 1802, 1809 and 8001):

_____ (\$ _____)
WORDS **FIGURES**

AMOUNTS ARE TO BE SHOWN IN BOTH WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

The undersigned agrees to complete the work enumerated herein **in accordance with Paragraph 9 of Information for Bidders**. It is expressly understood and agreed that the time of beginning, rate of progress, and the date of completion are essential conditions, and that in the event of failure to complete the work within the above specified time, the Contractor will be liable for the payment of liquidated damages as provided in **Paragraph 9 of Information for Bidders**. Extensions may be granted, upon written request, for inclement weather and for any other cause not the fault of the Contractor. The City reserves the right to shut the project down for extended periods due to inclement weather. Deadline extensions will be made to equally compensate for periods of shut down.

The undersigned likewise agrees that he will execute and deliver the Contract hereto attached within ten (10) days, Sundays and holidays excepted, after notification of the acceptance of this Bid and award of the Contract; and will furnish a performance and a payment bond for the total amount of the accepted Bid on the forms provided in the Contract Documents, satisfactory to the Owner as surety for the faithful performance and completion of the Contract and the payment of all subcontractors, material dealers and labor.

The undersigned certifies that he understands that it is the intent of the drawings, and the Contract Documents, that the work be completed in every respect and that no additional compensation will be allowed for minor tasks necessary to completely perform the work.

The undersigned acknowledges Addenda:

Addenda No. _____	Addenda _____
Addenda No. _____	Addenda _____

The undersigned has checked carefully all the above figures and understands that the Owner will not be responsible for any errors or omissions in making up this Bid.

_____	By: _____
Contractor	Printed Name: _____
	Title: _____

_____	Address: _____
Registered Virginia Contract Number	

_____	_____
SCC Number	

_____	Telephone: _____
Contractor's IRS Number	

Dates this ____ day of _____, 20____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned

_____ as Principal, and
_____ as Surety, are hereby held and
firmly bound unto _____ as Owner in the penal
sum of _____ for the payment of
which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs,
executors, administrators, successors and assigns.

Signed, this _____ day of _____, 20____

The condition of the above obligation is such that whereas the Principal has submitted to
_____ a certain bid attached
hereto and hereby made a part of hereof to enter into a contract in writing, for the _____

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The surety for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (L.S.)

Surety

By: _____

Seal

CONTRACT

THIS AGREEMENT, dated this ____ day of _____, 20__, for identification, is made by and between the CITY OF STAUNTON, VIRGINIA (the "OWNER"), a municipal corporation of the Commonwealth of Virginia acting by and through its City Manager, and

_____(The "CONTRACTOR"), a _____
(Name of CONTRACTOR) (State)

Corporation licensed and registered to do business in the Commonwealth of Virginia

WITNESSETH: That for and in consideration of the payments and agreement hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

FY18 BRIDGE REHABILITATION PROJECT

Hereinafter called the PROJECT, for a sum not to exceed _____
_____ under the terms of the contract documents

For said price, the CONTRACTOR is to furnish all materials, labor, superintendence, equipment, tools, machinery, and other accessories and services necessary to complete the said PROJECT.

The Contract Documents, which comprise the entire AGREEMENT between OWNER and CONTRACTOR, consist of the following:

- 1. This Agreement**
- 2. Information for Bidders**
- 3. Bid**
- 4. Performance and Payment Bonds**
- 5. General Conditions**
- 6. Special & Supplementary Conditions**
- 7. Technical Specifications**
- 8. Special Provisions**
- 9. Drawings**
- 10. Typical Traffic Control Details**
- 11. Railroad Agreements**

Said documents are those prepared by the City of Staunton or their assigned representative for the specific PROJECT.

The OWNER agrees to make payment to the CONTRACTOR in accordance with the General Conditions and for the price specified in the bid for work completed.

OWNER and CONTRACTOR stipulate that delay by the CONTRACTOR in completion would have significant adverse consequences for the PROJECT; that, however, the actual damages to OWNER from such delay are uncertain and would be impossible and not susceptible to reasonable determination; and that liquidated damages of such failure by CONTRACTOR to perform in a timely manner are a reasonable way and not a penalty to address such adverse consequences. CONTRACTOR also stipulates that it shall not challenge, either directly or indirectly, this liquidated damages provision. OWNER, therefore, may require CONTRACTOR to pay liquidated damages of \$1,000 per day for the CONTRACTOR's failure to perform timely in strict accordance with the

CONTRACT.

OWNER may deduct any liquidated damages from amounts due to CONTRACTOR and, otherwise OWNER shall be entitled to receive interest at the rate of 5% until deducted or paid. Liquidated damages shall be, other than for delay, in addition to any other entitlement by OWNER to damages and other remedies for any other damage, loss, or injury for which CONTRACTOR may be responsible.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions as provided in the Proposal and to make payments on account thereof as provided in the Supplement General Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in four (4) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

Director of Public Works Initials

City Manager or Authorized Representative

Director of Finance Initials

Approved as to Legality and Form:

City Attorney

(SEAL)

Contractor

Secretary

By: _____

Witness

Title

Address

NOTE: Secretary of the OWNER should attest. If CONTRACTOR is a corporation, Secretary should attest.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that _____

(Insert full name or legal title and address of Contractor)

as Principal, hereinafter called Contractor,

and _____

(Insert full name or legal title and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto _____

(Insert Name and Address of Owner)

as Obligee in the amount of: _____ dollars (\$ _____)
(Insert sum equal to contract price in both words and figures)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____, 20____
entered into a Contract with Owner for:

FY18 BRIDGE REHABILITATION PROJECT
Staunton, Virginia

in accordance with Drawings and Specifications as prepared by or for:

City of Staunton
116 West Beverley Street
Staunton, Virginia 24401

which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, in strict conformity with the Drawings, Specifications and Contract Documents, then this obligation shall be null and void. Otherwise, it shall remain in full force and effect for one (1) year after completion of all work:

- a. The Surety hereby waives notice of any alternation or extension of time made by the Owner.
- b. Any suit under this bond must be instituted, (1) before the expiration of one (1) year after completion of the Contract including the expiration of all warranties and guarantees, or (2) before the expiration of one (1) year after a defect or breach of warranty is discovered, if the action be for such.
- c. No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the successors or assigns of Owner and every action brought hereon shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.

SIGNED AND SEALED THIS _____ day of _____, 20____

In the presence of:

PRINCIPAL (SEAL)

WITNESS

BY TITLE

SURETY

WITNESS

BY TITLE

Surety: (Attach power of attorney)

CONTRACTOR'S PERFORMANCE BOND
Project: _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

that _____

(Insert full name or legal title and address of Contractor)

as Principal, hereinafter called Contractor,

and _____

(Insert full name or legal title and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Staunton, Virginia, 116 West Beverly Street, Staunton, Virginia 28801
(Insert full name or legal title and address of Owner)

as Oblige for the use and benefit of claimants as herein below defined in the amount of: _____
_____ (\$_____).
(Insert sum equal to contract price in both words and figures)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____, 20____,
entered into a Contract with Owner for:

FY18 Bridge Rehabilitation Project
City of Staunton
(Insert name or description and location of project)

in accordance with Drawings and Specifications as prepared by or for :

City of Staunton, 116 West Beverley Street, Staunton, Virginia 24401
(Insert full name or legal title and address)

which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall promptly make payment to all claimants as hereinafter defined, for all labor and materials used or reasonably required for use in the performance of the Contract, then this obligation shall be void. Otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- a. A Claimant is defined as one having a direct contract with the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.
- b. The above named Contractor and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work of labor was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- c. Any suit or action hereunder by any claimant:
 1. Shall not be commenced after the expiration of one (1) year following the date on which the claimant last performed labor or last supplied materials.
 2. Shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.

SIGNED AND SEALED THIS _____ day of _____, 20____,
in the presence of:

PRINCIPAL (SEAL)

WITNESS

BY TITLE

SURETY (SEAL)

WITNESS

BY TITLE

Surety:
(Attach power of attorney)

CONTRACTOR'S LABOR AND MATERIAL
PAYMENT BOND
Project _____

GENERAL CONDITIONS CITY OF STAUNTON, VIRGINIA

Article 1: Intent

- 1.1 The Contract Documents comprise the entire agreement between the City and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.
- 1.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe Work, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning.
- 1.3 Plans and Specifications – All Work that may be called for in the Specifications and not shown on the Plans, or shown on the Plans and not called for in the Specifications, shall be executed and furnished by the Contractor as if described in both these ways; and should any work or materials be required which are not detailed in the Specifications or Plans, either directly or indirectly, but which are nevertheless necessary for the proper carrying out of the intent thereof, the Contractor is to understand the same to be implied and required, and shall perform all such work and furnish any such materials as fully as if they were particularly delineated and described. The Contractor shall keep one copy of all Plans and Specifications on the project at all times.
- 1.4 This procurement is being conducted on behalf of other public bodies, in accordance with § 2.2-4304 (A) of the Code of Virginia. If authorized by the bidder, the resultant contract may be extended to any public body in the Commonwealth of Virginia in accordance with contract terms.

Article 2: Insurance

- 2.1 The Contractor shall not commence Work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the City, nor shall the Contractor allow any Subcontractor to commence Work on his subcontract until the insurance required of the Subcontractor has been so obtained and approved.

- a) The Contractor shall procure and maintain during the life of this contract Worker's Compensation Insurance as required by applicable Virginia law for all of his employees to be engaged in Work at the site of the Project under this contract and, in case of any such Work sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees to be engaged in such Work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each Subcontractor to provide adequate employer's Liability Insurance for the protection of such of his employees as are not otherwise protected.
 - b) Contractor's General Liability and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of the contract Contractor's General Liability Insurance and Vehicle Liability Insurance in the amounts specified in Section 2.3 below.
 - c) Subcontractor's General Liability and Vehicle Liability Insurance: The Contractor shall either (1) require each of his Subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's General Liability and Vehicle Liability Insurance of the type and in the amounts specified in subparagraph (b) hereof or (2) insure the activities in his policy, specified in subparagraph (b) hereof.
 - d) Fire, Extended Coverage, Vandalism, and Malicious Mischief (Completed Value Builder's Risk) Insurance: The Contractor shall purchase "All Risk" type Builder's Risk Insurance. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, water, flood, collapse, riot, aircraft, and smoke during the contract time, and until the work is accepted by the Owner. The Builder's Risk Insurance shall be for the benefit of the Owner, the Contractor, and the Subcontractors, as their interest may appear.
 - e) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) and (c) hereof shall provide adequate protection for the Contractor and his Subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this contract.
 - f) Proof of Carriage of Insurance: The Contractor shall furnish the City with certificates showing the type, amount, class of operations covered, effective dates, and date of expiration of policies.
- 2.2 Special Hazards – The Contractor's and his Subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards:

- 1) OWNER'S PROTECTIVE LIABILITY INSURANCE
- 2) CONTRACTOR'S COMPLETED OPERATIONS

All insurance coverages shall be written by companies licensed to do business in Virginia and shall be administered by a Virginia registered agent and shall list the City as an additional insured.

- 2.3 GENERAL LIABILITY, VEHICLE LIABILITY, AND WORKER'S COMPENSATION INSURANCE: The Contractor's General Liability Insurance, Vehicle Liability Insurance, and Worker's Compensation Insurance shall not be less than \$2,000,000, \$500,000, and \$500,000 respectively. BUILDERS RISK shall not be less than the contract amount.

The Contractor shall either (1) require each of his Subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's General Liability and Vehicle Liability Insurance of the type and in the same amounts as specified in the preceding paragraph, or (2) insure the activities of his Subcontractors in his own policy.

Article 3: Availability of Lands

- 3.1 City shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Upon reasonable written request, City shall furnish Contractor with a correct statement of record legal title and legal description of the lands upon which the Work is to be performed and City's interest therein as necessary for giving notice of or filing a mechanic's lien against such lands in accordance with applicable Laws and Regulations. City shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which Contractor will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by City, unless otherwise provided in the Contract Documents. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.
- 3.2 CONSTRUCTION IN PUBLIC RIGHTS-OF-WAY - The Contractor shall perform all his operations in a manner that will cause the minimal possible disruption to the normal vehicular and pedestrian traffic. The Contractor shall not block streets or highway to traffic without the prior consent of the City. Flagmen, lights, barricades, and construction signs shall be provided as directed by City. All barricades, signs, cones, etc. must conform to the guidelines established by the Manual of Uniform Traffic Control Devices (M.U.T.C.D.) and the Virginia Work Area Protection Manual. All flagmen must be Virginia Department of Transportation certified. Pavement, shoulders, ditches, drainage structures and all other facilities disturbed during the construction shall be restored to their original condition, at the Contractor's expense except for work specifically itemized

in the proposal. The Performance Bond shall cover all work on the City's rights-of-way and easements and the Contractor shall be responsible for the repair and maintenance of all areas disturbed within said rights-of-way and easements. No open ditches shall be permitted over night in public rights-of-way.

- 3.3 CONSTRUCTION ON PRIVATE AND PUBLIC PROPERTY - The area of the construction shall be left in the same condition as it was found. All private and public utilities pipes, wires, lines, fences, walls, walks, pavements, curb and gutter, graveled areas, driveways, drainage structures, trees, shrubs, mailboxes, guy wires, septic systems, etc., encountered during the work whether shown on the Plans or not, shall be protected from damage by the Contractor. Should any facilities be damaged, the Contractor shall repair, replace, or pay damages for same. The surface of the construction area shall be graded, stoned, paved, seeded, etc.; to fit original conditions encountered. Payment for this work shall be included in the Proposal price of the item under construction.

Article 4: Existing Utilities

- 4.1 The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the City or by the owners of such Underground Facilities or by others, unless otherwise expressly provided in the Supplementary Conditions.
- 4.2 City shall not be responsible for the accuracy or completeness of any such information or data; and
- 4.3 The cost of all of the following will be included in the Contract Price and Contractor shall have full responsibility for: (i) reviewing and checking all such information and data, (ii) locating all Underground Utilities shown or indicated in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all Underground Facilities and repairing any damage thereto resulting from the Work.
- 4.4 EXISTING UTILITY LINES - The Contractor shall not disturb or damage any existing utility lines found above or below ground whether shown on the Plans or not. If during the course of the work any disturbance, or breakage should occur, the Contractor shall replace, at his own expense, the affected utility lines to the satisfaction of the City and the proper utility company. The Contractor shall bear full responsibility for any damage to life and/or property incurred as a result of such disturbance or damage to existing utility lines. Special attention should be paid to the Code of Virginia, Sections 59.1-406 - 59.1-414 - "Overhead High Voltage Line Safety Act".

Article 5: Schedule

- 5.1 SCHEDULE OF CONSTRUCTION – Commencement of construction shall begin by the date determined by the City. Prior to initiation of construction, the Contractor shall have submitted a detailed work schedule to the City and have received approval of same. The Contractor must proceed according to the approved schedule unless the changes are approved by the City.
- 5.2 Contractor shall submit to City for acceptance proposed adjustments in the progress schedule that will not change the Contract Times. Such adjustments will conform generally to the progress schedule.

Article 6: Shop Drawing, Material Data Sheets

- 6.1 Contractor shall submit Shop Drawings to City for review and approval. All submittals will be identified as City may require and in the number of copies specified. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show City the materials and equipment Contractor proposes to provide and to enable City to review the information.
- 6.2 Contractor shall also submit material Data Sheets to City for review and approval. Each submittal will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as City may require to enable City to review the submittal.
- 6.3 Before submitting each Shop Drawing or Material Data Sheet, Contractor shall have determined and verified:
 - 6.3.1 all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto,
 - 6.3.2 all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work, and
 - 6.3.3 all information relative to Contractor's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.
- 6.4 Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier,

the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or “or-equal” item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be accepted by City under the following circumstances:

- 6.5 “Or-Equal”: If in City’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by City as an “or-equal” item, in which case review and approval of the proposed item may, in City’s sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.
- 6.6 *Substitute Items*: If in City’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” it will be considered a proposed substitute item. Contractor shall submit sufficient information as provided below to allow City to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall first make written application to City for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor’s achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other Contractors affected by the resulting change, all of which will be considered by City in evaluating the proposed substitute. City may require Contractor to furnish additional data about the proposed substitute.

Article 7: Contractor’s Responsibilities

- 7.1 It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and locations of the work, the conformation of the ground to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions and all other matters which in any way effect the work under this Contract. No verbal agreement or conversation

with any officer, agent or employee of the City either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

- 7.2 The Contractor shall keep on the work during its progress, a competent superintendent, satisfactory to the City and any directions given to such superintendent shall be as binding as if given to the Contractor. If the Contractor, in the course of the work, finds any discrepancy between the drawings and the physical conditions of the locality or any errors or omissions in drawings or in the layout as given by Points and Instructions, it shall be his duty to immediately inform the City in writing, and the City shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the Contractor's risk.
- 7.3 Contractor shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.
- 7.4 Unless otherwise specified in the Contract Documents, Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.
- 7.5 All materials and equipment shall be good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the City. If required Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.
- 7.6 Throughout the course of the construction, the Contractor shall maintain the project free from any conditions, which may result in danger or nuisance to the public, including but not limited to dust and street disrepair.
- 7.7 The Contractor shall be responsible for the condition of all excavations made by him. All slides and cave-ins shall be removed without extra compensation, at whatever time and under whatever circumstances they may occur.
The neglect, failure, or refusal of the City to order the use of bracing or sheeting, or a better quality, grade, or section, or larger sizes of steel or timber, or to order sheeting, bracing, struts, or shoring to be left in place, or the giving or failing to give orders or

directions as to the manner or methods of placing or driving sheeting, bracing, jacks, wales, rangers, etc., shall not in any way or to any extent relieve the Contractor of any responsibility concerning the condition of excavation or any of his obligations under the Contract; nor shall any delay, whether caused by any action or want of action on the part of the Contractor, or any acts of the City, or his agents, or employees, resulting in the keeping of an excavation open longer than would otherwise have been necessary, relieve the Contractor from the necessity of properly and adequately protecting the excavation from caving or slipping, nor from any of his obligations under the Contract relating to injury of persons or property, nor entitle him to any claim for extra compensation. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN PROPER AND SUFFICIENT SHEETING, SHORING AND BRACING TO PROTECT ALL PERSONS CONNECTED WITH THE WORK FROM INJURY.

- 7.8 Adequate sanitary conveniences for the use of persons employed on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such a manner and at such points as shall be approved by the City. These conveniences shall be maintained at all times without nuisance and their use shall be strictly enforced; upon completion of the work they shall be removed leaving the area clean and free from nuisance.
- 7.9 The Contractor will be required to comply with the City's Erosion and Sediment Control Ordinance. Special care shall be taken to prevent siltation of existing sewer, streets, drainage ditches, and private property.
- 7.10 Contractor shall obtain and pay for all construction permits and licenses. City shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening Bids, or, if there are no Bids, on the Effective Date of the Agreement.
- 7.11 The Contractor shall provide all field engineering services necessary for laying out the Project. All such services shall be performed by a Professional Surveyor registered with the State of Virginia. Control points shall be established and maintained during the execution of the Project. All documentation and control points shall be made available to the City throughout the execution of the Project.
- 7.12 The Contractor shall provide at their cost an independent testing service, approved by the City, to perform all testing required by the Contract Documents. Written reports shall be provided to the City.
- 7.13 The Contractor shall provide "as built" plans within 30 days of project completion. Such plans shall be prepared by a Licensed Surveyor and shall show such items as final elevations, grades, structure locations, etc.

- 7.14 Representatives of the City, as well as representatives of Local, State and Federal agencies and parties having an interest in the project shall have access to the work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and review.
- 7.15 During the performance of this contract, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations and such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000.00, so that such provisions will be binding upon each Subcontractor or vendor.
- 7.16 During the performance of this contract, contractor agrees that they will not, and shall not knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

Article 8: Subcontracts

- 8.1 Contractor shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, against whom City may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.
- 8.2 Contractor shall be fully responsible to City for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between City and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the City to pay or to see the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.
- 8.3 Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor. Contractor shall require all Subcontractors, Suppliers and such other persons and organizations

performing or furnishing any of the Work to communicate with the City through Contractor.

- 8.4 The Contractor shall, as directed by the Owner, remove from all public and private property, at his own expense, all temporary structures, rubbish and waste materials, resulting from his operations; and shall leave the site in a neat, orderly condition.

