

**ADDENDUM NO. 1
TO
BIDDING AND CONTRACT REQUIREMENTS AND SPECIFICATIONS
FOR
HOP BROOK CULVERT REPLACEMENT
WARREN WRIGHT ROAD
BELCHERTOWN, MA
May 28, 2026**

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Discussions held during the Pre-Bid Conference or over phone or email are informal and informational only. All official changes to the Contract Documents are made only by addenda.

The following changes and additional information are hereby made a part of the Contract Documents.

GENERAL:

1. Questions received via email are included with the responses in the attached question and answer document.

CONTRACT MANUAL:

1. 00 41 12 Bid Form
 - a. Article 6.01 – **CHANGE** date from 5/31/2025 to 6/1/2027.
 - b. Bid Schedule
 - i. **ADD** clarification regarding item numbers: “Item Numbers reference the associated Massachusetts Department of Transportation Standard Specifications for Highways and Bridges. Item Numbers denoted with an asterisk (“ * ”) refer to special provisions, which are provided in the Technical Specifications section of the Contract Manual.”
 - ii. **UPDATE** quantity for Item 765 (Seeding) from 0 SY to 2,300 SY.
2. 00 73 00 Supplementary Conditions
 - a. **REMOVE** “(awaiting final approval)” for the Turtle Protection Plan. The plan has been approved.

CONTRACT DRAWINGS:

1. Replace Sheets 20 to 33 with the signed and approved Massachusetts Department of Transportation Chapter 85 Bridge Plans included with this Addendum.

ATTACHMENTS:

1. Question and answer document.
2. Contract Manual – Revised Sections 00 41 12 Bid Form and 00 73 00 Supplementary Conditions
3. Contract Drawings – Signed and approved Massachusetts Department of Transportation Chapter 85 Bridge Plans

END OF ADDENDUM NO.1

Questions and Answers**Hop Brook Culvert Replacement****Warren Wright Road****Belchertown, MA**

Questions received over email with responses are provided below.

Q: Will Fuss & O'Neil have a representative onsite logging the borings for Item 190.1?

A: Fuss & O'Neill may have someone onsite during the logging, but it is expected that the Contractor hire a qualified professional to oversee the work.

Q: Bid Schedule page 00 41 12 – 7, Item 765 for SEEDING has a listed quantity of zero. Please verify the correct bid quantity for Item 765 SEEDING.

A: The correct bid quantity is 2,300 SY. The Bid Form has been revised.

Q: Bid Form page 00 41 12 – 2, Article 6.01 states that the Final Payment Date is 5/31/2025. Instructions to Bidders page 00 21 13 – 8, Article 9.01 states that the Final Payment Date is 6/1/2027. Please verify the correct Date for Final Payment.

A: The correct date for Final Payment is 6/1/2027. The Bid Form has been revised.

Q: Is there MassDOT prequal for the Belchertown culvert project? If so, are we listed on your MassDOT list of eligible bidders?

A: There is no required MassDOT prequalification or list of eligible bidders for this project.

Q: Please send us the Existing Site Conditions that is referenced in Section 00 21 13 Article 5.02.A.2.

A: The Existing Site Conditions referenced are part of the Contract Manual as Attachment A OTO Geotechnical Report and the Construction Drawings. This is listed within the Contract Manual, Section 00 73 00 Supplemental Conditions, Article 5.03.

Q: The Bid Form calls for proposed subcontractors and suppliers to be submitted with the bid. May these items be submitted (5) days after the bid?

A: The Bid Schedule must be complete for submission; however a list of subcontractors and suppliers may be submitted up to five (5) days after the bid.

Q: What is the significance of the * by some of the Item No.?

A: The asterisk denotes items that have special provisions, which can be found in the Technical Specifications section of the Contract Manual. The Bid Form has been updated to clarify this.

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: **Town of Belchertown, 290 Jackson Street, Belchertown, MA 01007.**
- 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 bond;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
 - E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - F. Required Bidder Qualification Statement with supporting data;

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

- 3.01 *Lump Sum Bids*
- A. Deleted.
- 3.02 *Unit Price Bids*
- A. Bidder will perform the following Work at the indicated unit price in the attached bid schedule.
 - B. Bidder acknowledges that:
 - 1. 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.

3.03 *Total Bid Price (Lump Sum and Unit Prices)*

Total Bid Price (Total of all Unit Price Bids)	\$
Completion Date for Final Payment	

ARTICLE 4—DELETED

ARTICLE 5—DELETED

ARTICLE 6—TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be ready for Final Payment by **June 1, 2027**.
- 6.02 Deleted.
- 6.03 Deleted.
- 6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *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.

7.03 *Receipt of Addenda*

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

Addendum Number	Addendum Date

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 *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 carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. 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; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data 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.
7. 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.
8. 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.
9. 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.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. 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.

8.02 *Bidder's Certifications*

- A. The Bidder certifies the following:

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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. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of 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)

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

Attest:

(individual's signature)

Name:

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_____ *(typed or printed)*

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

Bidder's Contractor License No.: (if applicable) _____

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BID SCHEDULE

Item Numbers reference the associated Massachusetts Department of Transportation Standard Specifications for Highways and Bridges. Item Numbers denoted with an asterisk (“ * ”) refer to special provisions, which are provided in the Technical Specifications section of the Contract Manual.

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
101.	CLEARING AND GRUBBING	A	0.3		\$
103.	TREE REMOVED - DIAMETER UNDER 24 INCHES	EA	10		\$
104.	TREE REMOVED - DIAMETER 24 INCHES AND OVER	EA	1		\$
115.1*	DEMOLITION OF BRIDGE NO. B-05-028 (5KR)	LS	1		\$
120.	EARTH EXCAVATION	CY	180		\$
121.	CLASS A ROCK EXCAVATION	CY	10		\$
123.	MUCK EXCAVATION	CY	1585		\$
129.2*	OLD PAVEMENT EXCAVATION	SY	1650		\$
140.1	BRIDGE EXCAVATION WITHIN COFFERDAM	CY	310		\$
150.	ORDINARY BORROW	CY	930		\$
151.	GRAVEL BORROW	CY	580		\$
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CY	715		\$
156.	CRUSHED STONE	TON	57		\$
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	TON	130		\$
157.1*	GABIONS	CY	120		\$
170.	FINE GRADING AND COMPACTING - SUBGRADE AREA	SY	1650		\$
190.1*	CONSTRUCTION PHASE BORINGS	FT	30		\$

