

TOWN OF GEORGIA

ARROW HEAD LAKE ROAD BRIDGE 10 REPAIRS

CONTRACT DOCUMENTS

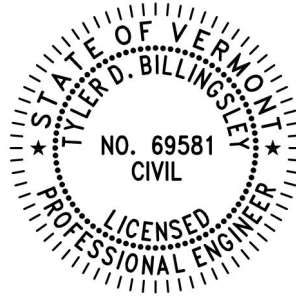
JULY 2024

ISSUED FOR: BID & CONSTRUCTION

PREPARED BY:



DRAFT



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Town of Georgia
Arrow Head Lake Road
Bridge 10 Repairs

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General Requirements	01
VTrans Standard Specifications for Construction 2018 (Under Separate Cover)	
<u>Permits</u>	
• None.	
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East Engineering plans: G-1.0, C-1.0, C-2.0, stamped "ISSUED FOR BID & CONSTRUCTION", dated July 23, 2024. VTrans Structural Details SD-516.11a, b.	

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ADVERTISEMENT FOR BIDS
TOWN OF GEORGIA
ARROW HEAD LAKE ROAD
BRIDGE 10 REPAIRS

General Notice

The **Town of Georgia** (Owner) is requesting Bids for the construction of the following Project:

Bridge 10 Repairs

Bids for the construction of the Project will be received until **August XY, 2024 at 9:00 a.m.** Bid submissions will be submitted electronically to the following email addresses. It is the responsibility of the Contractor to ensure that the email and any attachments were received by the bid due date/time.

Tyler@EastEngineeringPLC.com

Administrator@TownofGeorgia.com

RoadForeman@TownofGeorgia.com

The Project includes the following Work:

Bridge 10 Repairs on Arrow Head Lake Road, including concrete work, roadway approaches, guardrail, epoxy overlay and associated roadway/bridge improvements.

The Project has a contractual duration (final completion) of **60** days. Work to be completed in **2024 or 2025**. Engineers construction cost estimate range is \$150,000 to \$300,000.

Obtaining the Bidding Documents

The Issuing Office for the Bidding Documents is:

East Engineering, PLC
Richmond, Vermont

Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Printed copies of the Bidding Documents may be obtained from the Issuing Office by paying \$100 for each set (non-refundable). PDF sets of the Bidding Documents are available free of charge.

Pre-bid Conference

A pre-bid conference for the Project will not be held, however, Contractors are strongly encouraged to visit the Project Site prior to submitting a bid.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

This Advertisement is issued by:

Owner: **Town of Georgia**
Engineer: **East Engineering, PLC**

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INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—BIDDING DOCUMENTS

- 1.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 1.02 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.
- 1.03 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
 - 1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents.
 - B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.
 - C. After the Contract is awarded, the Owner will provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.
 - 1. Electronic Documents that are available in native file format include:
 - a. **AutoCAD Engineering Plans**
 - 2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.

ARTICLE 2—QUALIFICATIONS OF BIDDERS

- 2.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **10** days of Owner's request, Bidder may be required to submit the following information:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.

- C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
- 2.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 2.03 No requirement in this Article 2 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 3—PRE-BID CONFERENCE

- 3.01 A pre-bid conference will not be held. However, Contractors are highly encouraged to visit and inspect the site prior to submitting a bid.

ARTICLE 4—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be legally obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, as determined by the Owner, Engineer, and both private/public infrastructure owners. Boring logs are included for Contractor Reference.
2. *Hazardous Environmental Conditions:* Unknown.

ARTICLE 5—INTERPRETATIONS AND ADDENDA

- 5.01 Owner may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 5.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing.
- 5.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date/time for opening of Bids may not be answered.
- 5.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract

Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 6—BID SECURITY

- 6.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5** percent of Bidder's total bid price in the form of a Bid bond issued by a surety. A certified or company check is an acceptable alternative to a bid bond.
- 6.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 6.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 30 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 6.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 7—CONTRACT TIMES

- 7.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment are to be achieved, are set forth in the Agreement.
- 7.02 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 8—SUBSTITUTE AND "OR EQUAL" ITEMS

- 8.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 8.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as

supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 9—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 9.01 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the Work within five days after Bid opening.
- 9.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 9.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance.

ARTICLE 10—PREPARATION OF BID

- 10.01 The Bid Form is included with the Bidding Documents.
 - A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- 10.02 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 10.03 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 10.04 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 10.05 A Bid by an individual must show the Bidder’s name and official address.
- 10.06 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 10.07 All names must be printed in ink below the signatures.

- 10.08 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 10.09 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 10.10 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 11—BASIS OF BID

11.01 *Lump Sum*

- A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

11.02 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 12—SUBMITTAL OF BID

- 12.01 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked envelope with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement. It is the Contractor's sole responsibility to ensure that the delivery was successfully received by the Owner prior to the date and time that bids are due.
- A. Bids may not be submitted any earlier than three days prior to the due date and time indicated.
- 12.02 Emailed bids are not acceptable.
- 12.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 13—MODIFICATION AND WITHDRAWAL OF BID

- 13.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 13.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 13.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 14—OPENING OF BIDS

- 14.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. A tabulation of the Bids will be made available to Bidders after the opening of Bids.

ARTICLE 15—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 15.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 16—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 16.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities, in their sole opinion.
- 16.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 16.03 If Owner awards the contract for the Work, such award will be to a responsible Bidder submitting a responsive Bid. Price will also be considered, however, the Owner reserves the right to award the project to the Contractor they believe, in their sole opinion, will be in the best interest of the Project (not necessarily the lowest bid).
- 16.04 *Evaluation of Bids*
 - A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

- 16.05 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 16.06 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 17—BONDS AND INSURANCE

- 17.01 Payment and Performance Bonds (100% of Contract Value), if included in the contract documents, are required by only the selected Contractor.
- 17.02 Insurance requirements are noted in subsequent sections of the bidding documents.

ARTICLE 18—SIGNING OF AGREEMENT

- 18.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder.

ARTICLE 19—SALES AND USE TAXES

- 19.01 Owner is exempt from **Vermont** state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. shall be provided to the selected Contractor). Said taxes must not be included in the Bid.

END OF C-200

BID FORM FOR CONSTRUCTION CONTRACT

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: **Town of Georgia**
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;

ARTICLE 3—BASIS OF BID—UNIT PRICES

- 3.01 *Unit Price Bids*
- A. Bidder will perform the following Work at the indicated unit prices:

Item No. (VTrans)	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1.0	Bridge 10 Repairs				
1.1	General Conditions and Mob./Demob	LS	1		
1.2	Cast-in-Place Concrete (Backwall)	CY	10		
1.3	Expansion Joint	LS	1		
1.4	Approach Excavation/Backfill	CY	100		
1.5	Approach Type 3 Paving	TN	30		
1.6	Epoxy Overlay	SY	970		
1.7	Remove and Replace Approach Rail	LF	100		
1.8	Install new G-1D End Treatment	EA	2		
1.9	Associated Roadway/Bridge Work Directed by Engineer or Town	T&M	1	\$10,000.00	\$10,000.00
Total of All Bid Items					\$

- B. Bidder acknowledges that:
- each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents, and
3. Any unbalanced unit pricing, or “pennied” items, will be honored by the Contractor, regardless of the final quantity constructed as part of the project.

ARTICLE 4—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

4.01 Bid Acceptance Period

- A. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

4.02 Instructions to Bidders

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

4.03 Receipt of Addenda

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 5—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

5.01 Bidder’s Representations

- A. In submitting this Bid, Bidder represents the following:
 1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; and the Bidding Documents on (a) the cost,

progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

6. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
7. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
8. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
9. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
10. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

5.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name :

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

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BID BOND

Bidder Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: Town of Georgia Address <i>(principal place of business)</i> :	Bid Project <i>(name and location)</i> : Bridge 10 Repairs Bid Due Date:
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

CONTRACT FOR CONSTRUCTION OF A SMALL PROJECT

This Contract is by and between Town of Georgia (Owner) and

(Contractor).