Article 9: Owner's Responsibility

- 9.1 The Owner through his designated representatives shall have general supervision and direction of the work. He has the authority to stop the work whenever such stoppage may be necessary to ensure the proper execution of the Contract. He shall also have authority to reject all work and materials which do not conform to the Contract, to direct the application of forces to any portion of the work as in his judgment is required, to order the force increased or diminished and to decide questions which arise in the execution of the work.
- 9.2 Wherever work being done by the City's forces or by other Contractors is contiguous to work covered by this Contract the respective rights of the various interests involved shall be established by the City to secure the completion of the various portions of the work in general harmony.
- 9.3 If the Contractor should neglect to execute the work properly or fail to perform any provision of this Contract, the City after three days written notice to the Contractor, may without prejudice to any other remedy make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.
- 9.4 City shall promptly furnish the data required under the Contract Documents and shall make payments to Contractor promptly when they are due.
- 9.5 City shall provide inspection of the Contractors Work.
- 9.6 The City shall have the right at any time, for reasons which appear good to them, to annul this Contract upon giving written notice to the Contractor, in which event the Contractor shall be entitled to the full amount of the estimate for the work done by him under this Contract up to the time of such annulment, including the retained percentage. The Contractor shall be reimbursed by the City for such expenditures that are not otherwise compensated for, and as are required in preparing for and moving to and from the work; the intent being that an equitable settlement shall be made with the Contractor.

Article 10: Changes in Work

- 10.1 Without invalidating the Agreement and without notice to any surety, City may, at any time or from time to time, order additions, deletions or revisions in the work. Any additions, deletions or revisions will be authorized by a Change Order. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents.
- 10.2 Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented.
- 10.3 City and Contractor shall execute appropriate Change Orders covering:
 - 10.3.1 changes in the Work which are ordered by City;
 - 10.3.2 changes in the Contract Price or Contract Times which are agreed to by the parties; and
 - 10.3.3 Changes in the Contract Price or Contract Times, which embody the substance of any written decision, rendered by City.

Article 11: Changes in Contract Price

- 11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in Contract Price.
- 11.2 The Contract Price may only be changed by a Change Order. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to City promptly after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 20 days after the start of such occurrence or event and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.
- 11.3 The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:
 - 11.3.1 where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved.

- 11.3.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum.

Article 12: Changes in Contract Times

- 12.1 The Contract Times may only be changed by a Change Order except for inclement weather days as determined by the City. Such inclement weather days shall be maintained by the City and added to the number of days permitted for completion of the Project. Any claim for an adjustment of the Contract Times shall be based on written notice delivered by the party making the claim to the other party and to City promptly after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 20 days after such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times shall be determined by City. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this paragraph 12.1.
- 12.2 Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by City, acts or neglect of utility owners, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within control of Contractor.
- 12.3 Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of both City and Contractor, an extension of the Contract Times in an amount equal to the time lost due to such delay shall be Contractor's sole and exclusive remedy for such delay. In no event shall City be liable to Contractor, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of Contractor, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility owners.

Article 13: Indemnification

- 13.1 The Contractor agrees to indemnify, defend and hold harmless the City, its members of Council, officers, directors, agent and employees, against any and all claims, liabilities, losses, damages, costs and expenses (including reasonable attorney fees) arising out of,

or resulting from any and all injuries to persons or damage to property arising out of services performed hereunder or by reason of the intentional or negligence acts or omissions of the Contractor, its employees, agents or sub-consultants, including any independent contractors.

Article 14: SEPARATE CONTRACTS

- 14.1 The City reserves the right to let other contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

Article 15: Payment

- 15.1 5% of the dollar amount of the estimate of work completed shall be withheld until the final acceptance of the project. Payment shall be made based on estimates of work completed in the preceding month submitted on, or before the 5th day of the month for the duration of the contract. Application for partial payments shall be submitted on Standard City form.
- 15.2 Material stored on site shall be paid for based on supplier invoice only.
- 15.3 Failure by the City to make payments at the time provided by this Contract shall give the Contractor the right to suspend work until payment is made, or, at his option, after thirty days written notice, should the City continue to default; to terminate this Contract and recover the price of all work done and materials provided and all damages sustained; and such failure to make payment at the time provided shall be a bar to any claim by the City against the Contractor for delay in completion of the work, due to such suspension or failure to pay.
- 15.4 Payments to Subcontractors: The Contractor shall take one of two actions within seven days after receipt of payment by the City.
- a) Pay the Subcontractor for the proportionate share of the total payment received from the City attributable to the work performed by the Subcontractor under that contract; or
 - b) Notify the City and Subcontractor, in writing, of his intention to withhold all or a part of the Subcontractor's payment with the reason for nonpayment.

The Contractor shall pay interest to any Subcontractor on all amounts owed by the Contractor that remain unpaid after seven days following receipt by the Contractor of payment by the City for work performed by the Subcontractor. Interest shall accrue at the rate of 1 percent per month.

- 15.5 Upon the completion of the work and its final acceptance by the City, the Contractor shall submit his final estimate over his signature, covering work provided for in this Contract, completed and accepted by the City under the terms and condition hereof, whereupon the balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor within 30 days of receipt of the final estimate by the City, provided that, before the payment of said final estimate the Contractor shall submit evidence satisfactory to the City that all payrolls, material bills and outstanding indebtedness in connection with the work have been paid and that the Maintenance Bond has been posted. The payment of the final estimate due under this Contract and any and all alterations of same, shall release the City and the officers and agents thereof, from any and all claims or liabilities on account of the work performed and materials furnished under this Contract or any alterations thereof.

Article 16: Discrimination

- 16.1 During the performance of this contract, the Contractor agrees as follows:

- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- (b) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
- (c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs a, b, and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each Subcontractor or vendor.

Article 17: Claim Process

The OWNER and CONTRACTOR each hereby waive all right to trial by jury in any matter arising out of or in any way connected with this CONTRACT or their relationship, whether contractual or extra-contractual. They agree that prior to the assertion of any claim against the other, they will endeavor to resolve the claim through discussion, including the optional use of non-binding mediation. Absent agreed resolution, the process to assert a claim against the City is to present it in writing to the Appropriate City Department Director; and absent acceptance of the decision of the Director of Public Works, then appeal in turn to the City Manager or designee and ultimately to Council, with each such appeal to be submitted in writing within 10 calendar days of prior decision, identifying in writing on what specific basis, with citation to controlling and supporting documentation and legal authority, the appeal is sought and challenge made to the prior decision and the resolution or remedy which would be acceptable. With any claim that reaches City Council, the City Council shall decide the claim within 60 days of when it was submitted to the City Manager or designee.

SPECIFICATIONS FOR
FY18 BRIDGE REHABILITATION PROJECT
CITY OF STAUNTON, VIRGINIA

M&C COMMISSION NO. 3659

JULY 2017



MATTERN & CRAIG
CONSULTING ENGINEERS • SURVEYORS
701 FIRST STREET, S.W.
ROANOKE, VA 24016

DESIGN COORDINATOR: STEVEN A. CAMPBELL, P.E.

(540) 345-9342

BRIDGE REPAIRS CONTRACT

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SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 1A - SPECIAL CONDITIONS

1A-01 GENERAL

- A. The specifications have been arranged and sectioned only as a means of reference and shall not be interpreted as being a proper or complete means or method in which to arrange, install or complete the work.
- B. The Contractor shall comply with "Rules and Regulations Governing Construction, Demolition and All Excavation" as adopted by the Safety Codes Commission of the Commonwealth of Virginia, Occupational Safety and Health Administration (OSHA). The Contractor is required to employ safe practices and comply with all safety standards and laws.
- C. The Contractor shall comply with the "City of Staunton Manual of Specifications and Standard Details, Latest Revision".
- D. The Contractor shall demonstrate, by reference or other suitable means, the capability to provide the craftsmanship, experience, and equipment necessary to perform satisfactorily to this specification. The Contractor (or subcontractor) performing repair or replacement of bridge components or performing zone coating shall document a minimum of 5 years experience with the required work.

1A-02 LOCATION OF WORK

- A. The site of the work is various bridge locations within the City of Staunton Virginia including the following:

Bridge 1027 – US Route 250 (WBL Richmond Rd) over CSX Railway

Bridge 1802 – US Route 11 (Commerce Rd) over State Route 254

(New Hope Rd) and Lewis Creek

Bridge 1809 – US Routes 11, 250 and State Route 254

(Greenville Ave and Commerce Rd.) over Lewis Creek

Bridge 8001 – State Route 261 (Statler Blvd) over CSX Railway and Private Road

1A-03 CONTRACT METHOD

- A. Construct the Work under a Unit Price Contract.

1A-04 LAYING OUT WORK

- A. The drawings shall not be scaled. The Contractor must verify all dimensions and elevations at the site prior to proceeding with the work. The Contractor shall also verify existing utilities that may be affected by the Work.
- B. It is imperative that the Contractor work within the shown rights of way or easements, at all times, unless approved otherwise by the property owner and the Engineer.
- C. The Contractor shall, at his expense, provide competent engineering survey services and shall provide and maintain accurate, detailed, survey work
- D. Survey bench marks, baselines, station points, distances, offset lines, inverts, elevations, and other related information shall be laid out in accordance with the plans
- E. The Contractor shall coordinate his work with the Engineer, City officials, and adjacent property owners.

1A-05 SEQUENCE OF WORK

- A. Schedule for work required on this project shall be coordinated with the Owner. The work shall be scheduled so that work for bridges 1027, 1809, 1802 and 8001 shall be completed prior to June 30, 2018.
- B. All expansion joints shall be installed after completion of the HMWM Concrete Surface Treatment or Penetrant Sealer installation.
- C. Install Waterproofing (Epoxy) prior to installation of Penetrant sealer.

1A-06 UTILITY COMPANIES

- A. The Contractor shall coordinate with any utility companies whose facilities may be affected by the bridge work.

1A-07 TEMPORARY FACILITIES

- A. The Contractor may provide and maintain, at his expense, suitable field office facilities as required for the work at locations approved by the Owner and Engineer.
- B. The Contractor shall provide and maintain, at his expense, toilet accommodations for his employees at locations approved by the City and

Engineer. The sanitary facilities shall comply with all Local and State Sanitary Health Regulations for their installation, use and waste removal.

- C. The Contractor shall provide and pay for all water, electricity, illumination, heat and other utilities required for the proper execution of the work.
- D. The Contractor shall provide and maintain all barricades, fences, and other protective devices required around the project site and storage area in order to protect the Work, his employees and the public.

1A-08 PROGRESS MEETINGS - CONTRACTORS DUTIES

- A. Schedule and administer Project meetings throughout progress of the Work at a maximum of one month intervals, called meetings, and preinstallation conferences.
- B. Make physical arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within five days to Engineer, participants, and those affected by decisions made at meetings.
- C. Attendance: Job superintendent, major subcontractors and suppliers; Utility representatives; Owner and Engineers appropriate to agenda topics for each meeting.
- D. Suggested Agenda: Review of Work progress since last meeting, status of progress schedule and adjustments thereto, expected progress by next meeting, number of workers on site, delivery schedules, submittals, shop drawing status summary, maintenance of quality standards, pending changes and substitutions, project questions, and other items affecting progress of Work.

1A-09 PROGRESS SCHEDULES

A. FORMAT

- 1. Prepare Schedules as a horizontal bar chart with separate bar for each major portion of Work or operation, identifying first work day of each week.

B. CONTENT

- 1. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

2. Provide sub-schedules to define critical portions of entire Schedule.
3. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
4. Provide separate schedule of submittal dates for shop drawings, product data, and samples and dates reviewed submittals will be required from Engineer. Show decision dates for selection of finishes.

C. REVISIONS TO SCHEDULES

1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

D. SUBMITTALS

1. Submit initial Schedules within 15 days after date established in Notice to Proceed. After review, resubmit required revised data within 10 days.
2. Submit revised Progress Schedules with each Application for Payment.
3. Submit under transmittal letter.

E. DISTRIBUTION

1. Distribute copies of reviewed schedules to job site file, subcontractors, suppliers, Engineer, Owner, and other concerned entities.
2. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in Schedules.

1A-10

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. Present in a clear and thorough manner. Title each drawing with Project and Contract name and number; identify each shop drawing by

Specification section and paragraph number; identify each element of drawings by reference to sheet number and detail or schedule of Contract Documents. Shop drawings shall be thoroughly checked and coordinated by the fabricator and Contractor prior to being submitted.

B. Contractor Review

1. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.
2. Coordinate submittals with requirements of Work and of Contract Documents.
3. Sign or initial each sheet of shop drawings and product data, and each sample label to certify compliance with requirements of Contract Documents. Notify Engineer in writing at time of submittal, of any deviations from requirements of Contract Documents.
4. Do not fabricate products or begin work which requires submittals until return of submittal with Engineer acceptance.

C. Submittals Requirements

1. Furnish submittals specified in sections of the specifications, and for all equipment and materials used in the project. Shop drawings shall be required but not limited to the following items: repair materials, timber and timber connections, timber consolidant, fire retardant, and roof system, paint materials and surface preparation methods. Material Certifications and Manufacturer's Data Sheets for materials and products shall be submitted to the Engineer for approval. The Contractor shall also submit a "Written Plan" to the Engineer, describing the Methods and Scheduling that he intends to use to accomplish the Repair Work. This Plan shall detail any phasing and/or protection that he deems necessary to safely and efficiently accomplish the Work required. Contractor shall establish a numbering system for all submittals. Resubmittals of corrected submittals shall use sequential letter suffixes.
2. Apply Contractor's stamp, signed or initialed, certifying to review, verification of products, field dimensions and field construction criteria, and coordination of information with requirements of Work and Contract Documents.

3. Submit under transmittal letter. Identify Project by title and number. Contract by number. Identify Work and product by Specifications section and Article number. Use established numbering system.

D. Resubmittals

1. Make resubmittals under procedures specified for initial submittals; identify ALL changes made since previous submittal. Use sequential letter suffixes after the submittal number for numbering resubmittals.
2. The Engineer, as the Owner's representative, reserves the right to require the Contractor to resubmit any shop drawing found not to comply with the contract documents. Any shop drawing requiring more than one resubmittal shall be reviewed by Engineer at Contractor's expense, and will be invoiced monthly directly to the Contractor by the Engineer at the rate of \$100.00 per hour or fraction thereof. The Contractor shall pay the Engineer prior to the next pay request. Approval of the next pay request by the Engineer shall be contingent on the receipt of payment for the additional reviews.

E. Engineer's Review

1. Engineer will review shop drawings, product data, and samples and return submittals within ten days of receipt of a complete, Contractor checked submittal.

1A-11 TESTING

Concrete and Paint Testing for this Contract shall comply with the following criteria:

- A. Concrete and areas to be cleaned and painted shall be inspected and tested as the work progresses. Failure to detect any defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate the Owner for final acceptance.

B. Paint Testing:

1. Surface Preparation Check: Independent Testing Agency shall inspect and approve surface preparation prior to application of the first coat of paint for each area to be painted. Hold point inspections per Section 411.04d.2 of VDOT Road and Bridge Specifications, 2016

2. Paint Film Thickness Testing: Independent Testing Agency shall test dry film thickness at a minimum of six locations selected by the Engineer for each coat of paint for each day's work as required by Section 411.04 of the VDOT Road and Bridge Specifications. Hold point inspections per Section 411.04d.3-7 of VDOT Road and Bridge Specifications, 2016.

C. Concrete Testing:

1. Conduct strength tests of concrete during construction in accordance with the following procedures:
 - a) Secure composite samples in accordance with ASTM C 172 at point of placement. Each sample shall be obtained from a different batch of concrete on a random basis.
 - b) Mold and cure three specimens from each sample in accordance with ASTM C 31. Any deviations from the requirements of this Standard shall be recorded in the test report.
 - c) Test specimens in accordance with ASTM C 39. At least three specimens shall be tested: two at 7 days for acceptance and one at 1 day for information. The acceptance test results shall be the average of the strengths of the two specimens tested at 7 days. If one specimen in a test manifests evidence of improper sampling, molding or testing, it shall be discarded and the strength of the remaining cylinder shall be considered the test result. Sufficient test cylinders shall be made and tested at the appropriate ages to determine when operations such as release of falsework or placing the structure in service can occur.
 - d) Samples for acceptance tests for each mixture or class of concrete shall be taken not less than once a day nor less than once for each 50 cubic yards of concrete or once for each major placement.
 - e) Any concrete represented by a test which indicates a strength which is less than the specified 7-day compressive strength by more than 500 psi will be rejected and shall be removed and replaced with acceptable concrete. Such rejection shall prevail unless: (1) The Contractor, at his expense, obtains and submits evidence acceptable to the City that the strength and quality of the rejected concrete is acceptable. If such evidence consists of cores taken from the work, the cores shall be obtained and tested in accordance with the standard methods of ASTM C 42, or (2) The City determines that said concrete is located where it will not create an intolerable detrimental effect on the structure and

the Contractor agrees to a reduced payment to compensate the Owner for loss of durability and other benefits.

- f) Whenever the average of three consecutive tests, which were made to determine acceptability of concrete, falls to less than 150 psi above the specified strength or any single test falls more than 200 psi below the specified strength, the Contractor shall at his expense, make corrective changes in concrete manufacturing procedures before placing additional concrete of that class. Such changes must be approved by the City prior to use.

E. Testing Agency:

- a. All inspections and tests shall be performed by an "Independent Testing Agency", selected by the Contractor, and approved in writing by the Engineer.
- b. The Independent Testing Agency and its representatives are not authorized to revoke, alter, relax, enlarge or release any requirement of the contract documents, nor to approve or accept any portion of the work.
- c. The Independent Testing Agency shall report all test results to the Engineer and the Contractor immediately after they are performed. All test reports shall include the exact location in the work for which the test was conducted.

F. Testing Laboratory Responsibilities:

- a. Provide qualified personnel at site after due notice; cooperate with Engineer and Contractor in performance of services.
- b. Perform specified inspection, sampling, and testing of products in accordance with specified standards.
- c. Ascertain compliance of materials with requirements of Contract Documents.
- d. Promptly (by Fax) notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
- e. Perform additional inspections and tests required by Engineer.
- f. After each inspection and test, within one week submit one copy each of inspection report to Engineer and Contractor. Include: Date issued, Project title and number, name of inspector, date and time of sampling or inspection, identification of product and Specification

section, exact location in the Project, type of inspection or test, date of test, results of tests, and conformance with specified standards and with Contract Documents. Report indicating noncompliance shall be faxed to the Engineer within one day of observation of noncompliance. When requested by Engineer, provide interpretation of test results.

G. Contractor's Responsibilities:

- a. Cooperate with laboratory personnel, and provide access to Work, and to manufacturer's facilities, when required.
- b. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested and to facilitate tests and inspections.
- c. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
- d. Arrange with laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

H. All costs associated with Concrete and Paint Testing shall be paid for by the Contractor, and shall be included in the unit prices for individual bid items.

1A-13 PERMITS

- A. The Contractor is required to obtain and pay for all construction permits for this project as required by the Owner including erosion and sediment control, and land disturbance permits. Contractor will be required to obtain a business license required by the Owner. The Contractor shall comply with all VMRC, DEQ and U.S. Army Corps of Engineers nationwide permit requirements as provided by the Owner.

1A-14 WARRANTY

- A. Work and material for Preformed Elastomeric Joint Sealers, Replace Joint Sealant, Waterproofing - Parapets, Concrete Substructure and Superstructure Repairs, Type B Patching (HES), Zone Coating of Existing Beams, Zone Coating of Beam Ends, Diaphragms and Bearings, and Zone Coating Bridge Railing shall be guaranteed for a period of three (3) years against cracking, debonding, leaking, or other failure. A written guarantee, bearing both the signatures of the General Contractor and the Subcontractor (if any) performing this work shall be delivered to the Engineer prior to Final Payment.

1A-15 TEMPORARY STRUCTURES

- A. Contractor shall maintain temporary shoring, cofferdams, etc., for all conditions encountered during construction period.