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Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE	CY	230		\$
402.12*	DENSE GRADED CRUSHED STONE FOR SHOULDERS	CY	120		\$
440.	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL	LB	6410		\$
443	WATER FOR ROADWAY DUST CONTROL	MGL	7		\$
450.231	SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5- P)	TON	180		\$
450.31	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)	TON	225		\$
452.	ASPHALT EMULSION FOR TACK COAT	GAL	225		\$
453.	HMA JOINT ADHESIVE	FT	45		\$
620.131	GUARDRAIL, DEEP POST (SINGLE FACED)	FT	697		\$
627.1	TRAILING ANCHORAGE	EA	2		\$
627.82	GUARDRAIL TANGENT END TREATMENT, TL-2	EA	2		\$
628.24	TRANSITION TO BRIDGE RAIL	EA	4		\$
697.	SEDIMENTATION FENCE	FT	900		\$
698.1*	GEOTEXTILE FABRIC FOR STABILIZATION	SY	800		\$
698.3*	GEOTEXTILE FABRIC FOR SEPARATION	SY	785		\$
734.*	SIGN REMOVED AND RESET	EA	1		\$
748.	MOBILIZATION	LS	1		\$
748.1*	TEMPORARY ACCESS ROAD FOR USE BY NATIONAL GRID	LS	1		\$
751.	LOAM FOR ROADSIDES	CY	105		\$

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Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
765.	SEEDING	SY	2,300		\$
765.1*	VINE - VIRGINIA CREEPER	EA	120		\$
765.554*	SEEDING - WETLAND MIX	LB	2		\$
767.121*	SEDIMENT CONTROL BARRIER	FT	964		\$
833.7	DELINEATION FOR GUARDRAIL TERMINAL	EA	4		\$
851.11*	TRAFFIC CONES FOR TRAFFIC MANAGEMENT	LS	1		\$
852.	SAFETY SIGNING FOR TRAFFIC MANAGEMENT	SF	220		\$
853.1	PORTABLE BREAKAWAY BARRICADE TYPE III	EA	2		\$
853.2	TEMPORARY BARRIER (TL-2)	FT	44		\$
859.1*	REFLECTORIZED DRUM	LS	1		\$
866.106	6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)	FT	1200		\$
983.01*	STOCKPILE AND PLACEMENT OF NATURAL STREAMBED MATERIAL	CY	40		\$
983.011*	STOCKPILE AND PLACEMENT OF WETLAND MATERIAL	CY	15		\$
983.02*	SUPPLEMENTAL NATURAL STREAMBED MATERIAL	CY	20		\$
983.03*	STONE SCOUR PROTECTION FHWA CLASS II	TON	230		\$
983.031*	STONE SCOUR PROTECTION FHWA CLASS I	TON	65		\$
990.1*	COFFERDAM STRUCTURE - BRIDGE NO. B-05-028	LS	1		\$
990.11*	COFFERDAM STRUCTURE - CULVERT TERRESTRIAL PASSAGE	LS	1		\$
991.1*	CONTROL OF WATER - STRUCTURE NO. B-05-028	LS	1		\$

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Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
991.11*	CONTROL OF WATER - CULVERT TERRESTRIAL PASSAGE	LS	1		\$
995.01*	BRIDGE STRUCTURE, BRIDGE NO. B-05-028	LS	1		\$
995.011*	CULVERT STRUCTURE, TERRESTRIAL PASSAGE	LS	1		\$

TOTAL BASE BID \$ _____

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01 Add the following language at the end of Paragraph 1.01.A.3:

The Application for Payment form to be used on this Project is EJCDC C-620 or similar approved format.

SC-1.01 Add the following at the end of Paragraph 1.01.A.8:

The Change Order form to be used on this Project is EJCDC C-941.

SC-1.01 Add the following at the end of Paragraph 1.01.A.42:

For the purposes of M.G.L. Chapter 30, Section 39G, Completion of public works; semi-final and final estimates; payments; extra work; disputed items, Substantial Completion shall also mean either that the Work has been completed except for Work having a valued at less than 1 percent of the then adjusted total Contract Price, or substantially all of the Work has been completed and opened to public use except for minor incomplete or unsatisfactory Work items that do not materially impair the usefulness of the Work as required by the Contract.

SC-1.01 Add the following at the end of Paragraph 1.01.A.50:

A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order. The Work Change Directive form to be used on this Project is EJCDC C-940.

SC-1.01 Add the following new paragraph immediately after Paragraph 1.01.A.50:

A.51. "Project Closeout Documents" shall mean complete as-built drawings; warranties; project submittals and shop drawings; executed Substantial/Final Completion forms; or other documents as requested by the Owner or Engineer. As-builts shall be submitted in electronic, CAD format.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraph 2.01.B. in its entirety and insert the following in its place:

2.03 *Before Starting Construction*

SC-2.03 Add a new paragraph immediately after Paragraph 2.03.A of the General Conditions, which is to read as follows:

Before any work at the site is started, Contractor shall deliver to Owner, with a copy to Engineer, certificates of insurance (and other evidence of insurance requested by Owner) which Contractor is required to purchase and maintain in accordance with the requirements of Article 6. Contractor shall include and identify on the certificate of insurance, indemnification as required by Article 7.18.

2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

B. *Electronic Documents Protocol*: The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol (“EDP” or “Protocol”) for exchange of electronic transmittals.

1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.
- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party’s use of software application packages,

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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operating systems, or computer hardware differing from those established in this Protocol.

- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions (“System Infrastructure”) at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is **20 MB**. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology (“IT”) for maintaining operations of its System Infrastructure during the Project, including coordination with the party’s individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.
 - e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
 - f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
 - g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.
- C. *Software Requirements for Electronic Document Exchange; Limitations*
- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
 - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
 - 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. *Requests by Contractor for Electronic Documents in Other Formats*

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.
2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:
 - a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.
 - b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.
 - c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.
 - d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.

3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at **\$200** per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

SC-3.01 Add the following subparagraph immediately under Paragraph 3.01.A of the General Conditions which is to read as follows:

1. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

SC-3.03 Delete Paragraph 3.03.A.3 in its entirety and insert the following:

Contractor shall be liable to Owner and/or Engineer for failure to report any such conflict, error, ambiguity or discrepancy if Contractor knew or reasonably should have known thereof.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.03 Reference Points

SC-4.03 Add a new paragraph at the end of Paragraph 4.03.A of the General Conditions, which is to read as follows:

B. Engineer may check the lines, elevations, reference marks, batter boards, etc., set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate and satisfactory construction and completion of the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades.

4.04 Progress Schedule

SC-4.04 Add the following paragraph after Paragraph 4.04.A.2 of the General Conditions:

3. The Contractor's resident superintendent shall attend monthly progress meetings at the site of the work with the Engineer and others as appropriate to review schedule status and such other pertinent subjects as may be listed on the agenda by the Engineer.

4.05 *Delays in Contractor's Progress*

SC-4.05 At the beginning of the first sentence of Paragraph 4.05.A, insert the following: "In accordance with G.L. c. 30, §390, ..." In the first sentence of paragraph 4.05.A, strike the word "shall" and replace with "may".