Owner and Contractor hereby agree as follows:

ARTICLE 1 - THE WORK

1.01 Work

- A. Work includes all labor, materials, equipment, services, and documentation necessary to construct the Project defined herein.
- B. The Contractor shall complete all Work as specified or indicated in the Contract Documents. The Project is generally described as follows:
 1. Bridge 10 Repairs include concrete repairs, roadway reconstruction, epoxy overlay, and associated work.
 2. The Site of the Work includes property, easements, and designated work areas described in greater detail in the Contract Documents but generally located on Arrow Head Lake Road.

ARTICLE 2 - CONTRACT DOCUMENTS

2.01 Intent of Contract Documents

- A. It is the intent of the Contract Documents to describe a functionally complete project. The Contract Documents do not indicate or describe all of the Work required to complete the Project. Additional details required for the correct installation of selected products are to be provided by the Contractor and coordinated with the Owner and Engineer. This Contract supersedes prior negotiations, representations, and agreements, whether written or oral. The Contract Documents are complementary; what is required by one part of the Contract Documents is as binding as if required by other parts of the Contract Documents.
- B. During the performance of the Work and until final payment, Contractor and Owner shall submit all matters in question concerning the requirements of the Contract Documents, or relating to the acceptability of the Work under the Contract Documents to the Engineer. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- C. Engineer will render a written clarification, interpretation, or decision on the issue submitted, or initiate a modification to the Contract Documents.
- D. Contractor, and its subcontractors and suppliers, shall not have or acquire any title to or ownership rights to any of the Drawings, Specifications, or other documents (including copies or electronic media editions) prepared by Engineer or its consultants.

2.02 Contract Documents Defined

A. The Contract Documents consist of the following documents:

1. This Contract.
2. Performance bond.
3. Payment bond.
4. Specifications listed in the Table of Contents.
5. Drawings as listed on the Drawing Sheet Index.
6. Addenda.

ARTICLE 3 - ENGINEER

3.01 Engineer

A. The Engineer for this Project is **East Engineering, PLC.**

ARTICLE 4 - CONTRACT TIMES

4.01 Contract Times

- A. The on-site Work (excluding time for superstructure procurement) will be substantially completed within **45** days after the Effective Date of the Contract and completed and ready for final payment within **60** days after the Effective Date of the Contract. **Maximum closure period to traffic shall be XY days.**

4.02 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence in the performance of the Contract, and that Owner will incur damages if Contractor does not complete the Work according to the requirements of Paragraph 4.01. Because such damages for delay would be difficult and costly to determine, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner **\$500** for each day that expires after the Contract Time for substantial completion.

4.03 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor or their subcontractors or suppliers.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times.

- D. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor or Contractor's subcontractors or suppliers.

4.04 Progress Schedules

- A. Contractor shall develop a progress schedule and submit to the Engineer for review and comment before starting Work on the Site. The Contractor shall modify the schedule in accordance with the comments provided by the Engineer.
- B. The Contractor shall update and submit the progress schedule to the Engineer each month. The Owner may withhold payment if the Contractor fails to submit the schedule.

ARTICLE 5 - CONTRACT PRICE

5.01 Payment

- A. Owner shall pay Contractor in accordance with the Contract Documents at the following unit prices for each unit of Work completed:
 - Per Approved Bid Form

Payment will be made in an amount equal to the total of all extended prices for actual Work completed. The extended price is determined by multiplying the unit price times the actual quantity of that Work item completed. Actual quantities installed will be determined by the Engineer.

ARTICLE 6 - BONDS AND INSURANCE

6.01 Bonds

- A. Before starting Work, Contractor shall furnish a performance bond and a payment bond from surety companies that are duly licensed or authorized to issue bonds in the required amounts in the jurisdiction in which the Project is located. Each bond shall be in an amount equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect not less than one year after the date when final payment becomes due.

6.02 Insurance

- A. Before starting Work, Contractor shall furnish evidence of insurance from companies that are duly licensed or authorized in the jurisdiction in which the Project is located. Contractor shall provide insurance in accordance with the following:
 - 1. Contractor shall provide coverage for not less than the following amounts, or greater where required by Laws and Regulations:
 - a. Workers' Compensation:

State:	<u>Statutory</u>
Employer's Liability:	
Bodily Injury, each Accident	\$ <u>1,000,000</u>

Bodily Injury By Disease, each Employee	\$ 1,000,000
Bodily Injury/Disease Aggregate	\$ 1,000,000
b. Commercial General Liability:	
General Aggregate	\$ 2,000,000
Products - Completed Operations Aggregate	\$ 2,000,000
Personal and Advertising Injury	\$ 1,000,000
Each Occurrence (Bodily Injury and Property Damage)	\$ 1,000,000
c. Automobile Liability herein:	
Combined Single Limit of:	\$ 1,000,000

- B. All insurance policies required to be purchased and maintained will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the insured and additional insured.
- C. Automobile liability insurance provided by Contractor shall provide coverage against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- D. The Contractor's commercial general liability and automobile liability, and umbrella or excess, shall include and list Owner and Engineer and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each as additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis.
- E. Umbrella or excess liability insurance shall be written over the underlying employer's liability, commercial general liability, and automobile liability insurance. Subject to industry-standard exclusions, the coverage afforded shall be procured on a "follow the form" basis as to each of the underlying policies. Contractor may demonstrate to Owner that Contractor has met the combined limits of insurance (underlying policy plus applicable umbrella) specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policies and an umbrella or excess liability policy.
- F. The Contractor shall provide property insurance covering physical loss or damage during construction to structures, materials, fixtures, and equipment, including those materials, fixtures, or equipment in storage or transit.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 15.

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

7.01 Supervision and Superintendence

- A. Contractor shall supervise 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, safety, and procedures of construction.
- B. Contractor shall assign a competent resident superintendent who is to be present at all times during the execution of the Work. This resident superintendent shall not be replaced without written notice to and approval by the Owner and Engineer except under extraordinary circumstances.
- C. Contractor shall at all times maintain good discipline and order at the Site.
- D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours (7:00 a.m. to 6:00 p.m.), Monday through Friday. No work is allowed on any Federal holiday dates.

7.02 Other Work at the Site

- A. In addition to and apart from the Work of the Contractor, other work may occur at or adjacent to the Site. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

7.03 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, 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 performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be new, of good quality and shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable supplier, except as otherwise may be provided in the Contract Documents.

7.04 Subcontractors and Suppliers

- A. Contractor may retain subcontractors and suppliers for the performance of parts of the Work. Such subcontractors and suppliers must be acceptable to Owner.

7.05 Quality Management

- A. Contractor is fully responsible for the managing quality to ensure Work is completed in accordance with the Contract Documents.

7.06 Licenses, Fees and Permits

- A. Contractor shall pay all license fees and royalties and assume all costs incident to performing the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others.
- B. Contractor shall obtain and pay for all construction permits and licenses unless otherwise provided in the Contract Documents.

7.07 Laws and Regulations; Taxes

- A. Contractor shall give all notices required by and shall comply with all local, state, and federal Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages if Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations.
- C. Contractor shall pay all applicable sales, consumer, use, and other similar taxes Contractor is required to pay in accordance with Laws and Regulations.

7.08 Record Documents

- A. Contractor shall maintain one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved shop drawings in a safe place at the Site. Contractor shall annotate them to show changes made during construction. Contractor shall deliver these record documents to Engineer upon completion of the Work.

7.09 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work.
- B. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All persons on the Site or who may be affected by the Work;
 - 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.
- C. All damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, or anyone for whose acts the Contractor may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Contract Documents or to the acts or omissions of Owner or Engineer and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor).