1A-16 CONTRACTOR'S RELATIONSHIP TO THE OWNER

- A. Independent Contractor - It is expressly agreed and understood that the Contractor is in all respects an independent Contractor as to work and is in no respect any agent, servant, or employee of the Owner. The contract specifies the work to be done by the Contractor, but the method to be employed to accomplish the work shall be the responsibility of the Contractor.
- B. Subcontracting – Contractor may subcontract services to be performed hereunder with the prior approval of the Owner which approval shall not be unreasonably withheld. No such approval will be construed as making the Owner a part of, or to, such subcontract, or subjecting the Owner to liability of any kind to any subcontractor. No subcontract shall, under any circumstances, relieve the Contractor of its liability and obligation under this contract; and despite any such subcontracting the Owner shall deal through the Contractor, and subcontractors will be dealt with as representatives of the Contractor.

1A-17 RESTORATION

- A. The Contractor shall at his own expense, clean up all refuse, rubbish, scrap material and debris caused by his operations, to the end that at all times the site of the work shall not be a source of litter and shall present a neat, orderly and workmanlike appearance.
- B. Developed property such as walks, steps, landscaped areas, fences and the like, disturbed by the work, shall be restored or replaced to their original condition. Ditches shall be restored to their original shape and slope. All disturbed areas not covered by landscaping, pavement or structures and all areas disturbed by the construction activity shall be fertilized, limed, seeded with the type of seed that produces a stand of grass similar to the existing, and mulched. Any washing or erosion of the surface, and any areas that seed does not germinate, and grass grow, prior to acceptance of the work, shall be repaired by the Contractor, at no additional expense to the Owner.
- C. Any property pins or monuments, moved or destroyed by the project work, shall be restored to their correct location by a licensed surveyor.
- D. The Contractor shall be required to provide restoration of each project site before submitting his pay request to the City for review and signature.

The Engineer will not review and approve pay requests until such restorations are complete. Exceptions will only be made by the City.

1A-18

FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean exterior surfaces exposed to view.
- C. Clean site; sweep and pressure wash paved areas and curbs/sidewalks, rake clean other surfaces; clean drainage system.
- D. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site.
- E. Seed and mulch all disturbed areas not covered by structure, walk or pavement.

END OF SECTION

DIVISION 2 - SITE WORK

SECTION 2A - TRAFFIC, PROPERTY AND UTILITY MAINTENANCE AND COORDINATION

2A-01 SCOPE OF WORK

- A. The work shall include providing all materials, equipment, labor and services required to regulate and coordinate traffic, to protect and maintain property, to notify the public and nearby homeowners and businesses of work conditions, and to coordinate the work with the Engineer, the Owner, Local Businesses and Homeowners, and any affected Utility Companies.

2A-02 GENERAL

- A. Unless otherwise stated in the Contract Documents, Special Provisions, or herein, all construction and materials will conform to the Virginia Department of Transportation (VDOT) Road and Bridge Specifications, 2016, and VDOT Road and Bridge Standards, 2016.
- B. The Contractor shall, at his expense, maintain the work site in a clean and orderly appearance at all times. All debris and surplus material collected shall be disposed of off the work site by the Contractor, at his expense.

2A-03 TRAFFIC MAINTENANCE AND COORDINATION

- A. The method of controlling traffic in the work area, and all required traffic control devices and signs shall be in accordance with the State and Federal "Manual on Uniform Traffic Control Devices" and the "VDOT Work Area Protection Manual, latest editions." The Contractor shall submit to the Engineer, for review and approval prior to working with a roadway, a detailed traffic control plan for each site indicating type and location of all signs, pavement markings and traffic control devices based on Contractors proposed phasing and repair operations.
- B. Traffic control requiring outside lane closure operation on a Four-Lane Roadway shall be based on "VDOT Virginia's Work Area Protection Manual" Figure TTC-16.1. Traffic control requiring inside lane closure operation on a Four-Lane Roadway shall be based on "VDOT Virginia's Work Area Protection Manual" Figure TTC-17.1. Traffic control requiring flagging operations on a Two-Lane Roadway shall be based on "VDOT Virginia's Work Area Protection Manual" Figure TTC-23.1.
- C. The Contractor shall provide and maintain all signs, barricades, cones, lights, etc. required to control and protect vehicular and pedestrian traffic in the vicinity of the work area.

- D. Vehicular and pedestrian access to all businesses shall be maintained. All intersections and interchanges shall remain open to traffic unless approved by the Engineer.
- E. The Contractor shall not close the right-of-way of any street or alley without obtaining the approval of and the required permits from the Local Governing Authorities.
- F. When work conditions dictate that part of a street to be closed to traffic, the Contractor shall provide and maintain, at his expense, all signs, barricades, flashing lights, and/or other devices necessary to physically close part of a street adjacent to work area. The Contractor shall provide and maintain all traffic control devices and signs required to coordinate and detour traffic around the closed area.
- G. The Contractor shall make every attempt to minimize the length and extent of any traffic interruptions. The Contractor shall not restrict traffic, or work within the right-of-way of any street or highway without obtaining the approval of and the required permits from the Owner. Temporary lane closings will be allowed if approved by the Owner.
- H. The following traffic control constraints shall apply for the project:
 - a. Contractor shall maintain at least two 11' wide lanes for through traffic at all times, except at night when contractor shall maintain at least one 11' wide lane for through traffic at all times on Bridge 1027 – US Route 250 (WBL Richmond Rd.) over CSX Railway. Provide proper signage, channelization devices, and shadow vehicles as outlined in current "VDOT – Virginia's Work Area Protection Manual" (WAPM), Figures TTC-16.1 and TTC-17.1. Modify length for layout of traffic control devices as necessitated by existing conditions in the area of the interchange. Complete lane closures prior to intersection of Route 1426 (Staunton Crossing Dr.) utilizing appropriate portions of Figure TTC-27.1. For outside lane closure utilize appropriate portions of Figure TTC-39.1. Provide temporary "Stop" (R1-1) sign for ramp entrance in lieu of "Yield" (R1-2). Install W3-1 sign on ramp in lieu of W3-2. Cover existing "Yield" signs. Close right turn lane to Route 1426 simultaneously with closure of outside lane. In areas where taper lengths and buffer lengths must be reduced to meet existing field conditions, channelizing device spacing should be reduced to 40 feet to provide added visibility and driver guidance. Additional consideration should be given to further enhancing traffic controls to provide added visibility and driver guidance, and increased protection for workers during nighttime hours in accordance with WAPM Section 6G.26. Reduce speed on

westbound US Route 250 to 35 mph during night time work hours.

- b. Contractor shall maintain at least one 11' wide lane of through traffic in each direction at all times on Bridge 1809 – US Routes 11, 250 and State Route 254 (Greenville Ave. and Commerce Rd.) over Lewis Creek. Provide proper signage, traffic control devices, flagging operations, and shadow vehicles as outlined in current Figures TTC-16.1 and TTC-17.1. Short term full closure of lanes on the S Coalter St. leg, western Greenville Ave. leg and outside of Commerce Rd. will be allowed, if coordinated with and approved by the City. Western Greenville Ave. right turn and S. Coalter St. shall not be closed simultaneously. Provide Type III Barricades with "Road Closed" signs for each work area on Greenville Ave. and S. Coalter St. For closure of the western Greenville Ave. right turn lane utilize appropriate portions of Figure TTC-29.1. Provide minimum of four (4) temporary changeable message signs (TCMS) to be installed one week prior to beginning work forewarning public of forthcoming street closures. TCMS shall be installed at locations directed by City with agreed upon messaging. Provide proper flagging operations for bridge repairs per Figure TTC-23.1, modified to accommodate existing conditions. Maintain sidewalk access on one side of Bridge 1809 at all times. Open sidewalk shall not be immediately adjacent to work area. Sidewalk closure signs shall be placed at each end of bridge and at adjacent intersections in accordance with Figure TTC-35.0, Sidewalk Detour.
- c. Contractor shall maintain at least one 11' wide lane of through traffic at all times on Bridge 1802 – US Route 11 (Commerce Rd.) over State Route 254 (New Hope Rd.) and Lewis Creek. Provide proper signage, traffic control devices, flagging operations, and shadow vehicles as outlined in current "VDOT – Virginia's Work Area Protection Manual", Figures TTC-16.1 and TTC-17.1. Provide proper flagging operations for bridge repairs on New Hope Rd. per Figure TTC -23.1, modified to accommodate existing conditions. Provide advance signing on New Hope Rd. and connector road. Flaggers shall utilize two-way radios.
- d. Contractor shall maintain at least one 11' wide lane of through traffic in each direction at all times on Bridge 8001 – State Route 261 (Statler Blvd.) over CSX Railway and Private Road. Provide proper signage, traffic control devices, flagging operations, and shadow vehicles as

outlined in current "VDOT – Virginia's Work Area Protection Manual", Figures TTC-16.1 and TTC-17.1. Maintain left turn lane access from SB Statler Blvd. to US Route 250 (Richmond Ave.) at all times using a 50'-100' taper. Complete northbound lane closures prior to intersection of Route 250 (Richmond Ave.) utilizing appropriate portions of Figure TTC-27.1. Reduce speed on Statler Blvd. to 25 mph.

- f. Phasing of certain work items will be required. Coordination shall be made with Owner.
1. Shoulder closure will be permitted.
 2. All signs and wood posts shall be in accordance with Virginia Work Area Protection Manual and VDOT Road and Bridge Standards WSP-1. Posts shall be of the type approved by the Owner.
 3. Conflicting traffic markings shall be eradicated as required by the Engineer and Owner. Temporary pavement markings shall be provided as required for Maintenance of Traffic and shall be approved by the Owner. All existing traffic signs which conflict with proposed Maintenance of Traffic shall be temporarily covered.
 4. Upon final construction, Contractor shall eradicate all temporary pavement markings. Temporary covers shall be removed from all existing signs. The Owner will be responsible for reinstalling permanent pavement markings upon project completion
 5. Lane closures for two lane bridges shall be restricted to the hours of 9 am to 4 pm Monday thru Friday unless noted otherwise by the Owner, except as noted above for Bridge 1027 – US Route 250 (WBL Richmond Rd.) over CSX Railway. Coordinate timing of all road closures with the Owner.
 6. Maximum length of traffic interruption at Bridge 1027 – US Route 250 (WBL Richmond Rd.) over CSX Railway shall be 45 consecutive calendar days.
 7. Maximum length of traffic interruption at Bridge 1809 – US Routes 11, 250 and State Route 254 (Greenville Ave. and Commerce Rd.) over Lewis Creek shall be 30 consecutive calendar days. Maximum length of closure of western Greenville Ave. right turn lane shall be one two-day weekend.
 8. Maximum length of traffic interruption at Bridge 1802 – US Route 11 (Commerce Rd.) over State Route 254 (New Hope Rd.) and

Lewis Creek shall be 30 consecutive calendar days. Repairs to substructure shall be completed in no more than an additional 10 days.

9. Maximum length of traffic interruption at Bridge 8001 – State Route 261 (Statler Blvd.) over CSX Railway and Private Road shall be 30 consecutive calendar days.

- I. "Maintenance of Traffic" for each bridge will be paid for at the contract lump sum price. No measurement will be made. The lump sum pay item will include all materials, equipment, labor and services required to regulate and coordinate traffic, and will include Flagging, Signing, Lighting, Traffic Control Devices, Impact Attenuators, Barriers, Signalization, Pavement and Message Markings, Temporary Eradication of Existing Pavement Markings, and all miscellaneous and incidental items required by the Engineer and the Owner to adequately and safely maintain traffic during construction. Copies of the applicable details from the VDOT Virginia Work Area Protection Manual are attached.

Payment will be made under:

Pay Item	Pay Unit
Maintenance of Traffic	"Lump Sum"

2A-04 PROPERTY MAINTENANCE AND COORDINATION

- A. The Contractor shall notify the City forty-eight (48) hours prior to commencement of work in order to coordinate a means of ingress and egress to the work area and to determine a storage area for materials.
- B. The Contractor shall coordinate all work with property and business owners whose properties and businesses may be impacted either by the work or by the Contractor accessing the work.
- C. Existing trees, landscaped areas, driveways, mail boxes, utilities, walls, poles, right-of-way monuments and the like shall be protected from damage during the work under this contract. Any damage caused to such items shall be repaired or replaced by the Contractor at his expense.

2A-05 UTILITY MAINTENANCE AND COORDINATION

- A. Before the work is started, the Contractor shall notify all companies, corporations, municipalities and individuals who own utilities on the construction site, in the right-of-way or immediately adjacent to the construction area of the work to be performed. The Contractor shall arrange to have the various utilities located and to have them removed or

relocated as required, or to determine the method of protection acceptable to the respective owner, if the method of protection is not specified hereinafter. Any cost incurred with removing or relocating utilities shall be borne by the Contractor unless indicated otherwise.

- B. The work shall be coordinated and performed in a manner so that all existing fire hydrants, without exception, shall be accessible at any time during the work.
- C. The Contractor shall maintain existing streams, ditches, drainage structures and flows at all times during the work. The Contractor shall pay for all personal injury and property damage which may occur as a result of failing to facilitate drainage.
- D. The Contractor shall repair or replace any existing sanitary sewer, water or storm drain utility damaged or misaligned during or due to the work. All other utilities shall be repaired or replaced by the respective Utility Company(s) at the expense of the Contractor.
- E. The Contractor shall coordinate all work within the vicinity of existing utilities with the respective Utility Company. The work shall be conducted in a manner to avoid service interruption and in accordance with the rules and regulations of the respective Utility Company. Temporary bracing or supports shall be installed as needed to sufficiently support utility lines, etc. during construction. All methods for supporting and maintaining the existing utilities shall be subject to the approval of the respective Utility Company and the Owner. Any utilities removed as part of the Work, and not indicated to be removed or abandoned, shall be restored using materials and installation equal to the Utility's standards.
- F. The Contractor shall ascertain the exact location of each existing utility that may interfere with the work. The Contractor may obtain field utility locations by calling "Miss Utility" (1-800-552-7001) forty-eight (48) hours prior to working in the vicinity of existing utilities. If the utilities fail to locate, a second call shall be made providing an additional three (3) hour notice. Contractor shall note that a "Location Request Form," referencing Virginia State Law, is included in these specifications.

2A-06

PROTECTION OF PUBLIC AND PROPERTY

- A. The Contractor shall comply with all Local, State and Federal Laws and the Occupational Safety and Health Act in protecting the public, the worksite, and adjacent property from damage. The Contractor shall provide all sheeting, shoring, barricades, warning lights, signs, and fences required for this protection.

END OF SECTION

DIVISION 3 - BRIDGE WORK

SECTION 3A - BRIDGE REHABILITATION WORK

3A-01 SCOPE OF WORK

- A. The work shall include providing all equipment, tools, materials, labor, transportation, supplies, and services required as indicated in the Specifications and Special Provisions. The intent of the contract is to provide for the construction and completion in every detail of the work described.

Bid items are to include, but not limited to all labor, equipment, materials, mobilization and demobilization required to complete the work for each bid item shown on the drawings and described within the specifications. The General Description of the bid items can be found in the VDOT Road and Bridge Specifications, 2016, Special Provisions as listed herein, or as modified/clarified below:

- B. Preformed Elastomeric Joint Sealer:

The bid item includes replacement of expansion joint sealer including removal and disposal of existing joint and adjacent material and for surface preparation and installation of new joint material. Surface preparation shall include routing, brushing, saw cutting or other method approved by the Engineer to ensure the joint opening is free of oil, grease, existing joint material or any other foreign material which may interfere with bond of the new joint material. Replacement expansion joint material shall be D.S. Brown Neoprene Compression Seal, Watson Bowman Acme WABO Compression Seal or approved equal. Contractor shall be responsible to field check the width of the existing joint and for verifying the size of the preformed elastomeric joint sealer prior to ordering the joint sealer. All transverse compression seals at abutments and piers shall be installed in one piece and shall be installed in median, curbs, sidewalks and bridge railing. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price per linear foot.

- C. Epoxy Mortar Joint Repair:

This bid item includes installing EP-6 Epoxy to areas along expansion joints that have chipped as directed by the Engineer. The designated areas shall be cleaned by removing any loose concrete by light chipping and sand blasting similar to surface preparation for expansion joint installation. EP-6 Epoxy shall be applied to the cleaned surface. EP-6 Epoxy shall be installed in accordance with Section 243 of the VDOT Road and Bridge Specifications, 2016. Bid price shall include providing

all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price per linear foot.

D. Replace Joint Sealant

This bid item includes removing existing joint material, cleaning and replacing joint sealant. Joints shall be cleaned by routing, brushing or some other method approved by the Engineer. All loose material shall be removed from the joints using oil-free compressed air. Install backer rod as required per manufacturer's instructions. The resealing material shall be Dow Corning 902 RCS joint sealant or approved equal and shall be installed per manufacturer's recommendations. Bid price to include all equipment, labor, materials, environmental protection, disposal of materials, and inspection required to meet the specifications for this item and will be paid for at the unit price bid per linear foot.

E. Waterproofing – Penetrant Sealer for Deck, Median, Sidewalks, Curbs, and Approach Slabs:

This bid item includes the application of a silane penetrant sealer to the deck surface, sidewalks median, curbs, top of backwalls and approach slabs. Silane penetrant sealer materials and procedures shall be in accordance with Section 428, Concrete Surface Penetrant Sealer of the VDOT Road and Bridge Specifications, 2016 and the attached VDOT Special Provision Section 428, Concrete Surface Penetrant Sealer. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price bid per square yard.

F. Waterproofing – Parapets:

This bid item includes all labor, equipment and materials required to waterproof the parapets, railings and railing curbs to the limits shown. All areas are to be coated unless noted otherwise. Waterproofing materials shall be Tex-Cote 300 by Textured Coatings of America or approved equal. The material installation and surface preparation shall be per the manufacturer's recommendations. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price bid per linear foot

G. Waterproofing – Pier:

This bid item includes all labor, equipment and materials required to waterproof the existing pier surfaces below the pier cap. All surfaces below the pier cap are to be coated. Waterproofing materials shall be

Tex-Cote 300 by Textured Coatings of America or approved equal. The material installation and surface preparation shall be per the manufacturer's recommendations. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the lump sum price bid.

H. Waterproofing – (Epoxy Resin EP-3B/EP-3T) – Bearing Seats:

This bid item includes waterproofing the top (horizontal surface) of the pier caps. Waterproofing materials and procedures shall be in accordance with Sections 416.02 and 416.03 of the VDOT Road and Bridge Specifications, 2016. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price bid per square yard.

I. Zone Coating of Beam 14:

This bid item includes cleaning and painting of Beam 14 as indicated on the attached drawings to meet requirements of Section 411 of the VDOT Road and Bridge Specification, 2016. In addition, additional areas of steel that exhibits signs of rust/deterioration shall be cleaned and painted per Engineers direction. Specifically up to 6 bearing assemblies shall be cleaned and painted. These bearings may be cleaned utilizing Method 3. Cost for zone coating these bearings shall be included in the lump sum price. Bid price shall include all equipment, labor, materials, environmental protection, health and safety, disposal of materials, testing and inspection required to meet the specifications for this item and will be paid for at the lump sum price bid.

J. Zone coating of Beam Ends, Diaphragms, and Bearings:

This bid item includes cleaning and painting bearing assemblies, end diaphragms, and three (3) feet of the ends of the beam at each bearing located under an expansion joint to meet requirements of Section 411 of the VDOT Road and Bridge Specifications, 2016. In addition, additional isolated areas of the steel that exhibits signs of rust/deterioration shall be cleaned and spot painted per Engineer's direction. These areas shall not exceed 100 square feet and shall be included in the lump sum price. Bid price shall include all equipment, labor, materials, environmental protection, health and safety, disposal of materials, testing and inspection required to meet the specifications for this item and will be paid for at the lump sum price bid.

K. Concrete Substructure and Superstructure Surface Repairs:

This bid item includes the repair of spalls and delaminations in the substructure and superstructure including the underside of the deck. Bid price shall include all equipment, labor, materials, environmental protection, inspection, testing and disposal of materials to meet the specifications for this item and will be paid for at the unit price bid per square yard.

Replacement Concrete shall be either: 1) formed-and-poured, 2) pneumatically applied or 3) Type B Patch Material, at the Contractor's option. Formed-and-poured concrete shall be Class A4 Hydraulic Cement Concrete, per Section 217 of the VDOT Road and Bridge Specifications, 2016. Pneumatically Applied Mortar (Shotcrete) shall be per Section 412.03(g) of the VDOT Road and Bridge Specifications, 2016. Type B patching shall be as described in Section 412.03 of the VDOT Road and Bridge Specifications, 2016.