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.
- b. Contractor shall base the bid on costs that anticipate up to five days of abnormal weather conditions throughout the duration of this Contract.
 - 1) Every workday on which one or more of the following conditions exist will be considered a "bad weather day":
 - i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds 2" of precipitation (as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.

SC-4.05 Delete Paragraph 4.05.G and insert the following in its place:

G. Delays caused by or within the control of the Owner: In such event, and except as provided in M.G.L. c. 30, §390, the Contractor's sole remedy shall be an extension of the Contract Time. Except as provided in M.G.L. c. 30, §390, Contractor shall not be eligible for any increase in the Contract Price on account of any delay in the Work, no matter by whom such delay is caused, and Contractor shall make no claim for such an increase, whether such claim is styled as a claim for delay damages, acceleration of work, loss of production, or otherwise.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.02 *Use of Site and Other Areas*

SC-5.02 Add the following new paragraph immediately after Paragraph 5.02.A.2:

3. Environmental Site and Permit Requirements

- a. In-water work is restricted to periods of low-flow conditions which typically occurs between July 1 and October 31.
- b. The Contractor shall meet the conditions and limitations of all environmental permits required for the performance of the Work, including but not limited to those listed in the table below. The Contractor shall comply with all conditions of such permits and shall promptly notify the Owner of any changes in permit status or conditions. The Owner shall be responsible for securing permits prior to commencement of work. Permits and approvals listed below are included as attachments. Copies of the documents listed below shall be made available at the work site.

Issuing Agency	Document Title	Date of Document	Requirements
<i>Belchertown Conservation Commission</i>	<i>Order of Conditions for DEP #104-1112</i>	<i>April 24, 2024</i>	<i>Restoration Order of Conditions related to temporary and permanent wetland impacts</i>
<i>U.S. Army Corps of Engineers</i>	<i>General Permits for the Commonwealth of Massachusetts</i>	<i>June 2, 2023</i>	<i>General Permit Conditions</i>
	<i>Permit # NAE-2024-02104</i>	<i>October 18, 2024</i>	<i>Submission of Work-Start Notification Form (min. notice of two weeks before work begins)</i>
<i>The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife</i>	<i>Turtle Protection Plan</i>	<i>April 30, 2026</i>	<i>Protection during construction of the rare species <i>Glyptemys insculpta</i> (Wood Turtle)</i>

5.03 *Subsurface and Physical Conditions*

SC-5.03 In paragraph 5.03.C insert the word “reasonably” before the word “rely” in the first line and insert the following at the end of the first sentence:

The Owner does not warrant or guarantee the accuracy or completeness of the information therein, and the Contractor may not so rely to the extent that the Contractor knows, or reasonably should have known, of any inaccuracy or omission therein.

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

HOP BROOK CULVERT REPLACEMENT
WARREN WRIGHT ROAD
BELCHERTOWN, MASSACHUSETTS

Report Title	Date of Report	Technical Data
Geotechnical Engineering Recommendations, Hop Brook Culvert Replacement, Bridge No. BIN B-05-028 (CMF)	April 13, 2026	Summary of subsurface conditions

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
Hop Brook Culvert Replacement Construction Plans	May 7, 2026	Existing conditions

5.04 *Differing Subsurface and Physical Conditions*

SC-5.04 Insert the following paragraph before Paragraph 5.04.A:

In accordance with Massachusetts General Laws Chapter 30, Section 39N, if, during the progress of the Work, the Contractor or the Owner discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the Contract Documents either the Contractor or the Owner may request an equitable adjustment in the Contract Price applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such request to the other party as soon as possible after such conditions are discovered. Upon receipt of such a request from the Contractor, or upon its own initiative, the Owner will make an investigation of such physical conditions, and if they differ substantially or materially from those shown on the plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, the Owner will make an equitable adjustment in the Contract Price and the Contract shall be modified in writing accordingly.

SC-5.04 Amend Paragraph 5.04.E to add the following before the first sentence of that paragraph:

Adjustments resulting from actual subsurface or latent physical conditions from those indicated will be in accordance with Massachusetts General Law, Chapter 30, Section 39N and the applicable provisions of the Contract Documents.

Replace the word “shall” in the first sentence with “may.”

Amend sub-paragraph b. to add the following after the words “Paragraph 13.03”:

and provided that the Contractor shall only be entitled to an adjustment in Contract Price to the extent required by Massachusetts General Law, Chapter 30, Section 39N

5.05 *Underground Facilities*

SC-5.05 Delete the phrase “or was not shown or indicated with reasonable accuracy” following the words “Contract Documents” in the first sentence of Paragraph 5.05.B and Paragraph 5.05.C.1.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new subparagraph immediately after Paragraph 5.06.A.3:

4. The following table lists the reports or drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report/Drawing Title	Date of Report/Drawing	Technical Data
None		

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).
3. Pursuant to M.G.L. Chapter 30, Section 39A, Construction contracts for public ways, airports or public works; truck rentals; security for payment, and M.G.L. Chapter 149, Section 29, Bonds for payment for labor, materials, rentals or transportation charges (et al), the required payment bond shall also cover payment by the Contractor and Subcontractors for the rental or hire of dump trucks and “the rental or hire of vehicles, steam shovels, rollers propelled by steam or other power, concrete mixers, tools and other appliances and equipment employed in such construction,” and for payment of transportation charges directly related to such rental or hire. Such security for payment of transportation charges shall be incorporated by appropriate reference thereto as an additional obligation or condition in the required bonds.
4. In addition, such bonds shall cover payment by Contractor and Subcontractors of any sums due trustees or other persons authorized to collect such payments from the Contractor or Subcontractors, for health and welfare plans, supplementary unemployment benefit plans and other fringe benefits which are payable in cash and provided for in collective bargaining agreements between organized labor and the Contractor or Subcontractors.

Add the following new paragraph immediately after 6.01.H:

- I. If there is more than one surety company, the surety companies shall be jointly and severally liable.

6.02 *Insurance—General Provisions*

SC-6.02 Delete Paragraph 6.02.E in its entirety.

SC-6.02 Add the following paragraph immediately after 6.02.N

If Owner has any objection to the coverage afforded by or other provisions of the insurance purchased and maintained by Contractor in accordance with this Article 6 on the basis of its not complying with the Contract Documents, Owner will notify Contractor in writing thereof within thirty days of the date of delivery of such certificates to Owner in accordance with paragraph 2.01.B, and Contractor will provide such additional information in respect of insurance provided by him as Owner may reasonably request.