- D. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.
- E. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor shall act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.10 Shop Drawings, Samples, and Other Submittals

- A. Contractor shall review and coordinate the shop drawing and samples with the requirements of the Work and the Contract Documents and shall verify all related field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information.
- B. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
- C. With each submittal, Contractor shall give Engineer specific written notice, in a communication separate from the submittal, of any variations that the shop drawing or sample may have from the requirements of the Contract Documents.
- D. Engineer will provide timely review of shop drawings and samples.
- E. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs.
- F. Engineer's review and approval of a separate item does not indicate approval of the assembly in which the item functions.
- G. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of shop drawings and submit, as required, new samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
- H. Shop drawings are not Contract Documents.

7.11 Warranties and Guarantees

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

7.12 Correction Period

- A. If within one year after the date of substantial completion, any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly and without cost to Owner, correct such defective Work.

7.13 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any subcontractor, any supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts they may be liable.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Owner's Responsibilities

- A. Except as otherwise provided in the Contract Documents, Owner shall issue all communications to Contractor through Engineer.
- B. Owner shall make payments to Contractor as provided in this Contract.
- C. Owner shall provide Site and easements required to construct the Project.
- D. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, unless stated elsewhere in the Contract Documents, Owner shall have sole authority and responsibility for such coordination.
- E. The Owner shall be responsible for performing inspections and tests required by applicable codes.
- F. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- G. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- H. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Engineer's Status

- A. Engineer will be Owner's representative during construction. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in this Contract.

- B. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any subcontractor, any supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- C. Engineer will make visits to the Site at intervals appropriate to the various stages of construction. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work.
- D. Engineer has the authority to reject Work if Contractor fails to perform Work in accordance with the Contract Documents.
- E. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work.
- F. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

ARTICLE 10 - CHANGES IN THE WORK

10.01 Authority to Change the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work.

10.02 Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in the Work which are: (a) ordered by Owner or (b) agreed to by the parties or (c) resulting from the Engineer's decision, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 - 3. Changes in the Contract Price or Contract Times or other changes which embody the substance of any final binding results under Article 12.
- B. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 11 - DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS

11.01 Differing Conditions Process

- A. If Contractor believes that any subsurface or physical condition including but not limited to utilities or other underground facilities that are uncovered or revealed at the Site either differs materially from that shown or indicated in the Contract Documents or is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.
- B. After receipt of written notice, Engineer will promptly:
 - 1. Review the subsurface or physical condition in question;
 - 2. Determine necessity for Owner obtaining additional exploration or tests with respect to the condition;
 - 3. Determine whether the condition falls within the differing site condition as stated herein;
 - 4. Obtain any pertinent cost or schedule information from Contractor;
 - 5. Prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and
 - 6. Advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

ARTICLE 12 - CLAIMS AND DISPUTE RESOLUTION

12.01 Claims Process

- A. The party submitting a claim shall deliver it directly to the other party to the Contract and the Engineer promptly (but in no event later than 10 days) after the start of the event giving rise thereto.
- B. The party receiving a claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the claim through the exchange of information and direct negotiations. All actions taken on a claim shall be stated in writing and submitted to the other party.

- C. If efforts to resolve a claim are not successful, the party receiving the claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the claim within 45 days, the claim is deemed denied.
- D. If the dispute is not resolved to the satisfaction of the parties, Owner or Contractor shall give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction unless the Owner and Contractor both agree to an alternative dispute resolution process.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION OF DEFECTIVE WORK

13.01 Tests and Inspections

- A. Owner and Engineer will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access.
- B. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- C. If any Work that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense.

13.02 Defective Work

- A. Contractor shall ensure that the Work is not defective.
- B. Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. The Contractor shall promptly correct all such defective Work.
- E. When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. If the Work is defective or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

ARTICLE 14 - PAYMENTS TO CONTRACTOR

14.01 Progress Payments

- A. The Contractor shall prepare a schedule of values that will serve as the basis for progress payments. The schedule of values will be in a form of application for payment acceptable to Engineer. The unit price breakdown submitted with the bid will be used for unit price work. Break lump sum items into units that will allow for measurement of Work in progress.

14.02 Applications for Payments:

- A. Contractor shall submit an application for payment in a form acceptable to the Engineer, no more frequently than monthly, to Engineer. Applications for payment will be prepared and signed by Contractor. Contractor shall provide supporting documentation required by the Contract Documents. Payment will be paid for Work completed as of the date of the application for payment.
- B. Beginning with the second application for payment, each application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior applications for payment.

14.03 Retainage

- A. The Owner shall retain **10** % of each progress payment until the Work is substantially complete.

14.04 Review of Applications

- A. Within 10 days after receipt of each application for payment, the Engineer will either indicate in writing a recommendation for payment and present the application for payment to Owner or return the application for payment to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. The Contractor will make the necessary corrections and resubmit the application for payment.
- B. Engineer will recommend reductions in payment (set-offs) which, in the opinion of the Engineer, are necessary to protect Owner from loss because the Work is defective and requires correction or replacement.
- C. The Owner is entitled to impose set-offs against payment based on any claims that have been made against Owner on account of Contractor's conduct in the performance of the Work, incurred costs, losses, or damages on account of Contractor's conduct in the performance of the Work, or liquidated damages that have accrued as a result of Contractor's failure to complete the Work.

14.05 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

14.06 Substantial Completion

- A. The Contractor shall notify Owner and Engineer in writing that the Work is substantially complete and request the Engineer issue a certificate of substantial completion when Contractor considers the Work ready for its intended use. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Engineer will make an inspection of the Work with the Owner and Contractor to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor and Owner in writing giving the reasons therefor.

- C. If Engineer considers the Work substantially complete or upon resolution of all reasons for non-issuance of a certificate identified in 14.06.B, Engineer will deliver to Owner a certificate of substantial completion which shall fix the date of substantial completion and include a punch list of items to be completed or corrected before final payment.

14.07 Final Inspection

- A. Upon written notice from Contractor that the entire Work is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.08 Final Payment

- A. Contractor may make application for final payment after Contractor has satisfactorily completed all Work defined in the Contract, including providing all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents and other documents.
- B. The final application for payment shall be accompanied (except as previously delivered) by:
 - 1. All documentation called for in the Contract Documents;
 - 2. Consent of the surety to final payment;
 - 3. Satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any liens or other title defects, or will so pass upon final payment;
 - 4. A list of all disputes that Contractor believes are unsettled; and
 - 5. Complete and legally effective releases or waivers (satisfactory to Owner) of all lien rights arising out of the Work, and of liens filed in connection with the Work.
- C. The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

14.09 Waiver of Claims

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 60 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension.

15.02 Owner May Terminate for Cause

- A. Contractor's failure to perform the Work in accordance with the Contract Documents or other failure to comply with a material term of the Contract Documents will constitute a default by Contractor and justify termination for cause.
- B. If Contractor defaults in its obligations, then after giving Contractor and any surety ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. Declare Contractor to be in default, and give Contractor and any surety notice that the Contract is terminated; and
 - 2. Enforce the rights available to Owner under any applicable performance bond.
- C. Owner may not proceed with termination of the Contract under Paragraph 15.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- D. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- E. In the case of a termination for cause, if the cost to complete the Work, including related claims, costs, losses, and damages, exceeds the unpaid contract balance, Contractor shall pay the difference to Owner.

15.03 Owner May Terminate for Convenience

- A. Upon seven days written notice to Contractor, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for, without duplication of any items:
 - 1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. Other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner, and provided Owner does not remedy such

suspension or failure within that time, either stop the Work until payment is received, or terminate the Contract and recover payment from the Owner.

ARTICLE 16 - CONTRACTOR'S REPRESENTATIONS

16.01 Contractor Representations

A. Contractor makes the following representations when entering into this Contract:

1. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on:
 - a. The cost, progress, and performance of the Work;
 - b. The means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and
 - c. Contractor's safety precautions and programs.
5. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
6. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
7. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
8. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
9. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that, without exception, all prices in the Contract are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 17 - MISCELLANEOUS

17.01 Cumulative Remedies

- A. The duties and obligations imposed by this Contract and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.02 Limitation of Damages

- A. Neither Owner, Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

17.03 No Waiver

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

17.04 Survival of Obligations

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract.