The following shall apply to areas designated on the plans as Concrete Surface Repairs:

1. General:

Concrete surface repairs shall consist of removing and replacing deteriorated material, thoroughly cleaning exposed concrete surfaces and reinforcing steel, and replacing reinforcing steel. Cleaning shall be performed by sandblasting, waterblasting, or other approved methods to remove concrete, rust, oil, and other foreign materials detrimental to achieving a bond. The area and depth of repairs shall be as directed by the Engineer.

Dimensions of existing structures shown on the plans are approximate, and those that are pertinent to the construction of the new portion shall be verified in the field by the Contractor. Where details of new portions of the structure shown on the plans are not adaptable to the shape of the existing structure practical modifications may be made during construction with the approval of the Engineer provided neither the existing nor the new portions are impaired in structural strength.

2. Surface Preparation:

All concrete on the surfaces of the bridge in locations as directed by the Engineer shall be removed to one-inch (1") below the outer layer of longitudinal reinforcing steel. Surfaces where concrete is to be removed include but are not limited to spalls and delaminations in concrete beams, concrete diaphragms, pier caps and pier columns.

Areas to be repaired shall be outlined with saw cuts to a depth of one-inch (1").

Concrete shall be removed by the use of hand tools or pneumatic hammers weighing 30 pounds or less. Pneumatic hammers shall be worked at an angle of 45 to 60 degrees to the plane of the concrete surface being removed. Care shall be taken to prevent striking reinforcing bars with hammer points.

Exposed Reinforcing Steel shall be cleaned by abrasive blast cleaning. Reinforcement that has lost 1/4 or more of its original cross-sectional area shall be lapped with new bars of the same size and shape. New bars shall lap existing bars a length of 30 diameters on each side of the damaged portion, or if not possible, be welded with a 6" arc-welded lap on each side of the damaged portion with a double-flare V-groove weld in accordance with Section 407 of the VDOT Road and Bridge Specifications, 2016 or mechanically connected in accordance with Section 406.

Dust and debris shall be removed by blowing with compressed air or hosing with water. A fine spray of moisture shall be applied to the surface to outline, as it evaporates, loose fragments that are locked in place. Just prior to placement of repair material, the surface shall be cleaned.

Where approved by the Engineer, when the thickness of the surface repair is 2 inches or more, and existing reinforcing is not exposed, 2 x 2 - W1.4 x W1.4 welded wire fabric shall be used. The fabric shall be tied to reinforcing steel where possible. If reinforcing steel is not exposed or if the steel has a spacing greater than 1 foot 6 inches, expansion anchors 3/8 inch in diameter shall be placed along the edges of the patch and the fabric tied to the bolts. The expansion anchors shall be spaced not more than 1 foot 6 inches apart and shall be embedded at least 2 inches into the concrete.

3. Forming:

If this repair is made via forming-and-pouring, the "Bottom" of the repaired area shall be formed separately from other surfaces, and be poured prior to other surfaces. All pours shall be sufficiently vibrated to avoid honeycombing and provide well-consolidated concrete with no delaminations or voids between the new and existing concrete. The poured concrete will be sounded by the Engineer to test bond.

Forms shall be set to retain the original lines and shape of the structure, with two inches of cover over reinforcing steel. Chamfers to match existing shall be formed along all concrete edges. All

forms shall retain repair material without leakage. Forms shall be lined or coated with non-staining release agent for easy removal. Any holes for form anchorage shall be dry packed and sealed after forms are removed.

4. Formed-and-Poured-Patch Application:

Patch concrete shall contain 3.0 gallons per cubic yard of the corrosion inhibitor DCI-S. An Engineer approved Bonding Agent shall be applied to the prepared substrate in accordance with the material manufacturer's recommendations. Patch material shall be worked in a manner to avoid air entrapment, and shall be vibrated to achieve dense, uniform consistency. Spillovers onto adjacent areas shall be cleaned.

5. Pneumatically Applied Patch Application:

Patch concrete shall contain 3.0 gallons per cubic yard of the corrosion inhibitor DCI-S. Equipment, personnel, surface preparation, application, finishing, curing, quality assurance and testing shall comply with Section 412.03(g) of the VDOT Road and Bridge Specifications, 2016.

Prior to initial set, the surface shall be scraped or cut with a trowel or metal template to retain the original lines and shape of the structure, and to obtain an even and acceptable appearance, with two-inches (2") of cover over reinforcing steel. All concrete edges shall receive chamfers to match existing.

6. Type B Patching Application:

Patch concrete shall be an approved patching material from VDOT's approved products list and shall conform with the requirements of Section 412.03 of the VDOT Road and Bridge Specifications, 2016.

V. Type B Patching (HES)

This bid item includes the repair of spalls and delaminations on the top of the deck. All work shall be completed as described in Section 412.03 of the VDOT Road and Bridge Specifications, 2016. Concrete used for Type B Patching (HES) shall be either a high early strength Class A4 ready mixed concrete or an approved patching material from VDOT's approved products list. Bid price to include all equipment, labor, materials, environmental protection, disposal of materials and inspection required to meet the specifications for this item and will be paid for at the unit price bid per square yard.

W. (HMWM) Concrete Surface Treatment:

This bid item shall consist of furnishing and applying a high molecular weight methacrylate water repellent concrete surface penetrant to deck and approach slabs, in accordance with the attached VDOT Special Provision for Methacrylate Concrete Penetrant Sealer. Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection, and inspection required to meet the specifications for this item and will be paid for at the unit price bid per square yard.

X. Repair Epoxy Overlay:

This bid item includes removing existing epoxy overlay prior to installing new epoxy overlay in areas designated by the Engineer. The application and surface preparation for the epoxy overlay shall be in accordance with Section 431 of the VDOT Road and Bridge Specifications, 2016. The bid price to include providing all equipment, labor, tools, materials, disposal of materials, environmental protection and inspection required to meet the specifications for this item and will be paid for at the unit price per square yard.

Y. Railroad Coordination:

This bid item shall include services made necessary by Buckingham Branch Railroad for the purpose of coordinating and controlling railroad traffic when the Work is being performed on Buckingham Branch Right of Way. The Contractor is responsible for obtaining a Right of Entry Agreement and obtaining and paying for Buckingham Branch Railroad liability insurance for work near the structure and coordinating with Buckingham Branch Railroad for flagging services. The Contractor is also responsible for following all requirements of the Right of Entry Agreement. The Owner has also applied and paid for a Buckingham Branch Right-of-Entry permit required by Buckingham Branch Railroad. The Owner will be responsible for paying for Buckingham Branch Railroad flagging services and construction monitoring costs. Contact at Buckingham Branch Railway is Claude Morris at (434) 983-3300, ext. 228. Bid price shall be paid for at the lump sum bid price.

Z. Repair Stone Masonry Abutments:

This bid item includes repointing stone masonry, re-setting displaced stones, and replacing missing stones as directed by the Engineer. All unsound mortar and/or missing mortar shall be repointed. All missing, broken, and/or damaged stones shall be replaced. All work and material for this bid item shall conform to the Special Provision for Stone Masonry Work. Bid price to include all equipment, labor, materials, environmental

protection, and disposal of materials and will be paid for at the unit price per square foot.

AA. Replace Concrete Slope Protection:

Replace concrete slope protection shall consist of removing and disposing of existing settled concrete, installing suitable #57 stone backfill or approved equal to bring slope protection back to original grades, replacing existing reinforcing steel as shown on the drawings and as may be required by Section 412.03 of the VDOT Road and Bridge Specifications, 2016, preparing the contact surfaces, and furnishing and placing new Class A4 concrete to the limits shown on the drawings. The new concrete slope protection shall have the same dimensions as the existing slope protection that are being replaced. The locations of concrete slope protection replacement shall be determined by the Engineer.

Bid price shall include all equipment, labor, materials, disposal of materials, environmental protection and inspection required to meet the specifications for this item and will be paid for at the unit price per square yard.

BB. Anchor Bolt Replacement:

This bid item shall consist of core drilling, removing and disposing of existing bearing anchor bolts, furnishing and placing new anchor bolts with nuts and washers and grout, and providing any required environmental, worker and safety protection, and disposal of material in accordance with the details and requirements herein and Section 408.

New anchor bolts shall be swedged type bolts of the same and material as the anchor bolts being replaced.

The new anchor bolts shall be grouted in place using a high-strength grout conforming to Section 218.03 (d).

Anchor bolt replacement will be measured in units of each and will be paid for at the contract unit price per each.

3A-02 GENERAL

A. Unless otherwise stated in the Contract Documents, Special Provisions, or on the Plans, all construction and materials will conform to Virginia Department of Transportation Road and Bridge Specifications, 2016, and Road and Bridge Standards, 2016.

B. The Owner shall be designated the Engineer and the Inspector per VDOT Specification.

C. Warranty:

Work and material for Preformed Elastomeric Joint Sealers, Replace Joint Sealant, Waterproofing - Parapets, Concrete Substructure and Superstructure Surface Repairs, Type B Patching (HES), Zone Coating of Beams, and Zone Coating of Beam Ends, Diaphragms and Bearings shall be guaranteed for a period of three (3) years against cracking, debonding, leaking, or other failure. A written guarantee, bearing both the signatures of the General Contractor and the Subcontractor (if any) performing this work shall be delivered to the Engineer prior to Final Payment.

3A-03 PROJECT RECORD DOCUMENTS

- A. The Contractor shall maintain a clean set of plans for the sole use as record drawings. The record documents shall be stored separate from construction documents.
- B. At contract closeout, submit record documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor. Provide record set of prints with red marks reflecting changes and other record of construction.

END OF SECTION

SPECIAL PROVISIONS

SPECIAL PROVISIONS

This project shall be constructed in accordance with the plans, the Virginia Department of Transportation (VDOT) Road and Bridge Specifications dated 2016, Special Provision Copied Notes and Special Provisions as listed herein. Any reference within these documents to a responsibility assigned to VDOT or the “Department” shall be assumed -- for this contract -- to be accepted by the City of Staunton.

INDEX SPECIAL PROVISIONS

411A	Protective Coating of Metal in Structures
428	Concrete Surface Penetrant Sealer
	Methacrylate Concrete Penetrant Sealer
	Stone Masonry Work

SPECIAL PROVISION SECTION 411A

PROTECTIVE COATING OF METAL IN STRUCTURES

Pre-Paint Conference:

1. At least 7 days prior to start of the painting preparation, the Contractor shall conduct a meeting to review the proposed paint system, and to discuss the required methods and procedures to achieve the required paint quality. The Contractor shall send a pre-paint conference agenda to all attendees prior to the scheduled date of the conference.
2. The Contractor shall require responsible representatives of every party who is concerned with the paint process to attend the conference, including but not limited to the following:
 - Contractor's Superintendent
 - Painting Contractor
 - Painting Contractor's Superintendent
 - Testing Laboratory Responsible for Field Quality Control
 - Representative for Paint Supplier
3. Minutes of the meeting shall be recorded, typed and printed by the Contractor and distributed by him to all parties concerned within 5 days of the meeting. One copy of the minutes shall also be transmitted to the following for information purposes:
 - Owner's representative.
4. Engineer will be present at the conference. The Contractor shall notify the Engineer at least 14 days prior to the scheduled date of the conference.

SPECIAL PROVISIONS FOR SECTION 428

CONCRETE SURFACE PENETRANT SEALER

Waterproofing is amended as follows:

416.01 DESCRIPTION

- A. This work shall consist of furnishing necessary labor, tools, materials, equipment and incidentals to treat concrete surfaces with a waterproofing solution, including surface preparation, and application as shown on the Contract Drawings, and in accordance with this section. The final color of the coating shall be clear. Material shall hereafter be called Penetrant Sealer.
- B. The areas to be treated are as follows:
 - 1. Deck surface.
 - 2. Top surface of sidewalks and face of curbs on bridge.
 - 3. Approach slab surface.

416.02 MATERIALS

- A. General
 - 1. The Penetrant Sealer shall be an approved silane sealant having met the following performance criteria based on a single application of the solution in accordance with the manufacturer's recommended rate of coverage. The Penetrant Sealer shall contain approximately 30% solids by weight.
 - 2. The Penetrant Sealer shall not stain, discolor, or darken concrete. Application of the solution shall not alter the surface texture or form a coating on concrete surfaces. Treated concrete shall be surface dry within 30 minutes after application. There shall be no significant change in wet traction characteristics as tested in accordance with AASHTO E-303.

416.03 PROCEDURES

- A. Delivery, Storage, and Handling
 - 1. The material shall be delivered to the job in the manufacturer's sealed containers clearly marked with the manufacturer's identifications, including type of material and lot number and with the manufacturer's numbered seals intact.

2. Store materials in a covered area protected from rain or standing water, where temperatures are not less than 0 degrees F or more than 120 degrees F, with adequate ventilation and away from any source of ignition such as sparks, open flames, etc.

B. Equipment

1. General

- a. All necessary equipment shall be furnished by the CONTRACTOR. Minimum requirements for construction equipment required for surface preparation and application of the penetrating water repellent treatment solution are specified herein.

2. Surface Preparation Equipment

- a. Deck and sidewalk surfaces shall be cleaned by using shot blast equipment such as Blas Trac, Wheelabrator Frye, or Turbo Blast, Turbo Blast Company. The size and type of equipment shall be selected based on the job conditions. The size of the shot and travel speed of the equipment shall be selected to provide a uniformly clean surface with a uniform profile acceptable to the ENGINEER.
- b. All surfaces including the deck surface next to curbs, curbs, sidewalks, and parapets which are not cleaned by the shot blast equipment, shall be cleaned by blasting.

3. Application Equipment

- a. The penetrant sealer shall be applied using low pressure 15-40 psi application pressure. The nozzle shall deliver a minimum of 0.4 gpm with a fan angle of 50 degrees - 65 degrees.

C. Construction Methods

1. General

- a. Concrete surfaces shall be cleaned using equipment specified in B.2 above.

2. Surface Preparation

- a. All concrete surfaces prepared for treatment shall be thoroughly cleaned prior to application of the penetrant sealer. The method of cleaning shall remove all traces of

curing compound, laitance, grease, dirt, dust, salt, oil, asphalt, paint stripes, coating, or other foreign materials to the satisfaction of the ENGINEER.

- b. The cleaning process shall not cause any undue damage to the concrete surface. The method of cleaning shall be performed in such a manner as to provide a reasonably uniform appearing surface color.
- c. Not Used.
- d. On old concrete the degree of blasting shall be medium - sufficient to generally expose coarse aggregate with slight reveal - maximum reveal 1/4 inch.
- e. Concrete surfaces prepared for treatment shall be approved by the ENGINEER.

3. Weather Limitations

- a. The Penetrant Sealer shall not be applied when the sealer, air or concrete surface temperature is less than 50 degrees F or above 90 degrees F or otherwise below or above the manufacturer's recommended application temperature range. The solution shall not be sprayed when blowing winds or other conditions prevent proper application. Concrete surface shall be dry and shall have been dry for a minimum of 72 hours before application. Material shall not be applied if rain is expected within two (2) hours following application.

4. Application

- a. Penetrant Sealer shall be used as supplied by the manufacturer and not diluted or altered in any way. The solution shall be sprayed onto concrete surfaces using equipment specified in B.3 above, at an approximate rate of 125 square feet per gallon. It shall then be broomed into the concrete surfaces (to break surface tension and increase penetration).
- b. The sealer shall contain a fugitive dye to enable the solution and the uniformity of coverage to be visible on the treated surface for at least 4 hours after application. The fugitive dye shall not be conspicuous more than 7 days after application when exposed to direct sunlight.

- c. The CONTRACTOR shall provide, install, and maintain suitable traps, tarps, and/or drop cloths to protect against damage caused by spillage or heavy overspray. Protect all plants and vegetation from overspray. Protect all asphalt-containing material from overspray.
 - d. A flood application of the material is required. On horizontal surfaces, the liquid shall pond on the surface at least 5 seconds before being absorbed. On vertical surfaces, the liquid material shall run down 4-6 inches below the spray pattern. The CONTRACTOR shall be required to apply the material as described and shall be responsible for confirming the estimated coverage rate herein.
 - e. The CONTRACTOR shall provide adequate ventilation during the application and shall follow all safety precautions stated by the manufacturer.
5. Traffic
- a. Traffic shall be kept off treated surfaces until the solution has completely penetrated and is surface dry.

END OF SECTION



VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
METHACRYLATE CONCRETE PENETRANT SEALER

March 21, 2000

I. DESCRIPTION

This work shall consist of furnishing and applying a high molecular weight methacrylate water repellant concrete surface penetrant in accordance with this provision and in reasonably close conformity with the details and locations indicated on the plans.

II. MATERIALS

The penetrant sealer used in the performance of this work shall be a product as listed on the Department's current list of approved methacrylate penetrating sealers. The penetrating sealer shall have a minimum tensile elongation of 30 percent.

III. CONSTRUCTION METHODS

The penetrant sealer shall be applied in accordance with the manufacturer's recommendations, except as otherwise specified herein. A manufacturer's representative shall be on-site to provide guidance and technical expertise in the use and application of this product. The penetrant sealer shall not be applied until all adjacent or superimposed concrete placements have been completed. All surfaces to receive the penetrant sealer shall be sandblasted to provide a clean uniform texture free of foreign substances such as oils, release agents, curing agents or efflorescence. All sandblasting residue shall be completely removed prior to application of the penetrant sealer.

Each container of penetrant sealer material shall be thoroughly mixed in strict compliance with the manufacturer's recommendations. The penetrant sealer material shall be applied by experienced persons using spray, brush or roller and shall not be thinned or reduced, except as may be specifically required by the manufacturer.

The rates of application and number of coats shall be in accordance with the manufacturer's recommendations.



IV. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Methacrylate concrete penetrant sealer will be measured in square yards and will be paid for at the contract unit price per square yard, which price shall be full compensation for surface preparation and for applying sealer.

Payment will be made under.

Pay Item	Pay Unit
(HMWM) Concrete Surface Treatment	Square Yard

SPECIAL PROVISIONS FOR STONE MASONRY WORK

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Repoint stone masonry, and replace missing stones as directed by the Engineer. All unsound mortar and/or missing mortar shall be repointed. All missing, broken and/or damaged stones shall be replaced.

1.2 QUALITY ASSURANCE

- A. Restoration Specialist: Work must be performed by a firm having not less than 2 years successful experience in comparable masonry restoration projects and employing personnel skilled in the restoration processes and operations indicated.
- B. Field-Constructed Mock-Ups: Prior to start of general repointing of stone masonry, prepare the following sample panel on the structure where directed by the Engineer. Obtain Engineer's acceptance of visual qualities before proceeding with the work. Retain acceptable panels in undisturbed conditions, suitably marked, during construction as a standard for judging completed work.
 - 1. Repointing: Prepare 2 separate sample areas of approximately 3' high by 3' wide for each type of repointing required, one for demonstrating methods and quality of workmanship expected in removal of mortar from joints and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.
- C. Stone Replacement: Prepare sample panels for each type of stone replacement. Erect mock-up panels into an existing wall, unless otherwise indicated, to demonstrate quality of materials and workmanship.
- D. Source of Materials: Obtain materials for replacing missing stones from a single source for each type material required (stone, cement, sand, etc.) to ensure match of quality, color, pattern, and texture to match existing conditions.

1.3 SUBMITTALS

- A. Submittals shall be made in accordance with Section 105.10 of the VDOT Road and Bridge Specifications, 2016:

1. Product Data: Submit manufacturer's technical data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.

1.4 PROJECT CONDITIONS

- A. Do not repoint mortar joints or replace stones unless air temperatures are between 40°F (4°C) and 80°F (27°C) and will remain so for at least 48 hours after completion of work.
- B. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Remove immediately grout and mortar in contact with exposed masonry and other surfaces.
- C. Protect sills, ledges and projections from mortar droppings.

1.5 SEQUENCING/SCHEDULING

Perform repointing of stone masonry work in the following sequence.

- A. Rake-out existing mortar from joints indicated to be repointed.
- B. Repair existing masonry including replacing existing masonry with new masonry materials.
- C. Clean existing masonry surfaces.

PART 2 PRODUCTS

2.1 MASONRY MATERIALS

- A. Stone Accessories: Provide stones and accessories and other special ground, cut, or sawed shapes where required to complete repainting.

Provide units with color, surface texture and size to match existing stone work and with physical properties not less than those of existing units.

2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Aggregate for Mortar: ASTM C 144, unless otherwise indicated.