6.03 *Contractor’s Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. *Workers’ Compensation and Employer’s Liability:* Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance, including, as applicable, United States Longshoreman and Harbor Workers’ Compensation Act, Jones Act, stop-gap employer’s liability coverage for monopolistic states, and foreign voluntary workers’ compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers’ Compensation and Related Policies	Policy limits of not less than:
Workers’ Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman’s)	Statutory
Foreign voluntary workers’ compensation (employer’s responsibility coverage), if applicable	Statutory
Employer’s Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000

E. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

F. *Commercial General Liability—Form and Content:* Contractor’s commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

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general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- G. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

H. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
Property Damage – Each Occurrence	\$1,000,000
Property Damage – Annual Aggregate	\$3,000,000
Bodily Injury – Per Person	\$1,000,000
Bodily Injury - Each Occurrence	\$3,000,000

- I. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance 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 must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury and Property Damage – Per Person	\$500,000
Bodily Injury and Property Damage – Per Accident	\$1,000,000

- J. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

- K. *Contractor’s Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor’s Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$1,000,000
General Aggregate	\$1,000,000

- L. *Contractor’s Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the

duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor’s Professional Liability	Policy limits of not less than:
Each Occurrence/Claim	\$1,000,000
Annual Aggregate	\$3,000,000

6.04 *Builder’s Risk and Other Property Insurance*

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. *Builder’s Risk Requirements:* The builder’s risk insurance must:

1. be written on a builder’s risk “all risk” policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).
 - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
 - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder’s risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier). If this coverage is subject to a sublimit, such sublimit will be a minimum of \$N/A.
5. extend to cover damage or loss to insured property while in transit. If this coverage is subject to a sublimit, such sublimit will be a minimum of \$N/A.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.
9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
 - a. None
11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
 - a. None
12. If debris removal in connection with repair or replacement of insured property is subject to a coverage sublimit, such sublimit will be a minimum of \$N/A.
13. In addition to the coverage sublimits stated above, the following coverages are also subject to sublimits, as follows:
 - a. None.

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

SC-7.02 Add the following new Paragraph 7.02.C immediately after Paragraph 7.02.B:

The site superintendent may be a direct employee of the subcontractor provided that this individual has the full authority and responsibility of the general contractor’s specified superintendent. The General Contractor shall submit a letter to the Owner and the Engineer stating who the supervisor is and defining his/her authority during all construction related activities.

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours are defined as Monday through Friday, excluding holidays, between the hours of 7:00 AM and 7:00 PM. Requests to work other than regular working hours shall be submitted to Engineer not less than 48 hours prior to any proposed change. Occasional unscheduled overtime on weekdays may be permitted provided it is approved by Engineer.
2. Owner's legal holidays are: N/A.

SC-7.03 Add the following new paragraphs immediately after Paragraph 7.03.C:

- D. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer’s services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.
- E. Contractor and Subcontractors shall, insofar as practicable, give preference in the hiring of workers for the Project to qualified local residents with first preference being given to citizens of the United States who have served in the armed forces of the United States and have been honorably discharged therefrom or released from active duty therein.
- F. Contractor shall employ only competent persons to do the work and whenever Owner shall notify Contractor, in writing, that any person on the Work appears to be incompetent, disorderly, or otherwise unsatisfactory, such person shall be removed from the Project and shall not again be employed on it except with the consent of Owner.”
- . Contractor shall provide and maintain sanitary facilities for all persons employed on the Work, beginning with the first worker at the Site. Said facilities shall meet the following requirements unless otherwise specified in the Supplementary General Conditions or Specifications.
 1. There shall be no fewer facilities than the number required by applicable Laws;

2. Facilities shall be kept in a clean sanitary condition at all times and shall be adequately screened to be inaccessible to flies. (Note: If existing sanitary facilities at the Site are to be used by the Contractor, this requirement will be modified accordingly in the Supplementary General Conditions or Specifications.)”

7.05 *“Or Equals”*

SC-7.05 Insert the following at the end of the third sentence of Paragraph 7.05.A: “, and in accordance with G.L. c.30, §39M.”

Add a new paragraph SC-7.04.A.1.c immediately after paragraph 7.04A.1.b, which is to read as follows:

- c. It shall be Contractor’s responsibility to coordinate all submittals to Engineer for approval to eliminate any conflicts which might arise due to the use of “or equal” items. Any additional costs incidental to the use of “or equal” items shall be paid by Contractor.

7.07 *Concerning Subcontractors and Suppliers*

SC-7.07 Delete the third and fourth sentences of Paragraph 7.07.E in their entirety and replace them as follows:

If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it in writing, then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit a replacement for the rejected Subcontractor or Supplier that is acceptable to Owner.

Add the following paragraph immediately after Paragraph 7.07.M:

- N. Contractor shall make payments to Subcontractors in accordance with Massachusetts General Laws Chapter 30, Section 39F.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

B. Per Section 6(f) of Chapter 64H of the Massachusetts General Laws, Owner is exempt from payment of sales and compensating use taxes of the State of Massachusetts and of cities and counties thereof on all building materials and supplies to be used in the Work. The words “building materials and supplies” shall include all materials and supplies consumed, employed or expended in the construction, reconstruction, alteration, remodeling or repair of any building, structure, public highway, bridge or other such public work, as well as such material and supplies physically incorporated therein. Said words shall also include rental charges for construction vehicles, equipment and machinery rented specifically for use on the site of the project or while being used exclusively for the transportation of materials for the project. Contractor shall not include in their prices any amount therefore.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.

2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

7.12 *Record Documents*

SC-7.12 Add the following new paragraph and subparagraphs immediately after Paragraph 7.12.A.

B. Contractor shall comply with all applicable provisions of Chapter 30, Section 39R of the Massachusetts General Laws regarding Contractor's records.

7.16 *Submittals*

SC-7.16 Add the following new paragraph immediately after paragraph 7.16.F of the General Conditions, which is to read as follows:

G. The accuracy of all such information submitted by the Contractor is the responsibility of the Contractor. In reviewing Shop Drawings, Samples, and similar submittals, the Engineer shall be entitled to rely upon the Contractor's representation that such information is correct and accurate.

H. Add the following new paragraph immediately after paragraph 7.16.G, which is to read as follows:

Contractor to submit all product and material submittals as required by the project documents and to prepare for the start of Work. This shall include submission of a traffic management plan to be approved by the Owner and Engineer.

7.17 *Contractor's General Warranty and Guarantee*

SC-7.17 Add the following new paragraph 7.17.F, immediately after paragraph 7.17.E of the General Conditions:

F. Contractor shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion that the completed Work is free from all defects due to faulty materials or workmanship and Contractor shall promptly make such corrections as may be necessary by reason of any such defects including the repairs of any damage to other parts of the Work resulting from such defects. In the event that Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, Owner may do so and charge Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

7.18 *Indemnification*

SC-7.18 Insert the following at the end of Paragraph 7.18.B:

If, through the acts or neglect of Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the Work, Contractor shall settle with such other Contractor or Subcontractor by agreement if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against Owner on account of any

damage alleged to have been sustained, Owner shall notify Contractor, who shall indemnify and hold harmless Owner against any such claims.