17.06 Controlling Law

- A. This Contract is to be governed by the law of the state in which the Project is located.

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract.

This Contract will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

Town of Georgia

By: _____

Title: _____

CONTRACTOR:

By: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

MEASUREMENT AND PAYMENT TERMS / SPECIAL PROVISIONS

1. General

- a. This document is used to define bid items listed in the Bid Form and on the Agreement.

2. Lump Sum and Unit Price Items

- a. Lump sum items will be paid on a percentage complete basis. Unit price items will be paid based on the actual quantities installed and verified by the Owner and Engineer. The items listed below are all-inclusive items for the complete installation of the proposed infrastructure improvements.

Item 1.0 – Bridge 10 Repairs: Items 1.1 through 1.8 cover the full scope of the project. Scope items listed below include the main construction tasks, but are not intended to be a comprehensive list of all required activities. Contractor shall include all required work items to complete the project in the items listed below. Item 1.9 shall be utilized after review of, and written approval, by the Town and/or Engineer.

Item 1.1 – General Conditions and Mobilization/Demobilization

- Payment: Percentage completed.
- Mobilization of all equipment and materials to site,
- General conditions of the Contract Documents,
- Payment and performance bonds,
- Project coordination, communication, and administrative tasks,
- Permitting requirements and conditions,
- Temporary facilities/utilities including power, water, storage, and sewer/sanitary facilities,
- Maintenance and protection of site features in the construction area including utilities, vegetation, mailboxes, driveways, and other site features,
- Site security,
- Site safety including temporary fencing, barricades, plates, and signage,
- All necessary erosion prevention and sediment control devices,
- Construction layout for all components,
- Removal and disposal of damaged roadway/bridge/guardrail.
- Temporary support and protection of on-site utilities,
- Temporary support of all slopes and excavated areas,
- Traffic detour, including signs, tripods, posts, weights, etc. as needed,
- Two portable variable message boards, for 1 week prior to the start of construction through the end of construction.
- Demobilization of all equipment and materials from the site.

Item 1.2 – Cast-in-Place Concrete

- Measurement: Per cubic yard installed
- Reinforcing steel, ties, chairs, and supports,
- Formwork and supports/bracing,
- Concrete and admixtures,

- Curing means/methods/compounds, as well as cold weather protection when applicable.

Item 1.3 – Expansion Joint

- Payment: Percentage completed.
- Replacement of expansion joint on Abutment #2, including all ancillary work and components. Removal and reset of scuppers and drain pipes, drainage trough, steel/studs/nuts/bolts/plates.

Item 1.4 – Approach Excavation/Backfill

- Payment: Per Cubic Yard
- Removal and disposal of pavements,
- Removal/stockpile of roadway base material/backwall backfill material.
- Placement and compaction of stockpiled material.

Item 1.5 – Type 3 Pavement

- Payment: Per Ton. Payment limits are width of existing roadway, 15' from backwall, depth to existing pavement depth on-site or 4" (whichever is greater).
- Placement, compaction per State Specs.

Item 1.6 – Epoxy Overlay

- Measurement and payment: Per square yard.
- Removal of existing epoxy overlay, micromilling existing concrete deck, placement of multiple layer wearing surface of epoxy and aggregate.

Item 1.7 – Remove and Replace Approach Rail

- Measurement and payment: Per Foot
- Removal of and disposal of existing posts, rails, spacers and hardware.
- Installation of W-Beam guardrail VTrans Spec G-1

Item 1.8 – G-1D End Treatments

- Measurement and payment: Per Each
- Posts, spacers, rail, reflectors, hardware and associated components to the VTrans G-1D Standard Detail.

Item 1.9– Associated Roadway/Bridge Work Directed by Engineer or Town

- Payment: On a Time & Materials Basis or other agreed upon method (unit price or lump sum). This item is to cover any unforeseen or differing site/subsurface conditions and shall only be used after written authorization from the Town or Engineer.

END MEASUREMENT AND PAYMENT SECTION

PERFORMANCE BOND

Contractor Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: Town of Georgia Mailing address <i>(principal place of business)</i> :	Contract Description <i>(name and location)</i> : Bridge 10 Repairs Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
- 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
- 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **None**

PAYMENT BOND

Contractor Name: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: Town of Georgia Mailing address <i>(principal place of business)</i> :	Contract Description <i>(name and location)</i> : Bridge 10 Repairs Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **None.**

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Town of Georgia
Engineer: East Engineering
Contractor: Bridge 10 Repairs
Project: Bridge 10 Repairs

Engineer's Project No.: 080-04
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion:

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By (signature): _____

Name (printed): _____

Title: _____

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DRAFT

GENERAL CONDITIONS & SUPPLEMENTAL CONDITIONS

EAST ENGINEERING, PLC

DRAFT

DRAFT

1. GENERAL REQUIREMENTS

a. PROJECT SUMMARY

- i. This project includes bridge/roadway repairs to Arrow Head Lake Road and Bridge 10 in the Town of Georgia. Requirements are noted on the plans, permits, specifications, and contract documents.
- ii. All components for this project will adhere to the State of Vermont, Agency of Transportation (VTrans), Standard Specifications for Construction, 2024, unless otherwise noted on the plans or within these specifications, or approved in writing from the Engineer.

b. GENERAL AND SPECIAL CONDITIONS

- i. Proposed improvements are within a Town road right-of-way as well as private property (easements secured by Town). Contractor shall exercise caution while working to ensure areas outside of the limits of construction are not disturbed and the site is kept in a clean and neat manner.
- ii. Portions of Owner property used for Contractor laydown area (equipment/material storage, staging, etc.) shall be protected from damage. Any damage shall be repaired by the contractor at no additional cost to the Owner. Additional laydown areas are to be obtained by Contractor, at no cost to the Owner.
- iii. Working Days and Hours – Unless otherwise approved by the Engineer and Owner, working hours shall be 7:00 a.m. to 6:00 p.m. Work on the following days is prohibited:
 1. Saturday and Sunday
 2. New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day.
- iv. Permits – The following permits are required to be followed throughout construction:
 1. None.
- v. Hazardous Materials – During the duration of construction, if hazardous materials are detected, the contractor shall stop work and contact the Owner and Engineer prior to proceeding.
- vi. Historic Preservation – If unanticipated historic and/or archaeological resources are found, the Contractor shall stop work and contact the Owner and Engineer prior to proceeding.
- vii. Staging and Storage – The contractor shall utilize the Town road right-of-way for construction staging and material storage areas. The security and safety of the staging area is the sole responsibility of the Contractor. After construction is completed, the staging/storage areas shall be restored to pre-construction conditions or better.
- viii. Davis Bacon Wage Rates – This project is not subject to the requirements of the Davis Bacon Act.

c. REFERENCED STANDARDS

- i. State of Vermont, Agency of Transportation (VTrans), Standard Specifications for Construction, latest issue.
- ii. VTrans Standard Drawings for Construction, latest revisions.
- iii. American Association of State Highway and Transportation Officials (AASHTO)
- iv. Manual on Uniform Traffic Control Devices (MUTCD)

d. PROJECT MEETINGS AND COORDINATION

i. Meetings

1. Preconstruction Meeting – At least 10 days before beginning construction, the Owner and Contractor shall meet on-site to review the details of the project, discuss schedule, scope of work, party responsibilities, procedures for construction administration tasks (RFIs, CO's, Submittals, Payment Applications), special conditions and permitting requirements, and other applicable details of the project.

ii. Coordination

1. Contractor Representatives

- a. The Contractor shall provide a full-time representative on site during all construction activities. The representative shall supervise all operations of the work and have authority to direct all Contractor personnel, subcontractors and material suppliers.
- b. The Contractor shall designate at least two designated responsible people to be available at all time after working hours (including weekends and holidays) to be available in the event of an emergency. Contact information (home and cell phone numbers) shall be provided to the Engineer and Owner.