- D. Colored Mortar Aggregate: Natural or manufactured sand selected to produce mortar color indicated.
 - 1. For pointing mortar provide sand with rounded edges.
 - 2. Match size, texture and gradation of existing mortar as closely as possible.
- E. Colored Mortar Pigment: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.
- F. Water: Clean, free of oils, acids, alkalis and organic matter

2.3 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical batch mixer.
- B. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp unworkable mix which will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 1 to 2 hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- C. Colored Mortar: Produce mortar of color required by use of selected, ingredients. Do not adjust proportions without Engineer's approval.
- D. Do not use admixtures of any kind in mortar, unless otherwise indicated.
- E. Mortar Proportions:
 - 1. Pointing Mortar for Stone: One part white portland cement, 1 part lime and 6 parts colored mortar aggregate. Type S, conforming to ASTM C 270. Add colored mortar pigment to produce mortar colors required to match existing.
 - 2. Rebuilding Mortar: Same as pointing mortar.

PART 3 EXECUTION

3.1 PREPARATION: Comply with recommendations of manufacturers of chemical cleaners for protecting other surfaces against damage from exposure to their products.

A. Protect persons, adjacent creek, surrounding surfaces and building site from injury resulting from repointing stone masonry work.

1. Prevent chemical cleaning solutions from coming into contact with pedestrians, motor vehicles, landscaping, buildings and other surfaces which could be injured by such contact.
2. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
3. Dispose of run-off from cleaning operations by legal means and in manner which prevents soil erosion, undermining of foundations, damage to landscaping, and water penetration into building interiors.

B. Protect unpainted metal from contact with alkali chemical cleaners by covering them either with liquid strippable masking agent or polyethylene film and waterproof tape.

3.2 STONE REMOVAL AND REBUILDING

A. Stone Removal:

1. Carefully remove by hand at locations indicated any stones which are damaged. Cut out till units form joint to joint and in manner to permit replacement with common size stones.
2. Support and protect masonry indicated to remain which surrounds removal area. Provide shoring as required to support adjacent masonry and temporary void.
3. Salvage as many whole, undamaged stones as possible.
4. Remove mortar, loose particles and soil from salvaged stones by cleaning with brushes and water. Store stones for reuse.
5. Clean remaining stone at edges of removal areas by removing mortar, dust, and loose debris in preparation for rebuilding.

C. Stone Rebuilding:

1. Install new or salvaged stone to replace removed or missing stone. Fit replacement units into bonding and coursing pattern of existing stone. If cutting is required use motor driven saw designed to cut masonry with clean, sharp unchipped edges.
2. Lay replacement stones with completely filled bed, head and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Use wetting methods which ensure that units are nearly saturated but surface dry when laid. Maintain joint width for replacement units to match existing.
3. Tool exposed mortar joints in repaired areas to match joints of surrounding existing stonework.

3.3 REPOINTING EXISTING MASONRY

A. Joint Raking

1. Rake out mortar from joints to depths equal to 2-1/2 times their widths but not less than 1/2" nor less than that required to expose sound, unweathered mortar.
2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum or flush joints to remove dirt and loose debris.
3. Do not spall edges of masonry units or widen joints. Replace any masonry units which become damaged.
4. Cut out old mortar by hand with chisel and mallet, unless otherwise indicated.
5. Power operated rotary hand saws and grinders will be permitted but only with specific written approval of Engineer based on submission by Contractor of a satisfactory quality control program and demonstrated ability of operators to use tools without damage to masonry. Quality control program shall include provisions for supervising performance and preventing damage due to worker fatigue.

B. Joint Pointing

1. Rinse masonry joint surfaces with water to remove any dust and mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.
2. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8" until a uniform depth is formed. Compact each layer thoroughly and allow to become thumbprint-hard before applying next layer.
3. After joints have been filled to a uniform depth, place remaining pointing mortar in 3 layers with each of first and second layers filling approximately 2/5 of joint depth and third layer the remaining 1/5. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing stones have rounded edges recess final layer slightly from face. Take care not to spread mortar edges onto exposed masonry surfaces, or to feather edge mortar.
4. When mortar is thumbprint hard, tool joints to match original appearance of joints, unless otherwise indicated. Remove excess mortar from edge of joint by brushing.
5. Cure mortar by maintaining in a damp condition for not less than 72 hours.

3.4 FINAL CLEANING

- A. After mortar has fully hardened thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or bristle brushes and clean water, spray applied at low pressure.
- B. Use of metal scrapers or brushes will not be permitted.
- C. Use of acid or alkali cleaning agents will not be permitted.

MISCELLANEOUS



Miss Utility of Virginia
LOCATION
REQUEST FORM
1-800-552-7001

Please fill in form and be prepared to give information when operator answers.

TICKET _____ **DATE** _____ **TIME** _____
COMPANY _____ **PHONE** _____ **EXT.** _____
ADDRESS _____
CITY & STATE _____ **ZIP** _____
CALLER _____ **CALL BACK** _____
LOCATION (From where to where - be specific) _____

WORK TYPE _____
WORK DATE _____ **TIME** _____
INSTRUCTIONS VA _____ **DONE** _____
STATE _____ **CITY OR** _____
GRID _____ **COUNTY** _____
REMARKS _____

- A. Call Miss Utility Monday through Friday from 7:00 A.M. to 5:00 P.M. Emergencies will be handled on a 24-hour basis as stipulated in the State Law.
- B. Virginia Statute 56-265.17 states notification (ticket) shall be valid for ten working days and may be extended for an additional ten-working-day period upon request to the operator at least forty-eight hours prior to the expiration of the original ten-working-day period.
- C. Virginia Statute 56-265.19 requires a minimum of two working days' notice prior to any planned excavation. Virginia Statute 56-265.20 states that should the utilities fail to locate, a second call must be made providing an additional three (3) hour notice before excavation commences.
- D. For your protection make every effort not to call the center with "in progress" jobs as you will be in violation of the State Law and subject to billing should damages occur. (Make sure "in progress" requests are absolutely necessary)

Remember – It Is The Law!

Our Service Is Free – Damages Are Not

DRAWINGS



STRUCTURE NO.	STRUCTURE NAME
1027	U.S. ROUTE 250 (WBL RICHMOND ROAD) O/ CSX RAILWAY
1802	U.S. ROUTE 11 (COMMERCE ROAD) O/ STATE ROUTE 254 (NEW HOPE ROAD) AND LEWIS CREEK
1809	U.S. ROUTES 11 & 250/STATE ROUTE 254 (GREENVILLE AVENUE) O/ LEWIS CREEK
8001	STATE ROUTE 261 (STATLER BOULEVARD) O/ CSX RAILWAY

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS
VICINITY MAP
CITY OF STAUNTON, VIRGINIA



Mattern & Craig
ENGINEERS • SURVEYORS

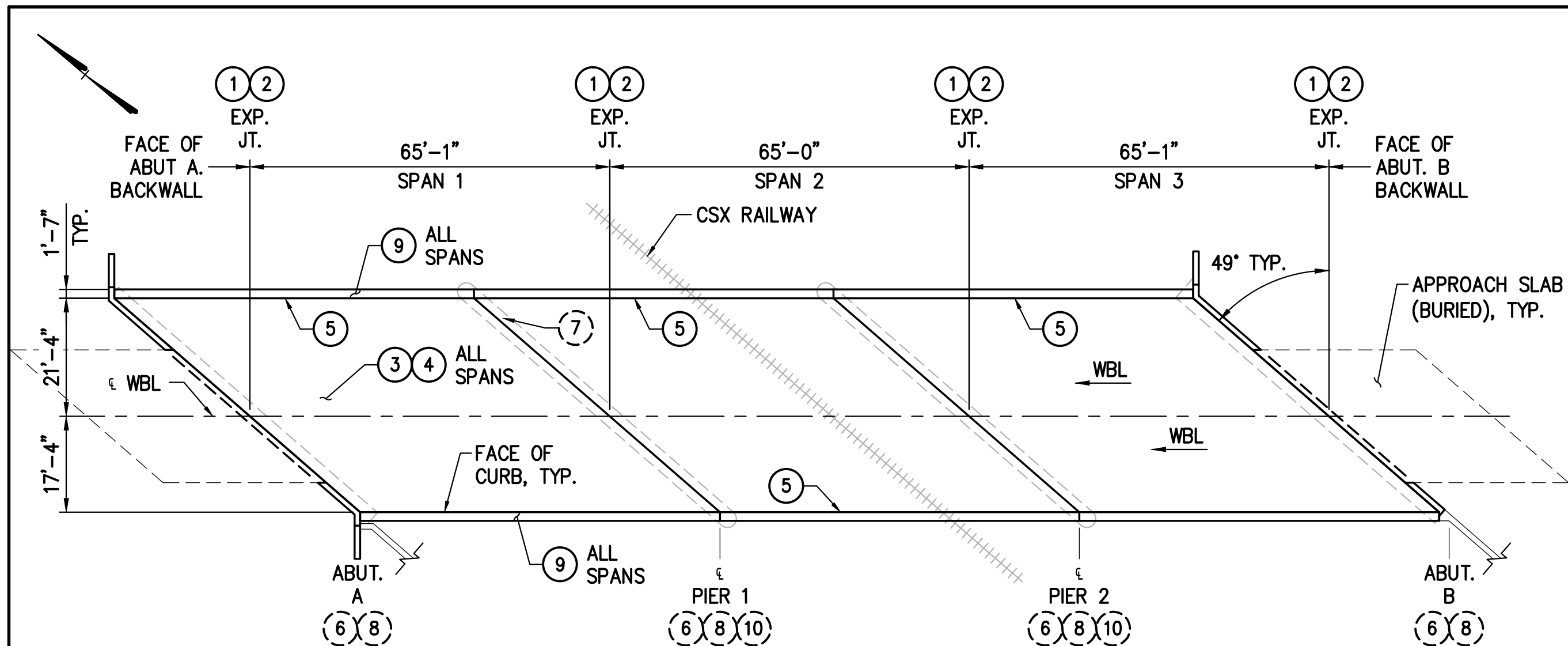
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FAX (540) 345-7691

Vertical Scale:
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Horizontal Scale:
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Commission Number:
3659

Sheet No.:
V-MAP



REPAIR NOTES:

- 1 - PREFORMED ELASTOMERIC JOINT SEALER
- 2 - EPOXY MORTAR JOINT REPAIR
- 3 - REPAIR EPOXY OVERLAY
- 4 - TYPE B PATCHING (HES)
- 5 - CONCRETE SUPERSTRUCTURE SURFACE REPAIR
- 6 - CONCRETE SUBSTRUCTURE SURFACE REPAIR

- 7 - REPLACE ANCHOR BOLT
- 8 - ZONE COATING OF BEAM ENDS, DIAPHRAGMS, AND BEARINGS
- 9 - WATERPROOFING - PARAPETS
(SEE SHEET WPL-1 FOR WATERPROOFING LIMITS)
- 10 - WATERPROOFING - (EPOXY RESIN EP-3B/EP-3T) PIER BEARING SEATS

US. ROUTE 250 (WBL RICHMOND ROAD) OVER CSX RAILWAY
REPAIRS LAYOUT

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

BRIDGE NO. 1027

CITY OF STAUNTON, VIRGINIA

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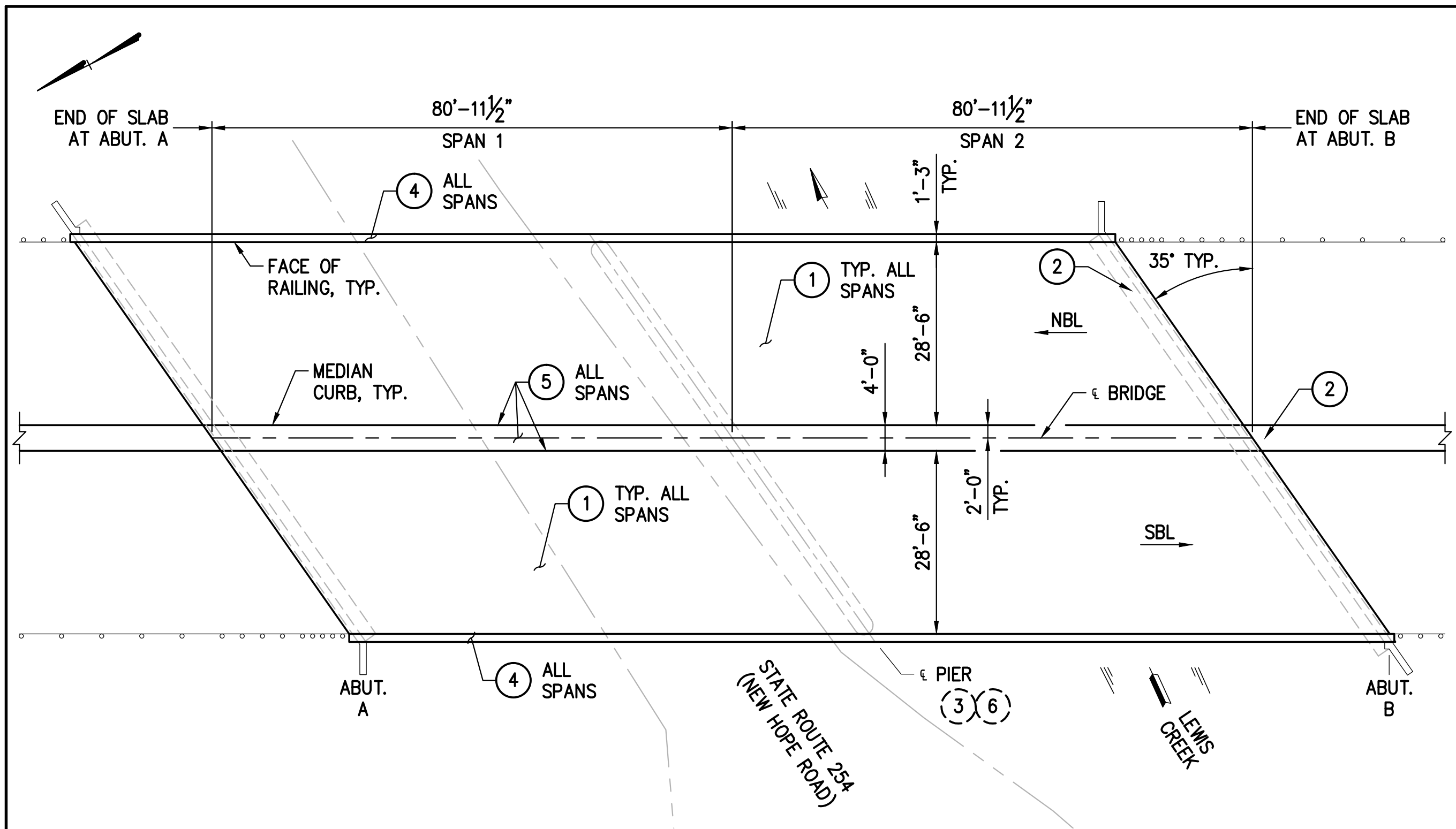
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Commission Number:
3659

Sheet No.:
1027-1



REPAIR NOTES:

- 1 - (HMWM) CONCRETE SURFACE TREATMENT
- 2 - TYPE B PATCHING (HES)
- 3 - CONCRETE SUBSTRUCTURE SURFACE REPAIR
- 4 - WATERPROOFING - PARAPETS
(SEE SHEET WPL-1 FOR WATERPROOFING LIMITS)

- 5 - WATERPROOFING - PENETRANT SEALER FOR MEDIAN AND CURBS
- 6 - WATERPROOFING - PIER

U.S. ROUTE 11 (COMMERCE RD) O/ STATE ROUTE 254 (NEW HOPE RD) & LEWIS CREEK
REPAIRS LAYOUT

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

BRIDGE NO. 1802

CITY OF STAUNTON, VIRGINIA



ENGINEERS • SURVEYORS

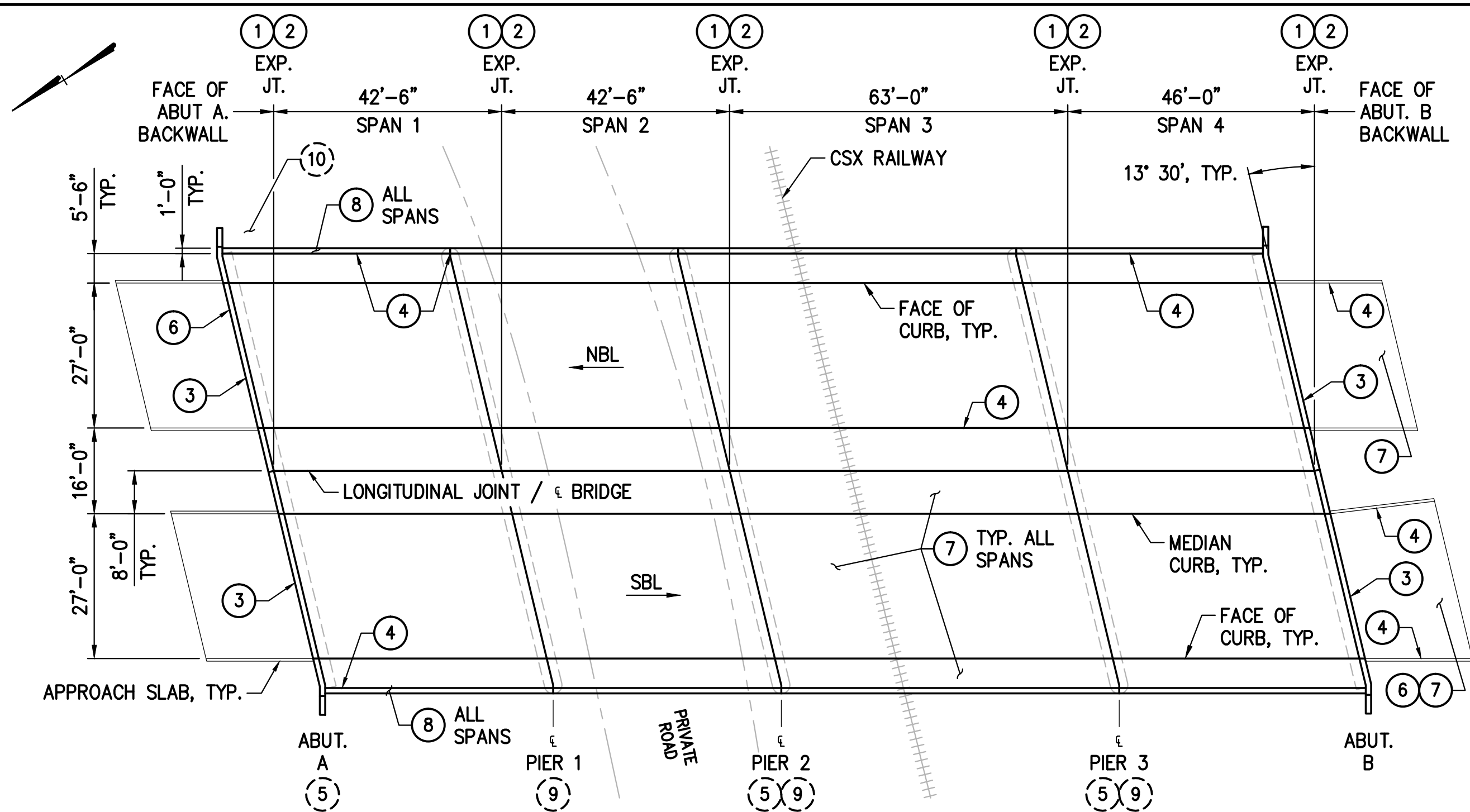
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Commission Number:
3659

Sheet No.:
1802-1



REPAIR NOTES:

- 1 - PREFORMED ELASTOMERIC JOINT SEALER
- 2 - EPOXY MORTAR JOINT REPAIR
- 3 - REPLACE JOINT SEALANT
- 4 - CONCRETE SUPERSTRUCTURE SURFACE REPAIR
- 5 - CONCRETE SUBSTRUCTURE SURFACE REPAIR
- 6 - TYPE B PATCHING (HES)

- 7 - WATERPROOFING - PENETRANT SEALER FOR TOP OF DECK, MEDIAN, SIDEWALKS, CURBS, AND APPROACH SLABS
- 8 - WATERPROOFING - PARAPETS
(SEE SHEET WPL-1 FOR WATERPROOFING LIMITS)
- 9 - WATERPROOFING - (EPOXY RESIN EP-3B/EP-3T) PIER BEARING SEATS
- 10 - REPLACE CONCRETE SLOPE PROTECTION
(SEE SHEET 8001-2)