ARTICLE 8—OTHER WORK AT THE SITE

8.02 Coordination

SC-8.02 Delete Paragraph 8.02 in its entirety and replace with the following:

Owner may contract with others for performance of work at the Site. Contractor will be responsible for the coordination of the performance of its Work at the Site.

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.02 Replacement of Engineer

SC-9.02 Delete the phrase “provided Contractor makes no reasonable objection to the replacement engineer” in Paragraph 9.02.A.

9.09 Limitations on Owner’s Responsibilities

SC-9.09 Insert the following after the first sentence of Paragraph 9.09.A:

However, the Owner shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.01 Owner’s Representative

SC-10.01 Add a new paragraph 10.01.B after paragraph 10.01.A of the General Conditions, which is to read as follows:

B. Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the Engineer and Contractor, (2) between the Owner and a Subcontractor or Subcontractors, or (3) between any person or entities other than the Owner and Contractor. The Engineer shall, however, be entitled to performance and enforcement of obligations under the Contract Documents intended to facilitate performance of the Engineer's duties.

10.02 Visits to Site

SC-10.02 Insert the following at the end of Paragraph 10.02.B:

However, the Engineer shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.

10.03 Resident Project Representative

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
6. *Payment Requests:* Review Applications for Payment with Contractor.
7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.

- b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

10.07 *Limitations on Engineer's Authority and Responsibilities*

SC-10.07 Insert the following after the first sentence in Paragraph 10.07.B:

However, the Engineer shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.

SC-10.07 Add a new paragraph immediately after paragraph 10.07.E of the General Conditions which is to read as follows:

Engineer's interpretations will be made in accordance with Massachusetts General Laws Chapter 30, Section 39P.

ARTICLE 11—CHANGES TO THE CONTRACT

11.05 *Owner-Authorized Changes in Work*

SC-11.05 Add a new paragraph immediately after paragraph 11.05.A of the General Conditions which is to read as follows:

Engineer's interpretations will be made in accordance with Massachusetts General Law, Chapter 30, Section 39P.

Add the following new paragraph immediately after paragraph 11.05.C of the General Conditions, which is to read as follows:

Upon request of the Owner or Engineer, the Contractor shall without cost to the Owner submit to the Engineer, in such form as the Engineer may require, an accurate written estimate of the cost of any such proposed extra Work or change. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor costs for the installation of each item of materials shall be shown if required by the Engineer. The Contractor shall promptly revise and resubmit such estimate if the Engineer determines that it is not in compliance with the requirements of this Article, or that it contains errors of facts or mathematical errors. If required by the Engineer, in order to establish the exact cost of new Work added or previously required Work omitted, the Contractor shall obtain and furnish to the Engineer bona fide proposals from recognized suppliers for furnishing any material included in such Work, and shall be furnished at Contractor's expense. The Contractor shall state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered.

11.07 Change of Contract Price

SC-11.07 In paragraph 11.07.C.2.a change "15 percent" to "10 percent."

Delete paragraph 11.07.C.2.c.

ARTICLE 12—CLAIMS

12.01 Claims

SC-12.01 Add a new paragraph immediately after paragraph 12.01.D.1 of the General Conditions to read as follows:

Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings unless otherwise agreed in writing by Owner and Contractor.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 Cost of the Work

SC-13.01 Add the following to the end of Paragraph 13.01.B.1 of the General Conditions to read as follows:

Following the Notice of Award and prior to the execution of the Agreement the Owner, prospective contractor and, if any, each prospective filed sub-bid contractor shall agree on what percentage markup shall be used as direct labor costs in determination of extra work costs.

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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Delete subparagraphs a, d, e, f, g, and h of Paragraph 13.01.B.5.

13.02 *Allowances*

SC-13.02 Delete Paragraph 13.02.C of the General Conditions in its entirety.

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by the Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION; REMOVAL; OR ACCEPTANCE OF DEFECTIVE WORK

14.02 *Tests, Inspections, and Approvals*

SC-14.02 Delete the remainder of Paragraph 14.02.F after the words "Contractor's expense."

14.05 *Uncovering Work*

SC-14.05 Delete Paragraph 14.05.C.2 in its entirety.

14.06 *Owner May Stop the Work*

SC-14.06 Insert the following new paragraph 14.06.B immediately after Paragraph 14.06.A:

If Owner stops Work under paragraph 14.06.A, Contractor shall not be entitled to any extension of Contract Time or increase in Contract Price, except as may be provided under G.L. c. 30, §390.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Applications for Payments*

SC-15.01.B.1 Delete the first phrase prior to the words "Contractor shall" in the first sentence of Paragraph 15.01.B.1 and insert the following:

On a monthly basis and in accordance with G.L. c.30, §39G.

SC-15.01.B.4 Delete paragraph 15.01.B.4 and insert the following in its place:

Retainage with respect to progress payments will be five percent or, if stipulated, the maximum allowed by law.

Insert the following new paragraph immediately after Paragraph 15.01.B.4:

Contractor shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within ten (10) days of payment by Owner. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and removal of the cost of related materials and equipment from the next submitted Application for Payment.

SC-15.01.B.5 Add new paragraph immediately after Paragraph 15.01.B.4:

5. The Application for Payment form to be used on this Project is EJCDC® C-620.

SC-15.01.D.1 Delete paragraph in its entirety and insert the following in its place:

The Application for Payment with Engineer's recommendations will be presented to the Owner for consideration. If both the Owner find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

15.01.E3 Delete Paragraph 15.01.E.3 in its entirety.

15.02 *Contractor's Warranty of Title*

SC-15.02 Insert the following new paragraphs immediately after Paragraph 15.02.A:

- B. No materials or supplies for the Work shall be purchased by Contractor or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor warrants that Contractor has good title to all materials and supplies used by Contractor in the Work, free from all liens, claims or encumbrances.
- C. Contractor shall indemnify and save Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall, at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the Contractor, either pay unpaid bills, of which Owner has written notice, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this

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sentence be construed to impose any obligation upon Owner to either Contractor, or Contractor's Surety. In paying any unpaid bills of the Contractor, Owner's payment shall be considered as payment made under the Contract by Owner to Contractor and Owner shall not be liable to Contractor for any such payment made in good faith.

15.03 *Substantial Completion*

SC-15.03.C Delete the third sentence of Paragraph 15.03.C and insert the following:

Owner may review the preliminary certificate and make written objection to Engineer as to any provisions of the certificate or attached list.

Delete the phrase “, within 14 days after submission of the preliminary certificate to Owner,” in the fourth sentence of paragraph 15.03.C.

Delete the phrase “, within said 14 days,” in the fifth sentence of Paragraph 15.03.C.