2. Construction Correspondence

- a. Submittals – Refer to Submittal Section for specific requirements.
- b. Request for Information (RFI) – RFI's shall be submitted by the Contractor to the Engineer in writing. The RFI shall include detailed information on the item requiring clarification including specification and/or drawing reference, a narrative explanation, and the requested response date.
- c. Change Orders (CO)– Prior to completing any work that the Contractor deems out of scope, a written request (Potential Change Order – "PCO") will be submitted to the Engineer and Owner. The PCO will include material, equipment, and labor rates and quantities of items to be installed with justification for the work.
- d. Payment Applications – A payment application shall be provided by the Contractor to the Owner noting progress percentages (lump sum items) and quantities installed (unit price items). Lien releases will

be provided to Owner with each payment application for each supplier that has an excess of \$25,000.

e. SUBMITTALS

- i. Submittals shall be provided to Engineer/Owner for materials and proceeds necessary to complete the required work. Submittals shall be provided in digital (PDF) format by email. Each submittal shall be legible and have clear indications/mark ups of the products/materials to be used. Each submittal will have a Contractor transmittal cover sheet with the referenced drawing/specification, date, and Contractor's signature indicating that the submitted product is in accordance with all project requirements. Required submittals are as follows:
 1. Project schedule (provide updates as requested by Owner or Engineer)
 2. Insurance certificates – Owner and East Engineering, PLC shall be listed as additionally insured.
 3. Preconstruction photos and or videos.
 4. Traffic control/detour plan.
 5. Aggregate borrow materials.
 6. Cast-in-place concrete.
 7. Pavement and overlay mixes/technical data.
- ii. Substitutions – If the Contractor prefers to use a product that differs from the drawings or specifications, a substitution submittal is required. Submittal will clearly compare the proposed material or product with the specified material or product.
- iii. Engineer/Owner shall have 15 calendar days to review each submittal.

f. TEMPORARY FACILITIES AND CONSTRUCTION MEASURES

- i. Storage Facilities – Contractor shall provide temporary on-site storage facilities to store materials and equipment. Contractor is responsible for the security and safety of all on-site materials and equipment. Any damaged or stolen materials or equipment shall be replaced at no cost to the Owner.
- ii. Sanitary Facilities – Contractor shall provide adequate sanitary facilities at the job site for all Contractor, Engineer and Owner personnel. Facilities shall be regularly maintained and cleaned.
- iii. Barricades, Fences and Safety Measures – Contractor is responsible for all site safety and protective measures. This includes all temporary barricades, fencing, plating, signage and other safety measures. All safety and protective measures shall meet applicable codes and standards.
- iv. Traffic Control – Contractor shall install and maintain all construction warning and detour signs in accordance with Vermont Agency of Transportation Standard Specifications and the Manual on Uniform Traffic Control Devices (MUTCD). All temporary signage shall be anchored with sandbags or equivalent methods to ensure signs stay upright and in the appropriate position. Contractor shall regularly

monitor signs, barricades, signals to ensure they remain in proper working order. Detour route shall be closely coordinated with Town personnel. All services (fire, emergency, police, school bus, postal) shall be notified by Contractor a minimum of 7 days prior to closing the road and immediately after road is re-opened to traffic. Portable variable message boards shall be installed on either side of the bridge a minimum of 7 days prior to closure.

- v. Environmental – Contractor shall install and maintain temporary environmental protective measures in accordance with applicable permitting documents and per the project drawings.
- vi. Utilities – Existing utilities shall be maintained at all times. Contractor is responsible for all DigSafe requirements. Coordination with utility authorities shall be a Contractor responsibility – this includes temporary supports, “pole-holds”, line shielding and associated tasks. Contractor shall coordinate with all utilities in the area that are not members of DigSafe to maintain all existing infrastructure. Protection of all utilities in the project area is a requirement. All repairs, damages, or other penalties shall be borne by the Contractor.

g. SITE DEMOLITION

- i. The Contractor shall demolish and/or modify all existing structures, facilities, and utilities as indicated on the drawings or specified herein. The Contractor shall furnish all materials, equipment, and labor to execute the work.
- ii. Demolished materials shall be legally disposed of at an approved facility by the Contractor. The Contractor is responsible for all costs to dispose of the material including labor, equipment, materials, trucking, and disposal fees.

h. SITE CLEARING AND GRUBBING

- i. Contractor shall clear and grub all necessary materials to complete the project within the limits of disturbance shown on project plans. Applicable items include: trees, shrubs, stumps, topsoil, snow/ice, trash/rubbish.
 - 1. Topsoil shall be segregated from other materials and stockpiled (using applicable erosion prevention and sediment control measures) for reuse during restoration of the site.
 - 2. Tree limbs and brush/vegetation may be mulched for EPSC measures or removed from site. No burning is allowed.
 - 3. Hardwood trees (excluding limbs) removed as part of the proposed repairs shall be removed from site or chipped on-site.
 - 4. Contractor to legally dispose of all materials at no expense to the Owner.

i. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

- i. Contractor shall install, maintain and upon completion of construction, remove erosion prevention and sediment control measures. Contractor shall comply with:

1. Vermont Erosion Prevention and Sediment Control Field Guide – Vermont Department of Environmental Conservation, Most Current Version.
2. The Vermont Standards & Specifications for Erosion Prevention & Sediment Control – Vermont Department of Environmental Conservation, Most Current Version.

j. PROTECTION AND REPAIR OF PROPERTY AND EXISTING INFRASTRUCTURE

- i. Contractor shall be responsible for protecting, maintaining and repairing or replacing site features during construction including:
 1. Underground Utilities – All DigSafe responsibilities are a responsibility of the Contractor as noted in previous sections.
 2. Overhead utilities shall be maintained and protected at all times. Temporary support(s) and/or pole hold(s) and/or relocation(s) shall be coordinated with the authority having jurisdiction. All temporary measures needed/required by the authority having jurisdiction shall be paid for by the Contractor. Any damage to existing poles or overhead utilities shall be paid for by the Contractor.
 3. Lawns, Grasses and Landscaping/Plantings – Contractor is responsible for restoring lawns and grass areas. Landscaping/plantings shall be replaced in-kind. Any pruning or cutting of branches shall be done in a neat and professional manner – cut ends of branches to be sealed by an acceptable arbor product within 24 hours of cutting.
 4. Survey monuments and markers – If existing survey markers or monuments are disturbed, Contractor shall pay a Professional Licensed Surveyor (registered in Vermont) to reset.
 5. Pavements – Pavement and driveways that are to remain shall not be damaged. If existing pavement and driveway areas are to be used as material stockpile and/or equipment parking areas, Contractor shall provide adequate temporary measures to protect the infrastructure from damage. Damaged pavements and driveways (as determined by Engineer or Owner) shall be removed and replaced by the Contractor at no cost to the Owner.
 6. Mailboxes – If mailboxes are in the area of disturbance, they shall be temporarily relocated/reset during construction to the satisfaction of the landowner and post office. After construction, mailboxes shall be reset to their original locations to the satisfaction of the landowner, post office and Engineer.

k. RECORD DRAWINGS

- i. The Contractor is responsible to keep one set of record drawings throughout the construction of the project. Differing conditions and actual locations/elevations of proposed improvements shall be clearly/neatly documented and dimensioned in red-pen or completed digitally in a PDF.

I. PROJECT CLOSEOUT

- i. Substantial Completion – Contractor will notify the Engineer and Owner when the project is ready to be inspected for Substantial Completion. Owner, Engineer and Contractor will conduct a walkthrough and document any outstanding items that remain to be completed (punchlist). If the Engineer and Owner determine that the completed work is substantially complete, a certificate will be issued with a final punch list.
- ii. Final Completion – Using the punchlist, the Contractor will complete all outstanding work items, remove temporary facilities, and conduct final cleaning of all work areas to the satisfaction of the Engineer and Owner. After completion of the punch list, Owner, Engineer and Contractor will conduct a final walkthrough. If satisfied, Owner and Engineer will release the certificate of final completion.