STATE ROUTE 261 (STATLER BOULEVARD) OVER CSX RAILWAY REPAIRS LAYOUT

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

BRIDGE NO. 8001

CITY OF STAUNTON, VIRGINIA

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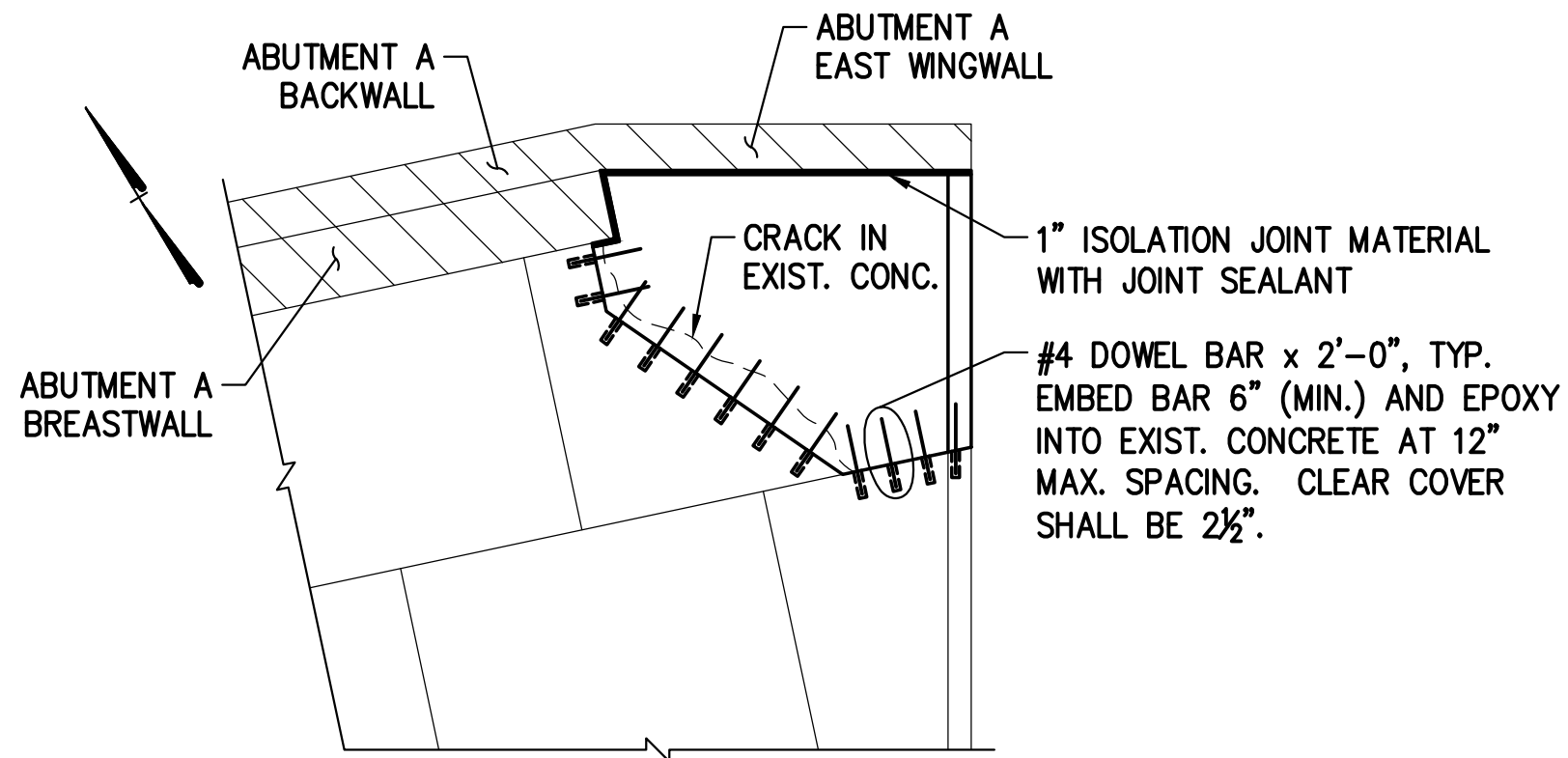
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Horizontal Scale:
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Commission Number:
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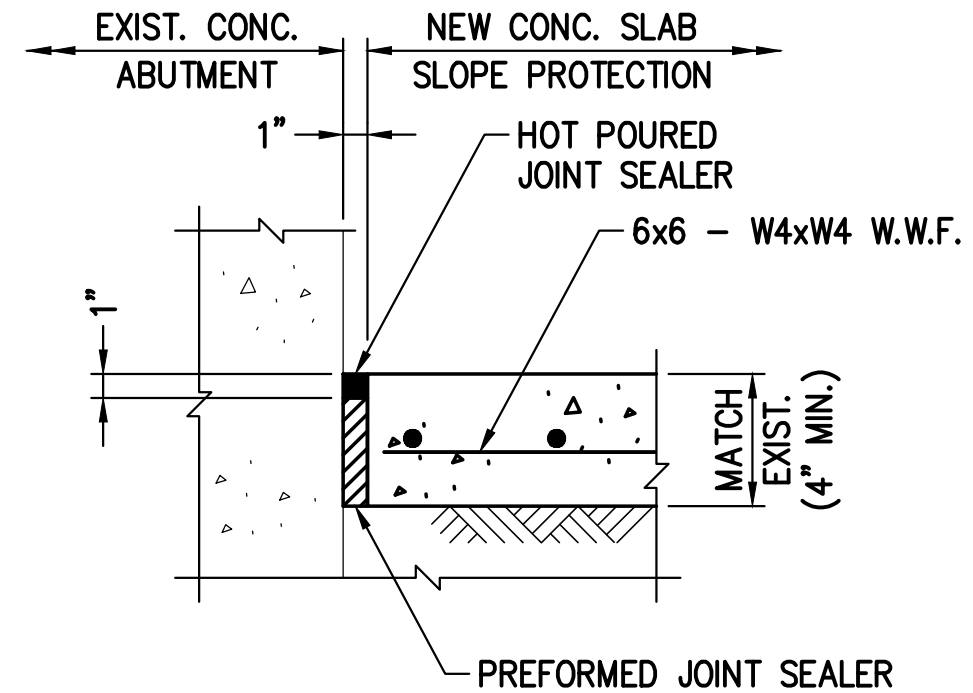
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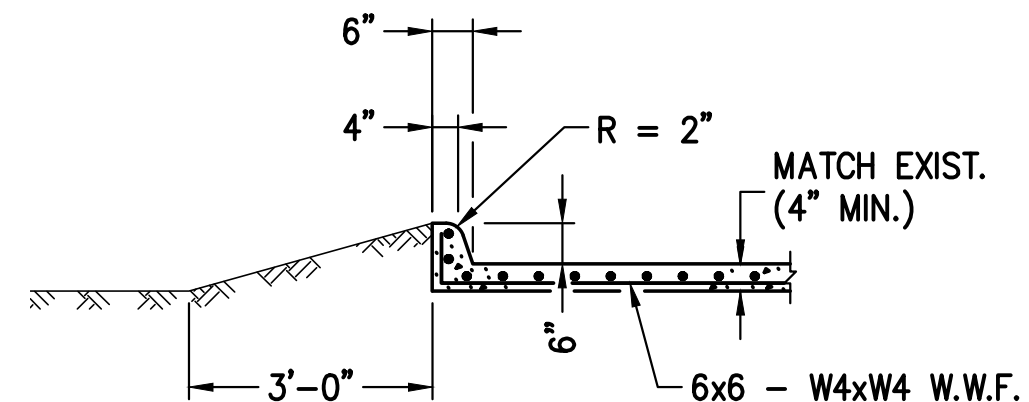
PLAN

NOTES:

1. SAW CUT 1" INTO EXIST. CONCRETE, 3" (MIN.) FROM BACK OF EXIST. CRACK.
2. REMOVE EXIST. CONCRETE TO LIMITS SHOWN.
3. EMBED DOWEL BARS INTO EXIST. CONCRETE.
4. PLACE WELDED WIRE FABRIC AND CONCRETE.
5. INSTALL ISOLATION JOINT MATERIAL AND JOINT SEALANT.



TYP. SECTION AT ISOLATION JOINT



TYP. SECTION AT CURB

STATE ROUTE 261 (STATLER BOULEVARD) OVER CSX RAILWAY
CONCRETE SLOPE PROTECTION REPLACEMENT

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

BRIDGE NO. 8001

CITY OF STAUNTON, VIRGINIA

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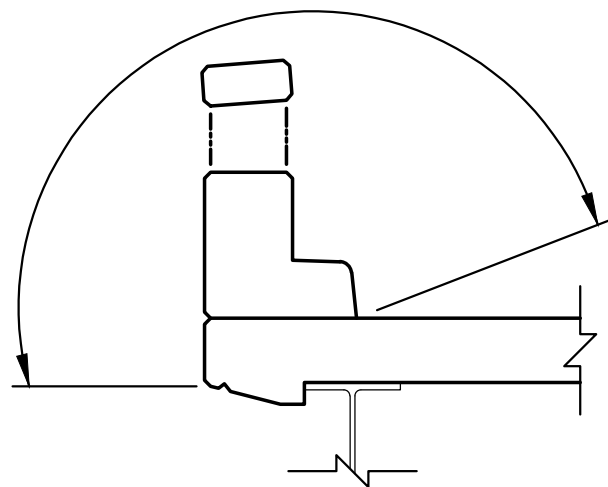
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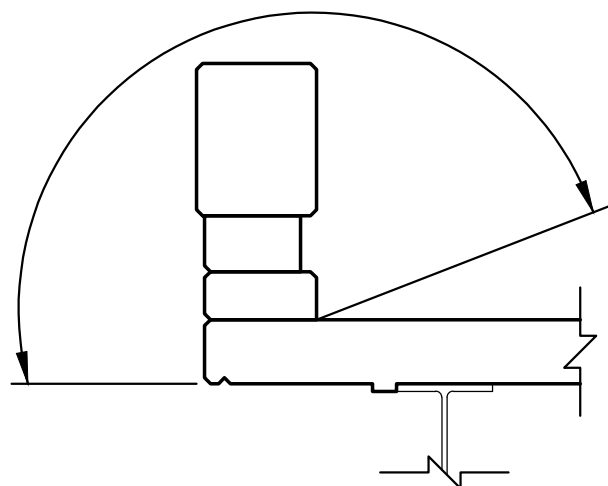
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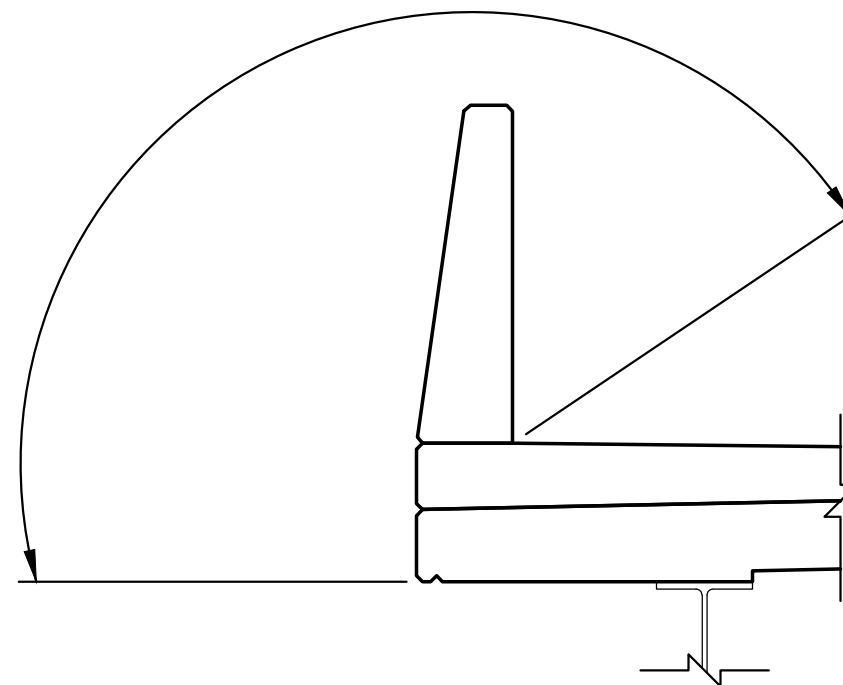
8001-2



STRUCTURE NO. 1027



STRUCTURE NO. 1802



STRUCTURE NO. 8001

LIMITS OF WATERPROOFING ON PARAPETS, RAILINGS, AND CURBS SEE SPECIFICATIONS FOR WATERPROOFING MATERIAL

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

WATERPROOFING

CITY OF STAUNTON, VIRGINIA



ENGINEERS • SURVEYORS

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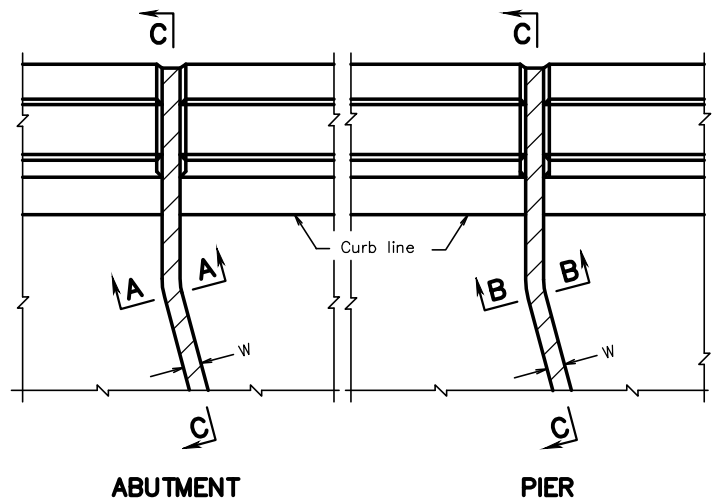
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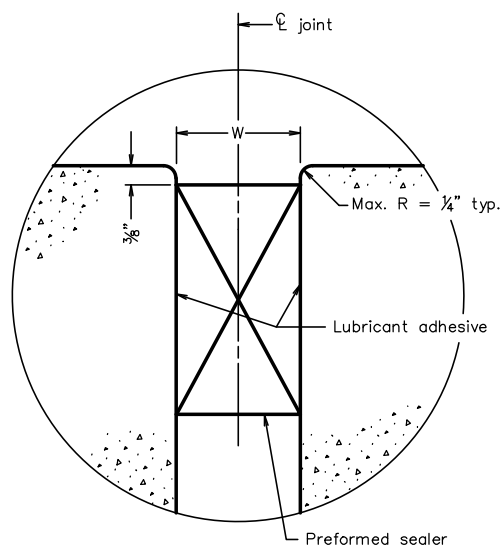
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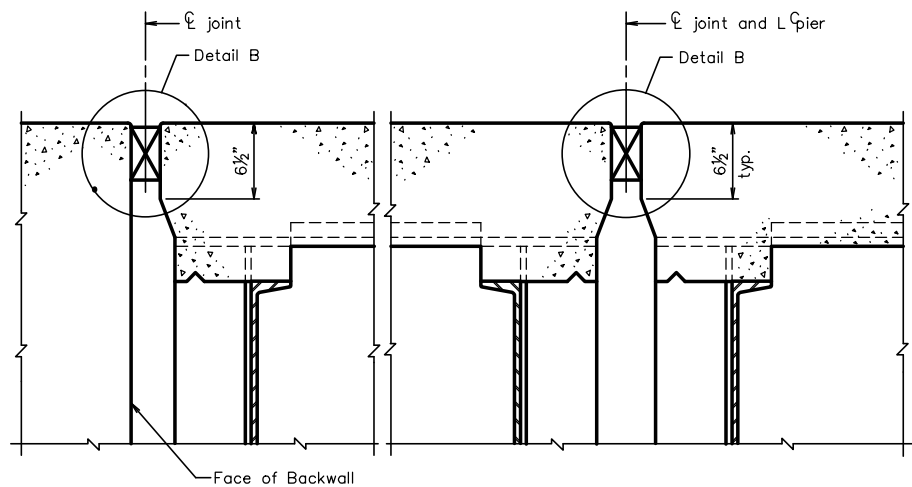
WPL-1



PART PLAN - SKEWED CROSSING

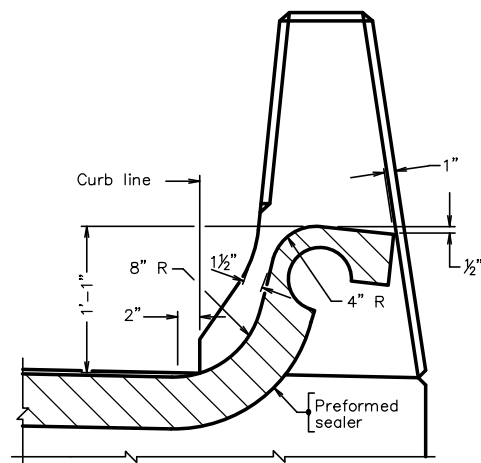


DETAIL B

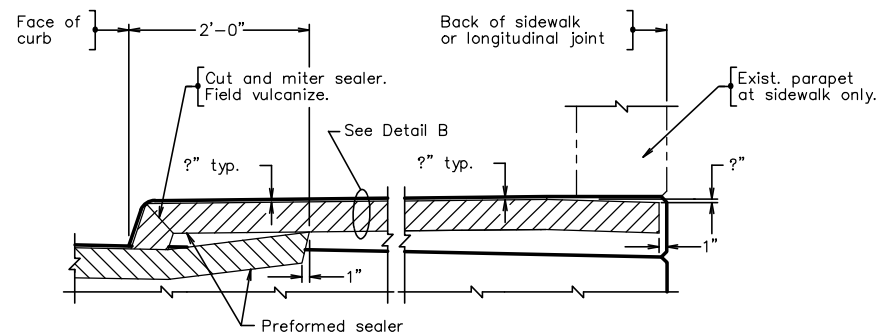


SECTION A-A

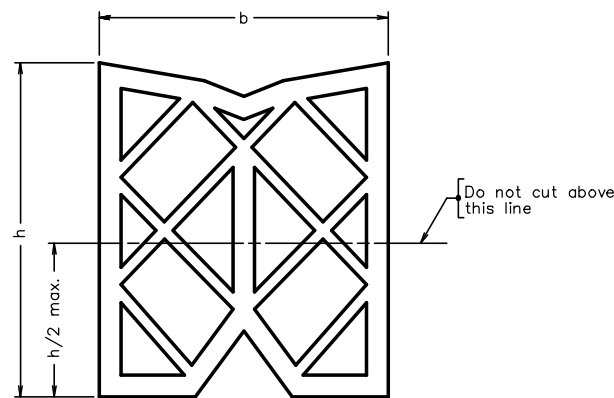
SECTION B-B



SECTION C-C



SECTION AT SIDEWALK OR MEDIAN
(Structure 8001 only)



PREFORMED ELASTOMERIC JOINT SEALER
In uncompressed state

Notes:

Section of sealer shown is heavy-duty structural type sealer and may vary slightly depending on manufacturer.

As nearly as possible, sides of joints shall be straight, vertical and parallel. The area of the installation shall be free from cracks and spalls.

Sealer shall be installed in one continuous piece except for sidewalk areas.

Joint width W is the final joint width of the cured concrete when placed at 60 °F. The width W shall be increased or decreased for every 10 °F temperature drop or rise respectively by t. When formed, joint width W shall be reduced by the amount to compensate for the opening of the joint caused by the deflection of the beam when the deck concrete is placed. If the joint is formed so that the form material will not move and the joint will not open as the deck concrete is placed, then adjustment shall not be made.

$$\text{Fixed Bearing: } \Delta = \frac{4d}{L} \Delta_s$$

$$\text{Expansion Bearing: } \Delta = \frac{d}{L} \Delta_s$$

d = Total rotation depth from top of slab to point of rotation on bearing.

Δs = Deflection of beam at midspan from dead load of concrete deck slab and bolsters. (See Dead Load Deflection Diagram.)

L = Length of span.

Δ = Compensation for joint opening due to deflection of beam during placement of concrete deck slab and bolsters for the last span placed adjacent to the joint.

All the dimensions are in the same units.