SC-15.03.G Insert the following new Paragraph 15.03.G immediately following 15.03.F

G. Notification to Owner and Engineer of Substantial Completion shall include the delivery of the Project Closeout Documents.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

SC-16.01 Delete Paragraph 16.01.A in its entirety and insert the following:

Owner may suspend the Work or any portion thereof in accordance with M.1G.L. c.30, §390.

16.02 *Owner May Terminate for Cause*

SC-16.02 Insert new paragraph immediately after Paragraph 16.02.A.4:

5. If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified.

Append to the end of the last sentence of Paragraph 16.02.D, “...to Owner's satisfaction.”

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.01 *Methods and Procedures*

SC-17.01 Insert a new Paragraph 17.01.C after Paragraph 17.01.B:

C. Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings, unless otherwise agreed by Contractor and Owner in writing.

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Arbitration*

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

17.04 *Venue*

SC-17.04 Add the following new paragraph immediately after Paragraph 17.03.

- A. *Any legal action relating to this Contract shall be filed in the Superior Court for the County in the Commonwealth of Massachusetts in which the Project is located, unless otherwise agreed by Contractor and Owner in writing.*

ARTICLE 18—MISCELLANEOUS

18.07 *Controlling Law*

SC-18.07 Amend Paragraph 18.07.A to state, "This contract is to be governed by the laws of the Commonwealth of Massachusetts."

18.10 *Wage Rates*

SC-18.10 Insert the following new paragraph:

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- A. The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to employment of labor, and to the schedule of minimum wage rates established in compliance with laws shall be a part of the Contract Documents. If after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the officials administering the laws mentioned above.
- B. The schedule of wages referred to above is minimum rates only, and Owner will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage in excess of the applicable, required rates.”

18.12 *Conflicts of Interest*

SC-18.12 Insert the following new Paragraph 18.12.A:

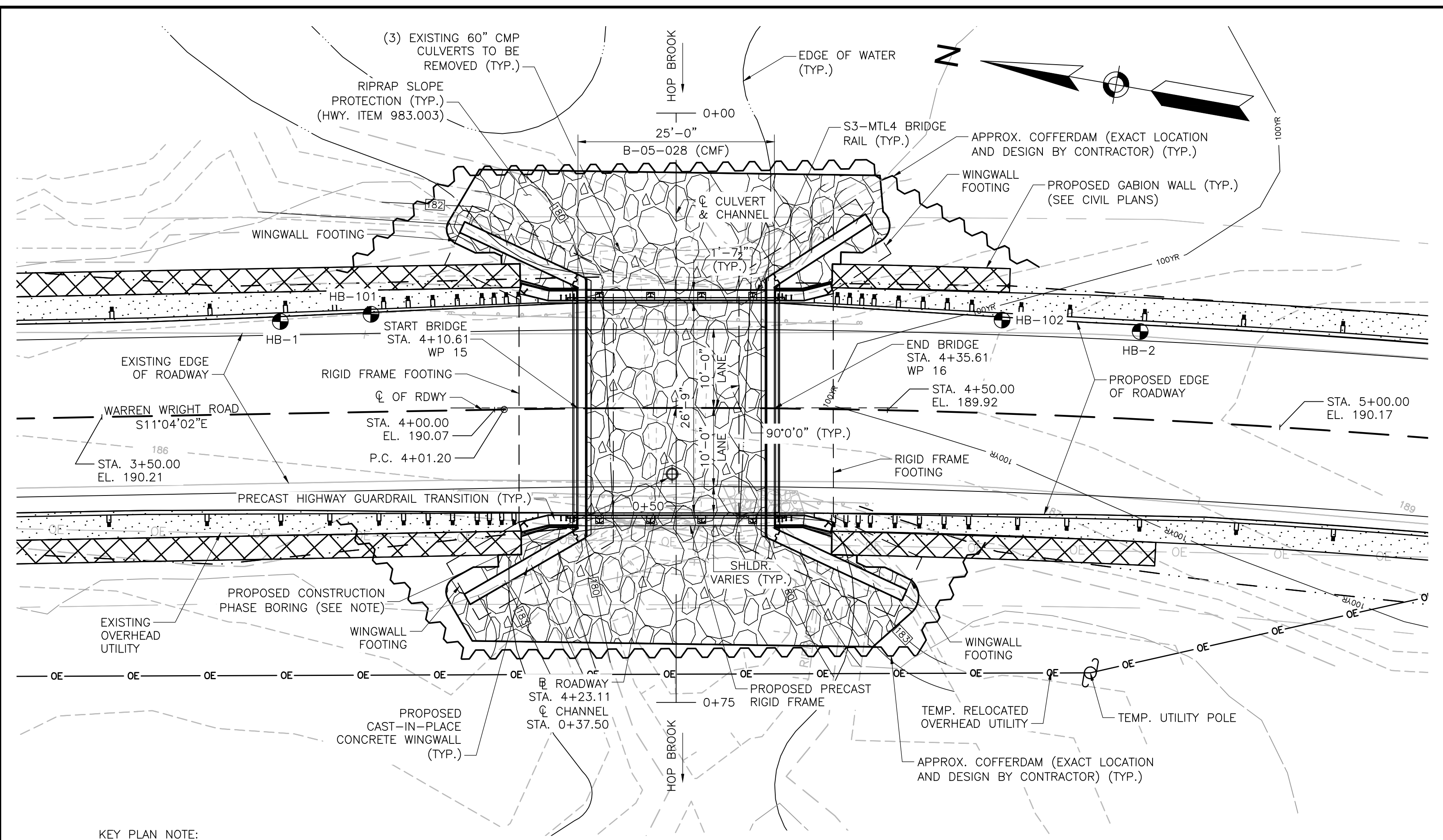
The parties acknowledge the provisions of the State Conflict of Interest Law (General Laws Chapter 268A), and this Contract expressly prohibits any activity which shall constitute a violation of that law. The Contractor shall be deemed to have investigated the application of M.G.L. c. 268A to the performance of this Contract; and by executing the Contract documents the Contractor certifies to the Owner that neither it nor its agents, employees, or subcontractors are thereby in violation of General Laws Chapter 268A.