END OF SECTION

DRAFT

SECTION 1046—EPOXY OVERLAY

1046.1 DESCRIPTION - This work is construction of a multiple layer wearing surface of epoxy and aggregate on in-service bridge decks.

1046.2 MATERIAL –

(a) Polymeric Resin Binder. Provide a thermosetting polymer resin compound comprised of 100% solids which holds the aggregate firmly in position once all components are combined. All components will come from a single manufacturer listed in Bulletin 15 and conform to Table A. Cure specimens at 73F \pm 2F, relative humidity 50% \pm 2% and test specimens at 73F \pm 2F.

**Table A
Binder Requirements**

Property	Requirement	Test Method
Viscosity (poises)	10 – 70	ASTM D 2556-14, Model RVT Brookfield, Spindle No. 3 at 20 rpm
Gel Time (minutes)	15-45 minutes	ASTM C 881, para. 11.2 modified, 70 ml sample
Ultimate Tensile Strength (psi)	2,000-5,000 at 7 days	ASTM D 638
Ultimate Tensile Elongation (%)	30-70 at 7 days	ASTM D 638
Absorption (%)	1 max. at 24-hrs.	ASTM D 570
Compressive Strength (psi)	1,000 min. at 3 hours 5,000 min. at 24 hours	ASTM C 109, 50 mm square mortar cube with plastic inserts
Permeability to chloride ion (coulombs)	100 max. at 28-days	AASHTO T277
Thermal Compatibility (Mixed with aggregate)	No delamination	ASTM C884
Infrared spectrum	Established for each component by the Manufacturer	AASHTO T237, paragraph 4 and 5

(b) Fine Aggregate. Provide aggregate approved by the binder manufacturer. This aggregate consists of angular silica sand, basalt, or other highly siliceous metamorphic or igneous rock. Provide aggregate free of dirt, clay, asphalt, and other foreign or organic materials conforming to Table B.

**Table B
Aggregate Requirements**

Property	Requirement	Test Method
Moisture Percentage (%)	Less than 0.2	AASHTO T 255
Mohs Scale Hardness	7 min.	Mohs Hardness Test
Aggregate Gradation Requirements - Sieve Analysis		
Sieve Designation	Total Percent Passing	
(No. 4)	100	
(No. 8)	30-75	
(No. 16)	0-5	
(No. 30)	0-1	

(c) Certification: Certify binder resin as specified in Section 106.03(b)3.

For aggregate, provide independent testing from an AASHTO certified laboratory to verify the Table B requirements are met. Independent testing must be less than 12 months old at the time aggregate is furnished to the project. Submit the Independent testing results for local approval as specified in Section 106.02(a)2.c.

1046.3 CONSTRUCTION

(a) Qualification of the Installer. Submit a minimum of three projects including the installer's contact information having a cumulative minimum of 1,000 square yards of epoxy overlays placed within the past 3 years. Include contact information for the three projects. An installer not meeting the minimum requirements will be allowed to perform the installation operation if approved in writing by the binder manufacturer.

(b) Quality Control.

1. Quality Control (QC) Plan. As specified in Section 106.03(a)2.a, submit a project specific QC Plan for acceptance before material placement. Include key personnel, equipment, materials, proposed methods of installation and operation, and the following:

1.a Designated QC Plan Administrator. Provide a designated QC Plan Administrator having full authority to institute any action necessary for the successful operation of the QC Plan and is responsible for the following:

- Identify and provide contractor procedures for:
 - Documenting areas and quantities used of binder and aggregate of each layer at each epoxy overlay site to verify application rates conforming to Table C.
 - Documenting the temperature of each component of the binder before use.
 - Moisture control methods for the aggregate.
 - Cleaning and maintenance schedule for machinery and equipment.
 - Corrective actions for unsatisfactory construction practices and deviations from the specifications. Any deviation from the accepted QC Plan will be cause for immediate suspension of operations.
- Contractor performance of required field QC sampling, testing and record keeping in conformance with the approved QC Plan and contract documents.
- Maintain and make available upon request, complete records of sampling, testing, corrective actions, and QC inspection results.

1.b Manufacturer's Technical Representative. A manufacturer's technical representative responsible for the following:

- Train and provide recommendations to construction personnel in the safe handling and proper application of materials before placing the epoxy overlay.
- Required to be onsite for the first 2 days of installation if the installer does not meet the minimum requirements as specified in Section 1046.3(a).
- Required to be onsite if corrective work is necessary.

- Required to be onsite if directed.

2. Documentation. Provide the following documentation of the preparation and application of the overlay:

- Deck patching location(s)
- Surface preparation – surface profile level or depth, cleanliness, substrate pull off test locations and results
- Moisture test results
- Environmental conditions at the time of placement – include ambient air temperature, deck temperatures and weather conditions
- Product Data Sheets (PDS)
- Safety Data Sheets (SDS)
- Material information:
 - Resin – manufacturer, component expiration dates, proportioning method and rate, and yield computations for each layer
 - Aggregate – type of aggregate and yield computation as well as visual inspection of surface covering
- Final adhesion testing locations and results
- Document all repairs needed because of defective work

(c) Pre-Epoxy Overlay Placement Meeting. At least 2 weeks before overlay placement, schedule a pre-epoxy overlay placement meeting to review the specification, method and sequence of placement, quality control plan, and protective measures.

(d) Delivery and Storage of Materials. Order, stock, and store material necessary to perform overlay application before field preparation. Store materials in a clean, dry environment according to the manufacturer's recommendations. Do not expose the aggregate to rain or moisture. At the storage area, post SDS, PDS, and other information from the manufacturer pertaining to health hazards, worker protection, and safe practices for the storage, handling, and disposal of the materials.

Provide the manufacturer's name, date of manufacture, batch/lot number, trade name, quantity, and mixing ratio on each binder storage container. Provide producer name, date of shipment, batch/lot number, weight, and independent lab test reference number on containers with aggregate.

(e) Equipment. Equipment is subject to acceptance. Provide the following:

(1) Surface Preparation Equipment.

- Shotblasting equipment capable of removing all loose, disintegrated concrete, dirt, paint, oil, asphalt, laitance, carbonation, and curing materials from the deck surface.
- Sandblasting equipment capable of removing all oxidation, dirt, paint, oil, and asphalt from the metal expansion joints.
- Provide a self-propelled vacuum capable of picking up dust and other loose material from the shotblasting and sandblasting operation.
- Provide air compressors capable of producing a minimum of 180 cubic feet per minute and 80 pounds per square inch of clean, dry compressed air and equipped with an oil/water separator to remove dust and loose material.
- Do not use scarifiers, milling machines, or sandblasting instead of shot-blasting, unless approved by the Engineer.

(2) Mechanical Application Equipment.

- An epoxy distribution system capable of accurate and complete mixing of the epoxy resin and hardening agent, verification of the mix ratio, and uniform and accurate distribution of the epoxy materials at the specified rate on 100% of the work area. Provide equipment approved by the epoxy-based overlay manufacturer.
- A mechanical aggregate spreader capable of uniform and accurate application of the dry aggregate over 100% of the work area.
- Provide a self-propelled vacuum truck;
- An air compressor capable of producing oil free and moisture free compressed air to remove all dust and loose material.
- Hand tools to facilitate the placement of the surface treatment as specified in this specification and the manufacturer's recommendations.

(3) Hand Mixing and Manual Application. Hand mixing is not allowed unless accepted by the Representative.