Structure	Abutment	Pier	Sealer Size b	Sealer Depth h	Joint Width W	t
1027	A (West)		2 1/2"	2 3/4" ±	1 9/16"	0"
		1	2 1/2"	2 3/4" ±	1 9/16"	1/16"
		2	2 1/2"	2 3/4" ±	1 9/16"	1/16"
	B (East)		3"	3" ±	1 15/16"	1/16"
8001	A (North)		2"	2 1/8" ±	1 3/8"	3/64"
		1	2"	2 1/8" ±	1 3/8"	3/64"
		2	1 3/4"	2" ±	1 3/16"	1/16"
		3	1 3/4"	2" ±	1 1/8"	3/64"
	B (South)		2"	2 1/8" ±	1 1/4"	0"

Contractor shall verify all joint width dimensions prior to obtaining materials.

PREFORMED ELASTOMERIC JOINT DETAILS

Issue Date:
06-MARCH-2017

Drawn By: DKA
Date: 03/06/17

BRIDGE REHABILITATIONS

PRE. ELAS. JT. DETAILS

CITY OF STAUNTON, VIRGINIA

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3659

Sheet No.:
PEJ-1

**VDOT VIRGINIA WORK AREA
PROTECTION MANUAL "FIGURES" –
TYPICAL TRAFFIC CONTROL FIGURES**

Typical Traffic Control
Stationary Operation on a Shoulder
(Figure TTC-4.1)

NOTES

Standard

1. For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR), **RIGHT SHOULDER CLOSED (W21-5aR)¹**), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed and a **RIGHT SHOULDER CLOSED (W21-5aR)¹** sign shall be added to that side.

Guidance

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

Option:

3. The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, **or¹** oscillating lights is used.

Standard:

5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, **or¹** oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, **or¹** oscillating, lights.
6. Taper length (L) and channelizing device spacing shall be at the following:

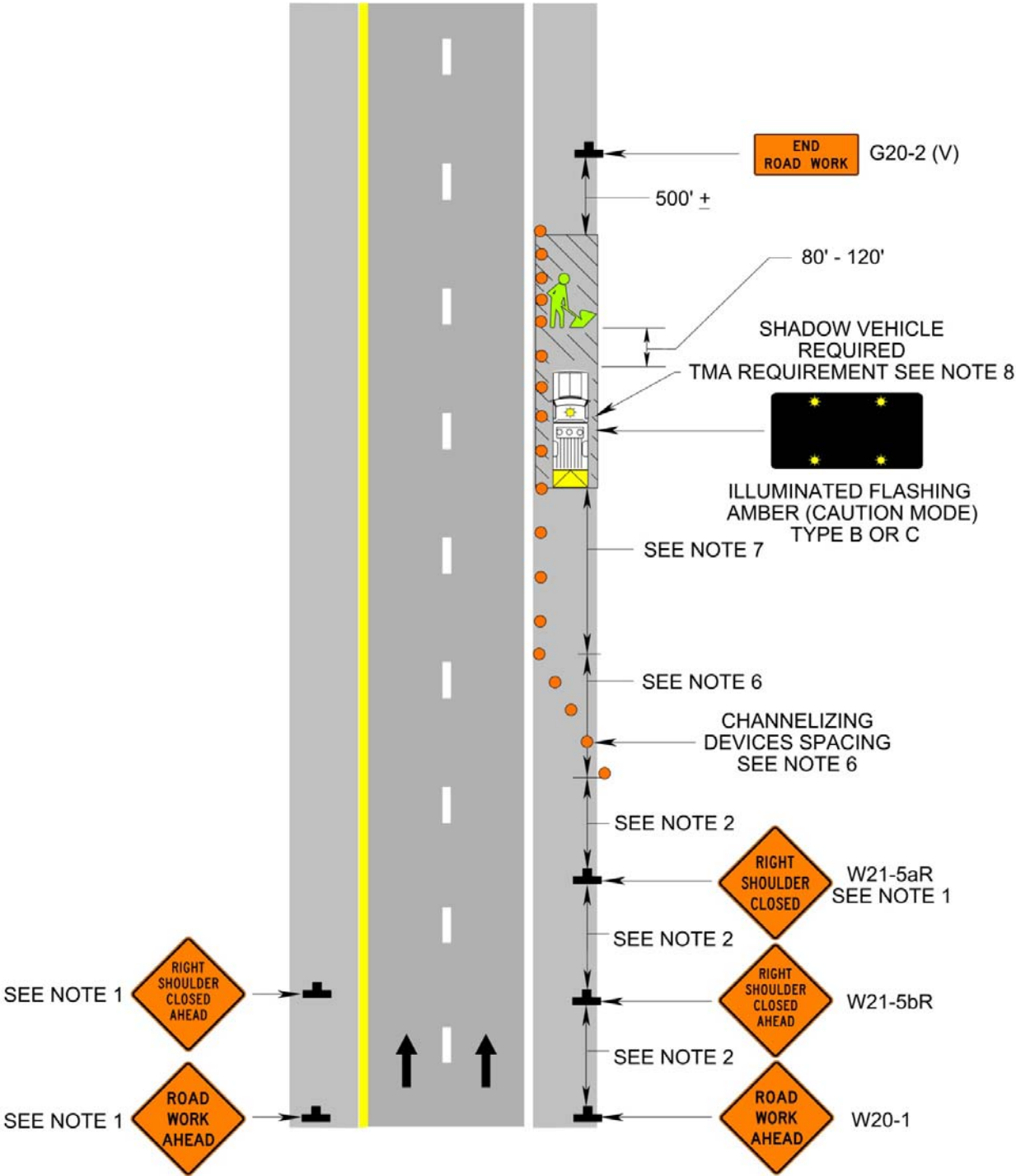
Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = $\frac{1}{3}$ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per $\frac{1}{4}$ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

7. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
8. A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.
9. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

Stationary Operation on a Shoulder
(Figure TTC-4.1)



Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.1)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
3. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

5. Taper Length (L) and Channelizing Device Spacing shall be:

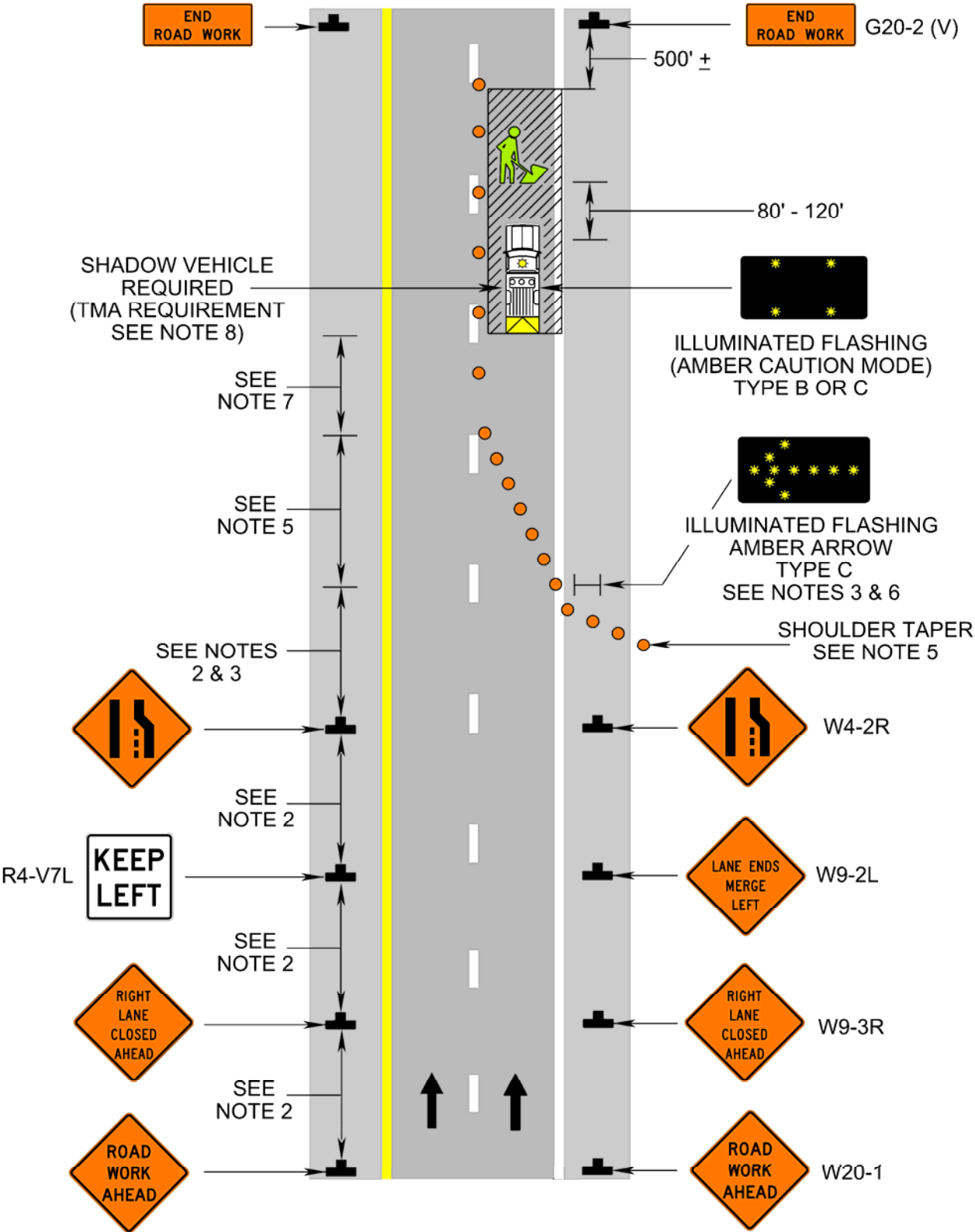
Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = $\frac{1}{3}$ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per $\frac{1}{4}$ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

6. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
7. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or¹ oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or¹ oscillating lights but can be used to supplement the amber rotating, flashing, or¹ oscillating lights.
10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.1)



Typical Traffic Control
Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.1)

NOTES

Standard:

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
3. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
4. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

5. Taper length (L) and channelizing device spacing shall be:

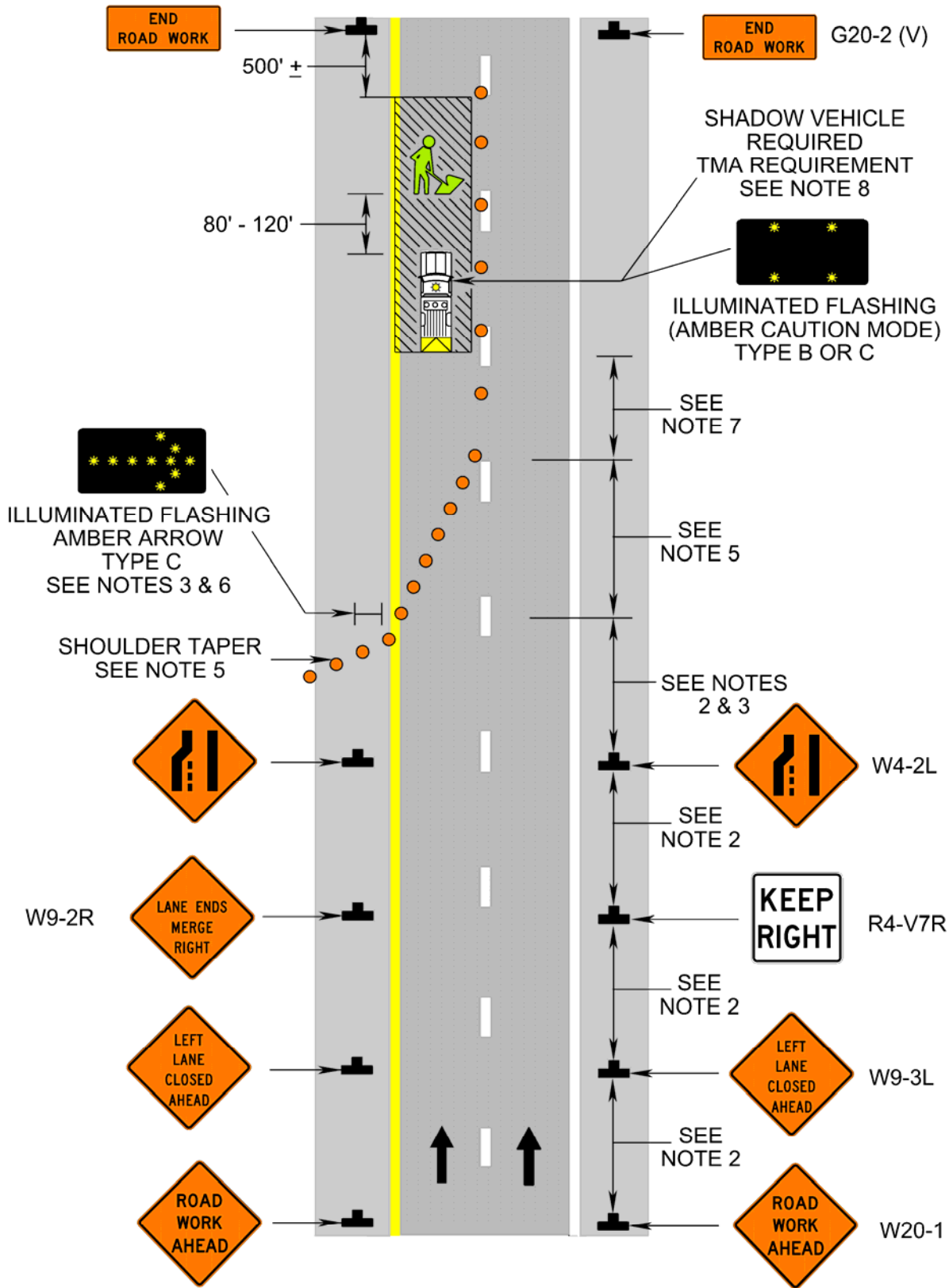
Taper Length (L)				
Speed Limit (mph)	Lane Width (Feet)			
	9	10	11	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = $\frac{1}{3}$ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'
* Spacing may be increased to this distance, but shall not exceed one access per $\frac{1}{4}$ mile.		

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

6. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
7. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or¹ oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
9. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or¹ oscillating lights.
10. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.1)



Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)

NOTES

Guidance:

1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.

Option:

3. Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

4. Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).
5. All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).
6. Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.¹
7. A shadow vehicle with at least one high intensity amber rotating, flashing, or¹ oscillating light shall be parked 80'-120' in advance of the first work crew.

Option:

8. A supplemental flagger may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the portable temporary rumble strips (PTRS)¹, should be readjusted at greater distances.
10. When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

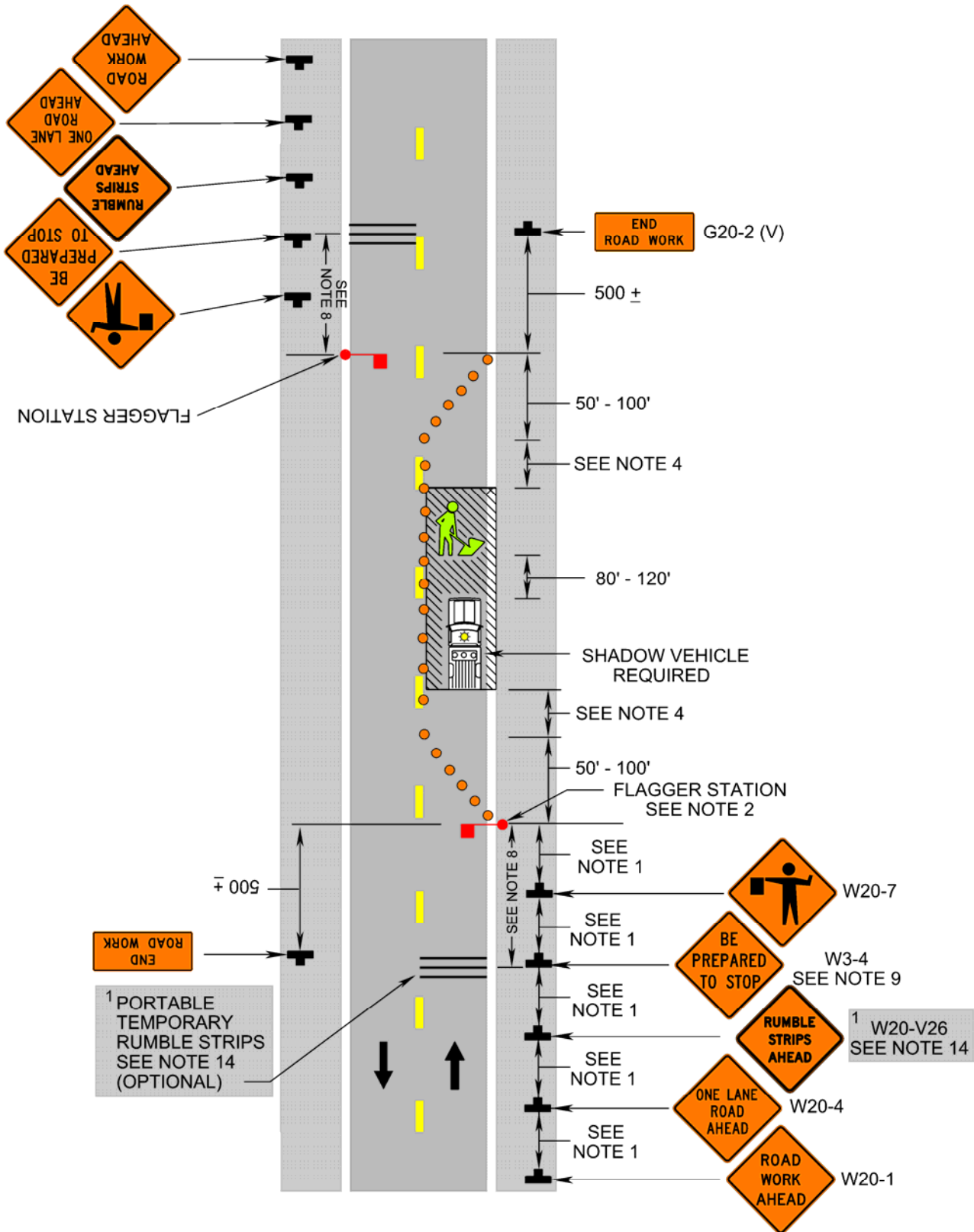
12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:¹

14. **When approved for use, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

Posted Speed	0 – 35 mph	36 – 55 mph
PTRS Spacing (Center to Center)	5 Feet	8 Feet

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)



Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.0)

NOTES

Standard:

- 1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

Guidance:

- 2. Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
- 3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
- 4. Temporary markings should be considered for operations exceeding three days in duration.*

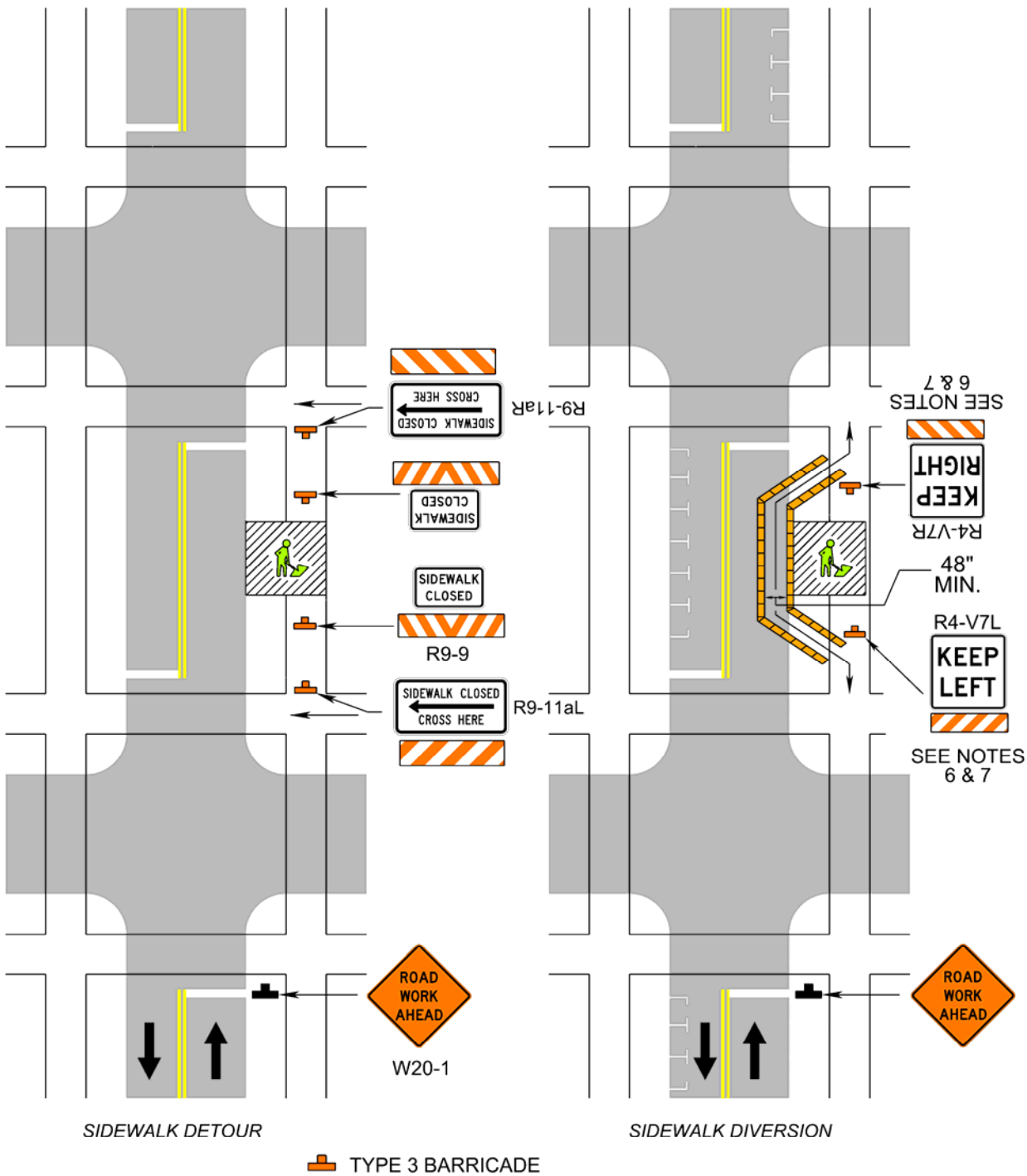
Option:

5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:

- 8. All sidewalk closures shall be closed with Type 3 Barricades.**

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.0)



Typical Traffic Control
Work Operation in the Vicinity of an Entrance Ramp
 (Figure TTC-39.1)

NOTES

Guidance:

1. *Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3.*
3. *An acceleration lane of sufficient length should be provided whenever possible as shown on the left diagram.*

Standard:

4. For the information shown on the diagram on the right-hand side of the typical application, where inadequate acceleration distance exists for the temporary entrance, the YIELD (R1-2) sign shall be replaced with STOP (R-1-1) signs (one on each side of the approach). For better visibility, the STOP and YIELD signs shall be mounted a minimum of 7 feet from the pavement surface to the bottom of the sign.¹
5. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
6. For taper lengths and channelizing device spacing, Note 5 of TTC-37 shall be used. The minimum length of a lane closure taper on a Limited Access highway shall be 1000'.
7. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or equipped with at least one high intensity amber rotating, oscillating, or flashing¹ light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
9. For long-term work zones existing conflicting pavement markings and markers shall be removed and temporary pavement markings and markers shall be installed per Figure TTC-60.