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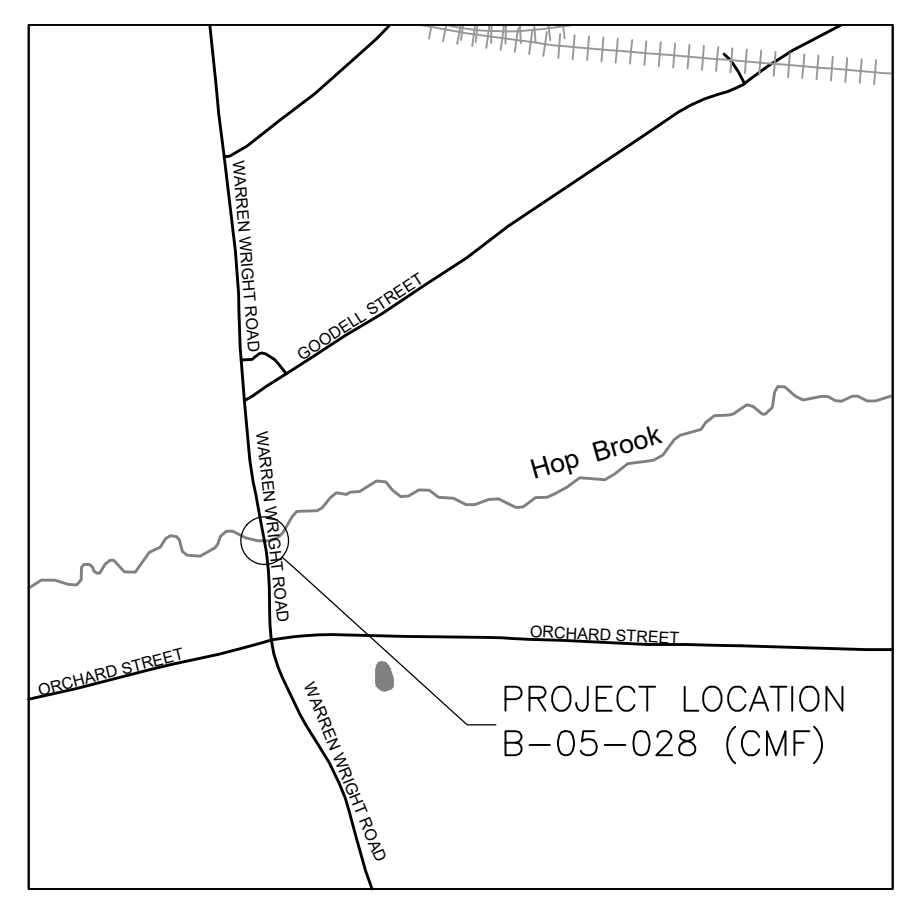
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KEY PLAN NOTE:
 ⊕ PROPOSED CONSTRUCTION PHASE BORING - SUGGESTED APPROXIMATE LOCATION SHOWN. CONTRACTOR TO SELECT EXACT LOCATION OF THE BORING WITH APPROVAL OF THE ENGINEER.

KEY PLAN
 SCALE: 1" = 10'-0"



LOCUS MAP
 SCALE: 1" = 1000'

COMMONWEALTH OF MASSACHUSETTS
 MassDOT, Highway Division
CONCEPTUAL DESIGN IS ACCEPTABLE TO MASSDOT FOR CONTRACTING
 DATE: 5/12/2026
 STATE BRIDGE ENGINEER

BELCHERTOWN WARREN WRIGHT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	01	14
PROJECT FILE NO.		N/A	

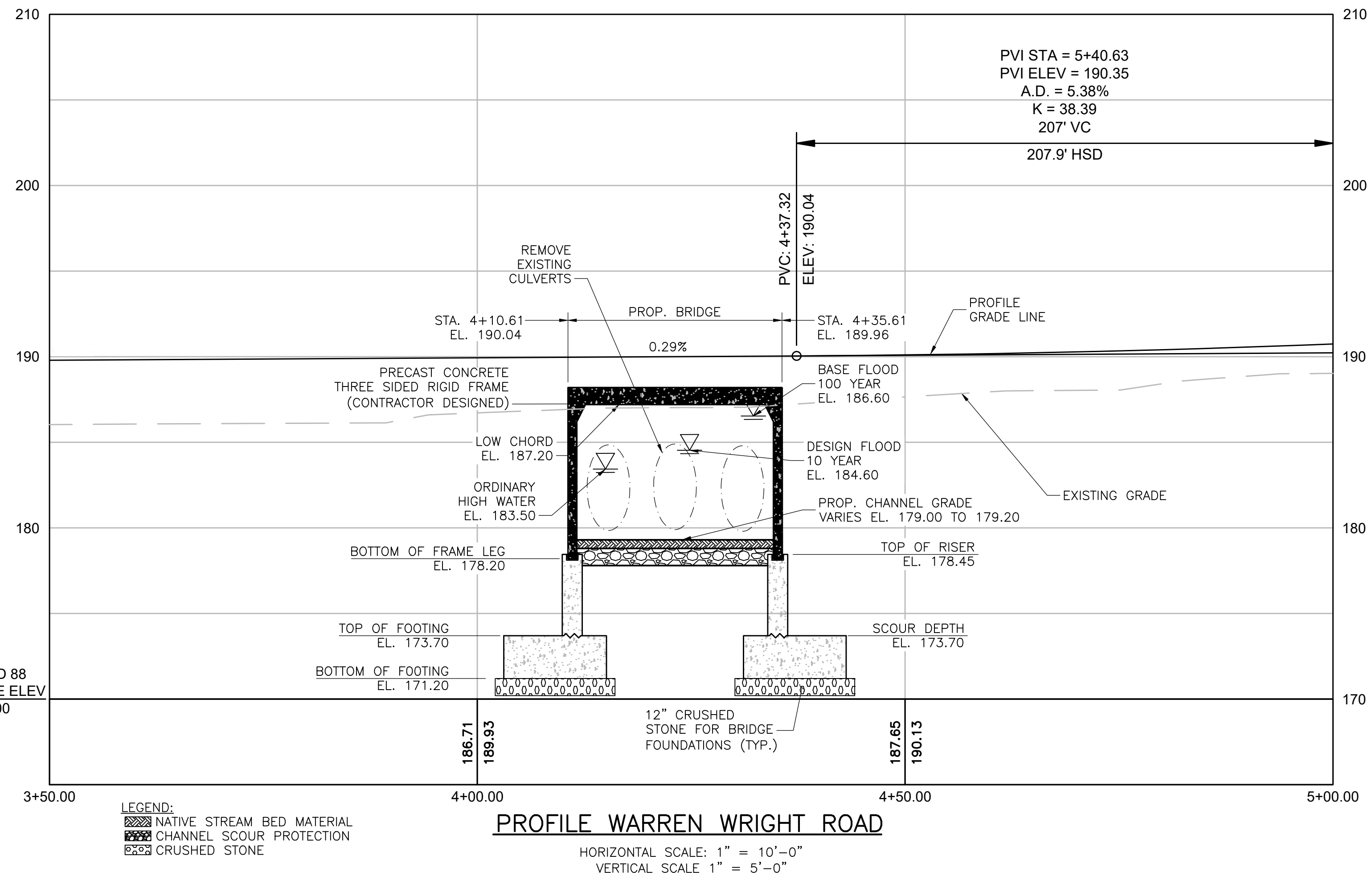
STRUCTURE PLAN, PROFILE AND INDEX

ESTIMATED QUANTITIES (NOT GUARANTEED)