- Provide calibrated containers for proper proportioning of the base and hardening components.
- Provide a clean, dry container large enough to blend and mix the proper proportions of base and hardening components.
- Provide a powered, paddle-type mixer for blending the base and hardening components.
- Provide squeegees, rollers, or brooms suitable for applying the mixed epoxy-based resin on the bridge deck surface at the specified application rate as specified in Table C.
- Provide shovels, hand spreaders, and other hand tools suitable for applying the aggregate at the specified rate.
- Provide brooms or air compressors equipped with an oil/water separator to remove excess aggregate after each layer of the overlay has cured.

(f) Surface Preparation. Sound the existing bridge deck surface to identify areas of unsound concrete in the presence of the Representative. Record locations of all areas determined to be unsound and provide documentation to the Representative. Remove unsound concrete and repair the areas as specified in Section 1040 and as directed. Do not use patching material containing magnesium phosphate. Do not apply epoxy overlay on concrete surfaces or repairs less than 28 days of age.

Perform pull tests to determine the suitability of the concrete surface according to ASTM C1583. Select locations to perform testing at a minimum of one location per span per lane or maximum of 4,000 square feet per lane, whichever is smaller. Include at least one test on newly repaired deck areas. The minimum acceptable bond strength on normal weight concrete cannot average less than 250 pounds per square inch.

No more than 24 hours before overlay placement begins, clean the bridge deck surface by shotblasting all surfaces to remove all curing compounds, loosely bonded mortar, surface carbonation, and deleterious material. Comply with the International Concrete Repair Institute (ICRI) standard for Concrete Surface Preparation (CSP) Level 5-7 or surface macrotexture depth of 0.04 to 0.08 inch according to PTM No. 751. Provide the necessary

concrete surface profile chips to visually verify the surface preparation. After shotblasting, vacuum sweep or air wash all surfaces to remove all dust, debris, and deleterious material.

In areas inaccessible by the shotblasting equipment (i.e., along curbs and median walls) use sandblasting or walk behind grinders or both to prepare the surface to the satisfaction of the manufacturer and Representative.

If cracks are present, remove loose material with compressed air and pre-treat cracks 1/4 inch or greater in width with the mixed binder. Do not overfill cracks. If cracks are overfilled shotblast or grind the material to make it flush with the adjacent pavement after the binder material is cured. Install the epoxy overlay after the binder in the pretreated cracks has gelled.

Construct the epoxy overlay so the final surface of the overlay is as shown on the standard drawings for expansion joints and dams. Shotblasting or concrete grinders may be used to create the proper profile. Prepare the concrete surface to provide a profile on both sides of the joint as specified in Section 501.3(o).

(g) Placing the epoxy overlay. If required, place a test strip of the overlay off the project site. Test strip should not exceed 100 square feet. Use the test strip for equipment calibration and establishing procedures and techniques for the actual overlay placement on the bridge deck.

Cover exposed areas not receiving overlay, such as curbs, sidewalks, railings, parapets, inlets, expansion dams, and along limits between adjacent lanes, if phasing application, or daily termination point with suitable coverings.

In phased construction, place joints between phases in neat lines parallel to the centerline of roadway. Stagger and overlap joints a minimum of 2 inches between successive layers so no ridges appear.

The deck surface must be dry before the application of the epoxy overlay. Do not place overlay if visible moisture is present on the concrete surface. Affix a sheet of transparent plastic to indicate the presence of moisture for a minimum of 2 hours depending on temperature, cloud cover, and conditions according to ASTM D4263 (modified to a minimum of 2 hours).

Use equipment to continuously mix, meter, and monitor the binder. If recommended by the binder manufacturer, use a heated metering pump. Mix the binder according to the manufacturer's recommendations.

Hand squeegee the mixed binder onto the prepared pavement surface using a serrated edge squeegee at uniform application rates as specified Table C.

Table C
Epoxy Overlay Application Rates

Course	Epoxy Rate	Aggregate Rate*
1	Not less than 0.22 gal./sq. yd	Not less than 10 lbs./sq. yd
2	Not less than 0.45 gal./sq. yd	Not less than 14.5 lbs./sq. yd

*Apply aggregate to completely cover the epoxy

Immediately after the binder application, mechanically spread the aggregate onto the wet, uncured binder at a uniform rate as specified in Table C. Do not allow loose aggregate or excessive dust onto any part of the adjacent, active travel lanes.

Hand spreading aggregate is allowed as a secondary method if mechanized equipment cannot be used due to access or geometry, as accepted.

Completely cover the wet, uncured binder with aggregate to achieve a uniform surface with no exposed binder remaining visible on the surface. Spread the aggregate without displacing the wet binder film during placement.

Remove excess aggregate from each course after the course has completely cured. Use brooms, vacuums, compressed air free from oil and water, or other approved methods to remove the excess aggregate. Do not remove excess aggregate until removal can be performed without tearing or damaging the surface.

Minimize walking or standing on the binder.

Locations identified by the Representative that did not receive a uniform and sufficient application of aggregate will be considered defective work. Remove and replace as specified in Section 1046.3(k).

Perform adhesion testing according to ASTM C1583 on the final layer. Test results will be the average of three tests on a test patch not less than 4.5 square feet. The minimum tensile adhesion strength cannot average less than 250 pounds per square inch. Perform a test patch at the same frequency as required for the initial pull tests conducted on the prepared concrete surface. Test each area at least 24 hours after the indicated minimum cure time for the second course.

If a failure occurs on an adhesion test, perform additional adhesion testing immediately before and immediately after the failed area. Continue testing until satisfactory test results are achieved. Remove and replace the failed area(s) at no additional cost to the Department.

(h) Curing. Do not allow vehicular traffic on the first course. Do not allow vehicular traffic on any course during the cure period.

Cure each course for the minimum cure period as specified in Table D unless longer periods are recommended by the manufacturer. Cure times are based on the average temperature of deck surface, resin, and aggregate components.

Table D
Curing Times

Course	60F- 64F	65F-69F	70F-74F	75F-79F	80F-84F	85 +F
1	4 hours	3 hours	2.5 hours	2 hours	1.5 hours	1 hour
2+	6.5 hours	5 hours	4 hours	3 hours	3 hours	3 hours

(i) Aggregate Cleanup. Collected aggregate can be reused if it is clean, uncontaminated, and dry. If contaminated aggregate is mixed with virgin aggregate, all the aggregate in the container will be considered contaminated and not acceptable for use in the epoxy overlay.

Between 30 and 45 days after placing the epoxy overlay, reclaim loose aggregate using a vacuum sweeper. Completely clean scuppers and expansion dams of accumulated aggregate. Use means of cleaning that does not damage neoprene glands in strip seal expansion dams. This reclaimed aggregate cannot be reused.

(j) Limitations of Operations. Follow the limits for all temperature and ambient conditions in the accepted QC plan and the manufacturer's requirements. Do not place epoxy overlays from October 1 to April 30, unless allowed in writing by the District Executive.

Do not apply the overlay at surface, air, or resin and aggregate component temperatures lower than 60 F. Do not apply the epoxy-based concrete overlay if the temperature is expected to drop below 55F within 8 hours after application or if the mixed epoxy-based resin gels in less than 10 minutes.

(k) Defective Work. Section 105.12 and as follows:

If temperatures fall below 60F, the Engineer will require a longer curing period. If, at any time during the curing period, the temperature falls below 50F, the work may be considered unsatisfactory and rejected.

Protect freshly applied overlays from sudden or unexpected rain. Stop all application operations if it starts to rain. The Representative may order removal and replacement of any material damaged by rainfall or contractor operations that cannot be satisfactorily repaired.

Remove the rejected or damaged epoxy-based concrete overlay in rectangular sections by milling or saw cutting to the top of the concrete deck surface. Remove and replace at no additional cost to the Department.

(l) Acceptance.

Table E
Acceptance and Payment Factor Per Each Individual Layer of Epoxy Overlay

Binder Rate	Item Pay Factor (%)
100% or more of the minimum binder rate	100% payment for the layer. *
> 80% and < 100% of minimum binder rate	60% payment for the layer. *
< 80% of minimum binder rate	remove and replace. *

*The payment for each layer will be independent.