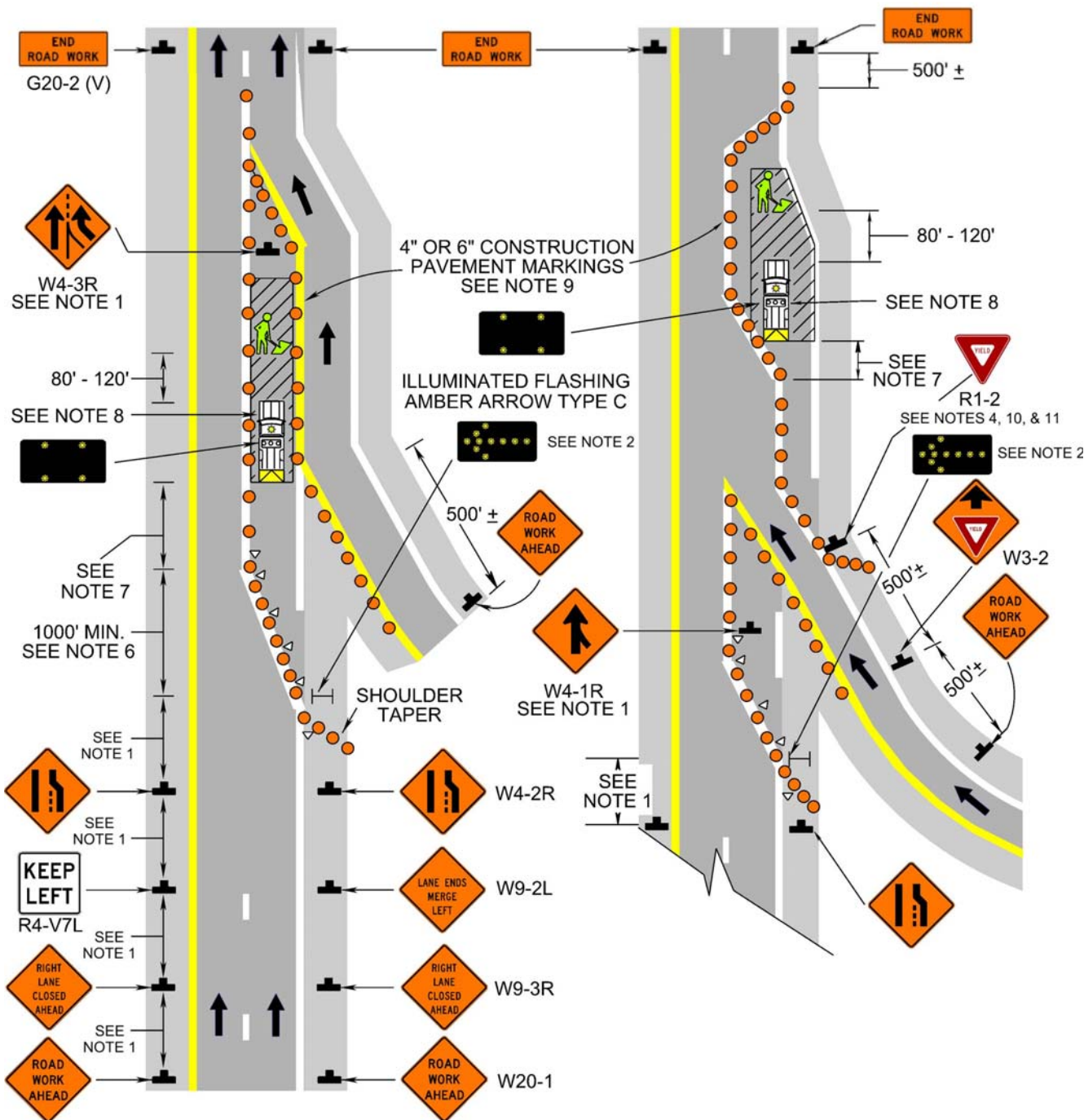
Guidance:

10. *When used, the YIELD or STOP sign should be located so that ramp vehicular traffic has adequate sight distance of oncoming mainline vehicular traffic to select an acceptable gap in the mainline vehicular traffic flow, but should not be located so far forward that motorists will be encouraged to stop in the path of the mainline traffic. Also, a longer acceleration lane should be provided beyond the sign to reduce the gap size needed. If insufficient gaps are available, consideration should be given to closing the ramp.*
11. *Where STOP signs are used, a temporary stop line should be placed across the ramp at the desired stop location.*
12. *The mainline merging taper with the arrow board at its starting point should be located sufficiently in advance so that the arrow board does not confuse the drivers on the entrance ramp, and so that the mainline merging vehicular traffic from the lane closure has the opportunity to stabilize before encountering the vehicular traffic merging from the ramp.*
13. *If the ramp curves sharply to the right, warning signs with advisory speeds located in advance of the entrance terminal should be placed in pairs (one on each side of the ramp).*

Option:

14. Where the acceleration distance is significantly reduced, a NO MERGE AREA (W4-5P) supplemental plaque may be placed below the Yield Ahead (W3-2) sign.
15. A Type B high-intensity flashing warning light with a red lens may be placed above the STOP sign.
16. When operations are 3 days or less in duration, lanes may be delineated by channelizing devices in lieu of temporary markings.

Work Operation in the Vicinity of an Entrance Ramp
(Figure TTC-39.1)



RAILROAD AGREEMENTS



Application For Right-of-Entry

(Access to Railroad Property for Non-Environmental Projects Only)

Submit one original of the application and drawing along with a check for \$600.00 (nonrefundable Application Fee) to:

Buckingham Branch Railroad
P.O. Box 336
1063 Main Street
Dillwyn, VA 23936
Attn: Claude Morris

Application and plans must be approved and written authority received from the Railroad **before** work is begun. The Buckingham Branch Railroad reserves the right to approve or deny any application. Access to Railroad Property is not authorized until an approved Buckingham Branch Railroad Right of Entry Agreement has been returned to the Contractor signed by authorized Buckingham Branch Personnel. This application does not authorize access to Railroad Property to gather information to complete the application. Contact Buckingham Branch Railroad at 434-983-3300 if you need assistance.

Application Date: _____

Agreement Party Information:

(This should be the party that will be executing the right-of-entry agreement and securing required insurance.)

Complete legal name of applicant as it would appear in a legal document (inaccurate information will delay your request.)

Company Contact Name & Title: _____
Telephone: _____ Fax: _____ E-Mail: _____
Street Address: _____
City: _____ State: _____ Zip: _____
Type of Business: ☐ Corporation (State of Incorporation _____)
☐ Individual ☐ Partnership (Type and State of Partnership _____)
☐ Developer ☐ Municipality
☐ Non-Profit Organization _____
☐ Other _____
Signature _____ Date: _____

Complete legal name of contractor(s) doing the work. (If different from applicant)

Space is provided for two contractors. Additional pages may be added if more than two contractors will be doing work on railroad property. Each contractor will be required to add Buckingham Branch Railroad as an additional insured to their General Liability Insurance Policy and may be required to sign the Right of Entry Agreement.

Contractor's Name: _____
Contact Name: _____
Telephone: _____ Cell # _____ Fax: _____ E-Mail: _____
Address: _____ City _____ State _____ Zip _____

(Additional Contractor working on railroad property)

Contractor's Name: _____
Contact Name: _____
Telephone: _____ Cell # _____ Fax: _____ E-Mail: _____
Address: _____ City _____ State _____ Zip _____

Engineer/Consultant Information: (Leave blank if same as above)

☐ Check here if agreement should be mailed to this address.

1. Company Name: _____
2. Company contact Name & Title: _____
3. Telephone: _____ Fax: _____ E-Mail: _____
4. Street Address: _____
City: _____ State: _____ Zip: _____

Project Information:

5. CSX Reference Number for New Agreements: _____
6. Is this request for a: ☐ New Agreement ☐ Revision to an existing agreement
☐ Extension to an existing agreement?
7. If not a new agreement, furnish existing CSX Agreement Number: _____
(Also include a copy of the existing agreement.)
8. Location: _____
City: _____ County: _____ State: _____
9. Location Description: (Give distance and direction from nearest road crossing.)

DOT/AAR# _____ Railroad Milepost # (if known) _____

10. Attachments Provided: (Check all that apply.)
☐ Photograph ☐ Location Map (REQUIRED)
☐ Railroad VAL Map Fragment ☐ County Tax Map
11. How did you verify that property and/or trackage are the railroad's?

12. Bridge Number(s): _____
(This must be provided for bridge survey/inspection.)
13. Latitude: _____ Longitude: _____ (if known)
14. Project Description (be explicit): _____
(Note: Describe only the portion of the project related to this request to enter railroad property) _____

15. How close will the work be to the nearest track? _____ Feet, or ☐ On Tracks.
(Note: Drawings must show distances to railroad pole lines, signals and / or culverts.)

Important: Subgrade penetrations require a CSX assigned inspector before BB will issue a Right of Entry. This may include any procedure which goes under the track. A CSX inspector may be required for other types of construction.

It is the contractor's responsibility to complete the CSX Outside Party Request Form and to make arrangements for the assigned inspector through CSX prior to applying to BBRR for a ROE.

16. Does work on railroad property include: Circle those that apply.

Aerial Wire Line Crossing

Jack and Bore? (Requires CSX assigned inspector) Name of CSX Inspector _____

Directional Bore? (Requires CSX assigned inspector) Name of CSX Inspector _____

☐ Soil borings? To What Depth: _____

☐ Excavation? To What Depth: _____

☐ Construction?

☐ Demolition? Describe (no explosives): _____

☐ Bridge Inspection? ☐ Bridge repair/rehab?

☐ Staging area? What will they be used for and where will they be located?: _____

☐ Other: _____

17. Is this project: ☐ related to a construction project? ☐ related to a railroad real estate transaction? ☐ preliminary or feasibility study for a bridge rehabilitation project?

If yes, provide details and attach a copy of any railroad approvals already obtained.

18. What type of equipment will be used on railroad property?

19. Does access to the property require crossing railroad tracks? _____

If yes, how and where? ☐ At a public crossing

☐ Other (please explain): _____

20. Will equipment overhang: ☐ Tracks or ☐ Property at any time? Please explain:

21. Expected length of project on railroad property: Begin date _____

Completion date: _____ (Please allow ample time for this agreement to be executed and your project to be scheduled with the Buckingham Branch Rail Traffic Control Center.)

Buckingham Branch Railroad Use Only:

CSX Approval Required Y / N Agreement Number: _____

RPL: Y / N

BB Additional Insured Y / N

Parties named in Agreement: _____

Comments: _____

Approved? Yes _____ No _____ By: _____ Date: _____

VAL Map: _____ Application Fee Received (Chk #) _____



1063 Main Street
P.O. Box 336
Dillwyn, VA 23936
(434) 983-3300 ext. 228
claudemorris@buckinghambranch.com

SAMPLE AGREEMENT: Application must be submitted to obtain Right of Entry.

BBRR Right of Entry Agreement

Date:

Contractor Name:

Contractor Address:

Send flagging invoice to:

Name: _____

Attn: _____

Address: _____

Re:

This has reference to the need of **(Contractor Name)** to enter the property of Buckingham Branch Railroad Company, hereinafter called "Railroad", to _____ **at approximately MP** _____ **at or near** _____, VA hereinafter called "Work".

Railroad hereby grants to _____ **contractor's name** _____, hereinafter called "Contractor", the right and permission to enter upon Railroad's property for the purpose of performing said Work as outlined / requested in Contractor's request, dated _____ and made a part hereof by reference, subject to the terms, conditions and provisions herein below set forth:

1. The Work shall be performed at the entire cost and expense of Contractor in accordance with good and sound engineering practices, to the satisfaction of the Railroad's Manager of Track & Structures (MT&S), and in a manner to avoid accidents and damages or unnecessary delays to or interference with train traffic of Railroad.
2. Contractor shall notify **Track and Structures Specialist, Mr. Wayne Owen, at 434-390-2667** at least 7 days before proceeding with the Work on Railroad property and shall abide by the instructions of said **Specialist** or his representative, insofar as the safety of the Railroad is concerned.
3. No equipment of Contractor shall be placed and operated, nor Work permitted to be performed on railroad property, unless prior arrangements have been made with the **Railroad's Specialist** or his representative for flagging protection. Equipment shall be moved across the Railroad's track(s) only at a public crossing, unless prior arrangements have been made with the **Railroad's Specialist**. All

precautions must be taken by Contractor to avoid interference with or damage to Railroad's signal and communication facilities during the course of said Work.

4. Railroad shall furnish flagman, watchman, inspectors, and any other personnel which in Railroad's opinion may be necessary to protect the facilities and traffic of Railroad during the performance of said Work. The flagman, inspector and any other Railroad personnel are subject to availability and will be scheduled solely at the discretion of the Railroad. **Contractor** shall pay the Railroad for said services, including lodging expenses and all applicable surcharges within 30 days of receipt of invoice of said services. A late fee of 1% per month will be added to invoices that are not paid within 30 of receiving an invoice. Work may not begin until a Railroad flagman is on site unless prior approval has been secured from the **Railroad's Specialist**. Flagger's labor and mileage will be billed to and from the location of the work and will also include labor and mileage incurred placing flagging signs on the railroad. Flaggers must start work before construction starts. The hours of the flagger will be longer than the contractor's work day. Flagging rates are subject to change upon 30 days' notice to the Contractor.

Present Rates for Flagging and other necessary railroad personnel are:

Regular Time:	\$60.00 per hour
Overtime (any hours over 8 hours per day)	\$85.00 per hour
Mileage:	\$ 0.535 per mile

Contractor shall provide a designated parking space for flagger.

The Contractor is responsible for obtaining all "before you dig" permits. Miss Utility does not locate railroad wires or railroad utilities. The rates shown above also apply for railroad personnel marking railroad wires or railroad utilities and any other railroad personnel required to complete work performed under this Agreement.

5. **This permit does not include and expressly excludes the performance of any site investigation activities designed to determine environmental conditions on or beneath Railroad properties.** Precluded activities include performing soil borings for purposes other than geotechnical investigation, obtaining soil, groundwater and surface water samples, and conducting field or laboratory analyses of any soil, groundwater or surface water samples obtained from Railroad properties to identify chemical composition or

environmental condition.

6. **Contractor**, as far as State law will allow, hereby assumes risk of and agrees to indemnify, defend, protect and save Railroad and all of its officers, directors, employees, agents, invitees, successors, assigns and any other railroad which may own property or perform operations at the location of the Work performed under this Agreement, harmless from and against:

- a.) injury to or death of any person or persons whomsoever, including but not limited to the agents, servants or employees of the parties hereto;
- b.) the loss or damage to any property whatsoever, including property owned or in the care, custody or control of Railroad; and lost revenues to the railroad due to work of the contractor that makes the track inaccessible or unusable; and

- c.) all claims, demands, suits, judgments or expenses incurred in connection therewith; resulting from or arising out of the sole or concurring negligent or willful acts or omissions of Contractor, or its agents, servants or employees, in the performance or execution of the Work performed under this right-of-entry or incidental thereto.

Certificates of insurance must be provided to the Railroad showing evidence of **Contractor's**, Comprehensive General Liability Insurance and Automobile Insurance. The Certificates must name Buckingham Branch Railroad Company as an additional insured on the Automobile and General Liability policies. Evidence of Worker's Compensation must be shown on the certificates. General Liability insurance certificates **must show that there is no exclusion for work within 50 feet of railroad property.**

A Railroad Protective Liability Insurance Policy with Buckingham Branch Railroad Company shown as the named insured shall be provided by Contractor. Policies must be emailed or submitted to the Railroad (to the attention of Claude Morris) at the address in Dillwyn, VA noted in the letterhead above prior to the commencement of any Work.

- 7. Contractor shall promptly notify BBRR's MT&S or his representative of any loss, damage, injury or death arising out of or in connection with said Work to be performed.
- 8. It is understood and agreed that, upon completion of said Work, Railroad's property shall be left in a condition satisfactory to Railroad's MT&S or his duly authorized representative.

9. All personnel working on Railroad's right-of-way must comply with the Railroad's safety rules and requirements to include, without exception, the wearing of hard hats and approved safety shoes and glasses. Anyone not in compliance with these rules and regulations will be asked to leave Railroad property.
10. This right-of-entry and the permission conferred and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Work or at midnight, _____ whichever occurs first, unless extended in writing by Railroad. Buckingham Branch Railroad shall have the right at any time and at its sole discretion to terminate this agreement upon notice to the Contractor. Liabilities, obligations and claims incurred under this agreement shall survive termination or expiration of this agreement.
11. **Access to railroad property is not allowed and no work may begin until the contractor has received a fully executed agreement signed by an authorized Buckingham Branch Railroad Official.**

If the provisions and terms of the right-of-entry granted by this agreement are acceptable to the Contractor, please have an authorized official sign in the space provided below and return along with the insurance certificates, to Mr. Claude Morris, Buckingham Branch RR Co., P.O. Box 336, Dillwyn, VA 23936. Once the required certificates are received, a fully executed agreement will be returned for your files.

Accepted by Contractor: _____

By: _____ authorized signature

Title: _____

Date: _____, 2017

Job Site Contact Person: _____

Telephone Numbers for Job Site Contact:

Office Number: _____ **Mobile Number:** _____

Approved: Buckingham Branch Railroad Company

By: _____

Title: _____

Date: _____, 2017 **Insurance Approved:** _____