1046.4 MEASUREMENT AND PAYMENT—Square Yard

Payment includes surface preparation, furnishing, applying all courses, and final cleaning.

Repairs to the bridge deck will be paid separately for type of concrete bridge deck repair as indicated.

PRODUCT DATA SHEET

Sikadur®-22 Lo-Mod FS

LOW-MODULUS, FAST SETTING, MEDIUM-VISCOSITY, EPOXY RESIN BINDER

PRODUCT DESCRIPTION

Sikadur®-22 Lo-Mod FS is a 2-component, 100% solids, moisture-tolerant, fast setting epoxy resin binder. It conforms to the current ASTM C-881, Grade-1 and AASHTO M-235 specifications.

USES

Sikadur®-22 Lo-Mod FS may only be used by experienced professionals. Use neat as the binder resin for a skid-resistant broadcast overlay. Use also as the binder resin for epoxy mortar and concrete for patching and overlays.

CHARACTERISTICS / ADVANTAGES

- Fast Setting for quick turn around
- Meets 3 h/1000 psi requirement when mixed as an epoxy mortar
- Tolerant to moisture both before and after cure
- Convenient easy mix ratio A:B = 1:1 by volume
- Excellent strength development
- Leveling viscosity for easy, efficient application of a broadcast overlay
- Successfully used in HFST applications. Refer to local DOT specs. for product acceptance

PRODUCT INFORMATION

Chemical Base	Epoxy Resin
Packaging	4 gallon (15 L) units / 110 gallon (416 L) unit / 660 (2498 L) gallon totes. Note: Part A of the Sikadur® 22 Lo-Mod, Sikadur®-22 Lo-Mod FS and Sikadur® 21 Lo-Mod LV is a universal component of these three products.
Color	Clear to light amber
Shelf Life	24 months in original, unopened containers
Storage Conditions	Store dry at 40–95 °F (4–35 °C) Condition material at 65–85 °F (18–29 °C) before using.
Volatile organic compound (VOC) content	<20 g/L
Viscosity	Approximately 2,000 cps

TECHNICAL INFORMATION

Shore D Hardness	72		(ASTM D-2240) 73 °F (23 °C) 50 % R.H.
Compressive Strength		40 °F(4 °C) 73 °F (23 °C) 90 °F (32 °C)	(ASTM C-579)
	3 hours	- 1750 psi 3600 psi	
	8 hours	2000 psi 4400 psi 6400 psi	
	1 day	4500 psi 6500 psi 8000 psi	
	3 days	5500 psi 7500 psi 8500 psi	
	7 days	8500 psi 8500 psi 9000 psi	
	14 days	9000 psi 9000 psi 9000 psi	
	28 days	9000 psi 9000 psi 9000 psi	
Material cured and tested at the temperatures indicated and 50 % R.H.			
Modulus of Elasticity in Compression	7 days	40,000 psi	(ASTM C-579)
	28 days	40,000 psi	73 °F (23 °C) 50 % R.H.
Tensile Strength		Mortar 1:3 Neat	(ASTM D-638)
	7 day	1200 psi 2650 psi	73 °F (23 °C) 50 % R.H.
Elongation at Break		Mortar 1:3 Neat	(ASTM D-638)
	7 day	40 % 55 %	73 °F (23 °C) 50 % R.H.
Tensile Adhesion Strength		Mortar 1:3 Neat	(ASTM C-1583; ACI 503R)
	1 day	- > 550 psi	73 °F (23 °C)
	7 days	- > 570 psi	50 % R.H.
		(concrete failure) (concrete failure)	
Shear Strength		Mortar 1:3 Neat	(ASTM D-732)
	7 day	2600 psi 3430 psi	73 °F (23 °C) 50 % R.H.
Thermal Compatibility	Pass		(ASTM C-884)
Abrasion Resistance		Mortar 1:3 Neat	(Taber Abrader)
	14 day, Weight loss, 1,000 cycles*	2.0 grams 0.030 grams	73 °F (23 °C) 50 % R.H.
* (H-22 wheel; 1,000 gm weight for mortar/ C-17 wheel, 1,000 gm wt for neat)			
Water Absorption		Mortar 1:3 Neat	(ASTM D-570)
	7 day (24 hour immersion)	- <0.20 %	73 °F (23 °C) 50 % R.H.
Rapid Chloride Permeability	0 coulombs		(AASHTO T-277)

APPLICATION INFORMATION

Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.
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Coverage1 gal. yields 231 in³

Mortar Binder - 1 gal. of mixed Sikadur® 22 Lo-Mod FS with the addition of 5 gal. by loose volume of an oven dried sand, yields approximately 808 cu. in. of epoxy mortar

Pot Life Approximately 15–20 minutes (60 gram mass; ASTM C-881)

Waiting / Recoat Times

	60–64 °F (16–18 °C)	65–69 °F (19–21 °C)	70–74 °F (21–23 °C)
Coat 1	4–4 ½ h	2 ½–3 h	2–2 ½ h
Coat 2	5 ½–6 h	4 ½–5 h	4 h
	75–79 °F (24–26 °C)	80–84 °F (27–29 °C)	85+ °F (29+ °C)
Coat 1	2 h	1.5 h	1 h
Coat 2	3 h	3 h	2 ½–3 h

Average Substrate and Material Temperature. These set times were determined under laboratory conditions, actual set times may vary based on on-site conditions

APPLICATION INSTRUCTIONS**SUBSTRATE PREPARATION**

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes and any other contaminants.

Preparation Work: Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blast cleaning or equivalent mechanical means.

Steel - Should be cleaned and prepared thoroughly by blast cleaning to white metal finish.

MIXING

Mixing Pre-mix each component. Proportion equal parts by volume of Component 'A' and 'B' into clean pail. Mix thoroughly for 3 min. with Sika paddle on low-speed (400–600 rpm) drill until uniformly blended. Mix only that quantity that can be used within pot life.

To prepare epoxy mortar - Slowly add 5 parts by loose volume of oven-dried sand to 1 part mixed resin.

APPLICATION METHOD / TOOLS

Broadcast Overlay - Prime the prepared substrate with Sikadur®-22 Lo-Mod FS. While primer is still tacky, spread mixed Sikadur®-22 Lo-Mod FS with a 3/16 in. (4.7 mm) notched squeegee. When material levels, broadcast the oven-dried aggregate slowly allowing it to settle in the epoxy binder.

Ultimately the broadcast aggregate should be applied to excess at a rate of 2 lb./ft² (0.9 kg/m²) Remove excess broadcast aggregate after epoxy has set. Priming is an optional step in the broadcast overlay applications.

Epoxy Mortar - Prime prepared substrate with mixed

Sikadur®-22 Lo-Mod FS. While primer is still tacky, apply epoxy mortar by trowel or vibrating screed. Finish with finishing trowel. Priming is mandatory when using the Sikadur®-22 Lo-Mod FS as an epoxy mortar.

LIMITATIONS

- Minimum substrate and ambient temperature 40 °F (4 °C).
- Minimum age of concrete before application is 21–28 days depending upon curing and drying conditions.
- For on grade, split-slab and unvented metal pan deck, please consult Sika Technical Service regarding moisture limitations.
- Maximum thickness 1/2 in. (13 mm) exterior exposed to thermal change.
- Do not dilute. Addition of solvents will prevent proper cure.
- Use oven-dried aggregates only.
- Material is a vapor barrier after cure.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.
- For HFST applications, system and application details are governed by local DOT & AASHTO specification.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LOCAL RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

KEEP CONTAINER TIGHTLY CLOSED •KEEP OUT OF REACH OF CHILDREN •NOT FOR INTERNAL CONSUMPTION •FOR INDUSTRIAL USE ONLY •FOR PROFESSIONAL USE ONLY

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use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 201-933-8300.

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