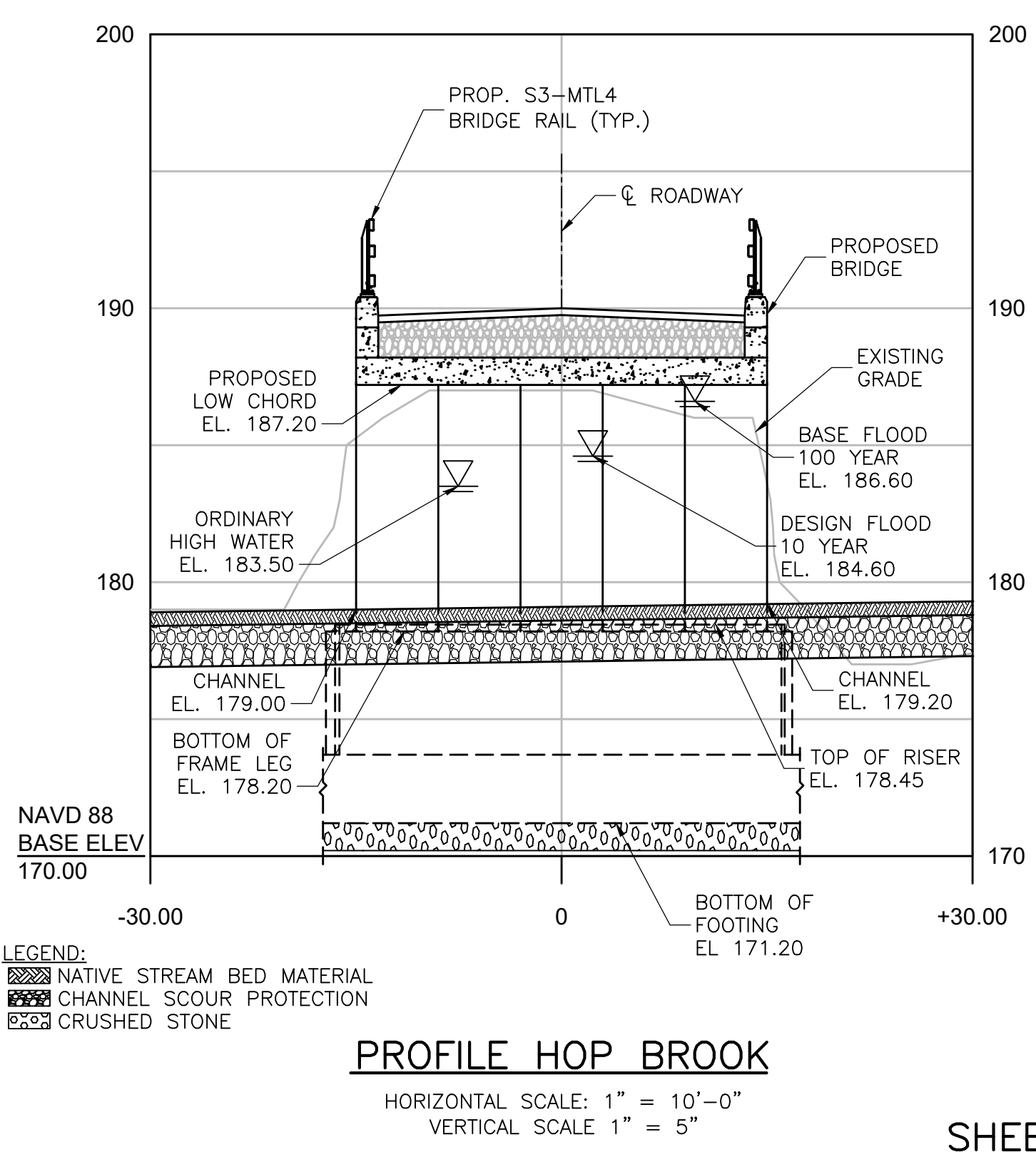
MUCK EXCAVATION	1060 C.Y.
BRIDGE EXCAVATION WITHIN COFFERDAM	150 C.Y.
GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	620 C.Y.
CRUSHED STONE FOR BRIDGE FOUNDATIONS	90 TON
CONSTRUCTION PHASE BORING	30 L.F.
SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)	9 TON
SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)	11 TON
GEOTEXTILE FABRIC FOR SEPARATION	380 S.Y.
COFFERDAM STRUCTURE NO. B-05-028 (CMF)	1 L.S.
CONTROL OF WATER - BRIDGE NO. B-05-028 (CMF)	1 L.S.
BRIDGE STRUCTURE, BRIDGE NO. B-05-028 (CMF)	1 L.S.
DEMOLITION OF BRIDGE NO. B-05-028 (5KR)	1 L.S.

WARREN WRIGHT ROAD - ALIGNMENT CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C16	0+19.06	2943395.037	396217.817	R=2008.00' Δ=3°15'47" L=114.36' T=57.19'		1+33.41	2943282.242	396236.562
L19	1+33.41	2943282.242	396236.562		S11°04'02"E 267.79'	4+01.20	2943019.434	396287.966
C15	4+01.20	2943019.434	396287.966	R=1192.00' Δ=10°04'45" L=209.69' T=105.11'		6+10.89	2942811.175	396309.956
L20	6+10.89	2942811.175	396309.956		S0°59'17"E 156.86'	7+67.75	2942654.340	396312.661



PROFILE WARREN WRIGHT ROAD
 HORIZONTAL SCALE: 1" = 10'-0"
 VERTICAL SCALE 1" = 5'-0"



PROFILE HOP BROOK
 HORIZONTAL SCALE: 1" = 10'-0"
 VERTICAL SCALE 1" = 5'

INDEX

SHEET NO.	DESCRIPTION
01	STRUCTURE PLAN, PROFILE AND INDEX
02	GENERAL NOTES
03 - 08	BORING LOGS
09	STRUCTURE ELEVATIONS
10	FOOTING AND WALL LAYOUT
11	STRUCTURE SECTIONS AND DETAILS
12	S3-MTL4 BRIDGE RAILING DETAILS
13	HIGHWAY GUARDRAIL TRANSITION DETAILS
14	ADDITIONAL DETAILS



MAY 04, 2026 ISSUED FOR CONSTRUCTION
 TOWN OF BELCHERTOWN
 290 JACKSON STREET, P.O. BOX 306
 BELCHERTOWN, MA 01007

**BRIDGE REPLACEMENT
 BELCHERTOWN
 WARREN WRIGHT ROAD
 OVER HOP BROOK**

FUSS & O'NEILL
 1550 MAIN STREET, SUITE 400
 SPRINGFIELD, MA 01103
 413.452.0445
 www.fando.com

GENERAL NOTES:

DESIGN REVIEW AND APPROVALS – CHAPTER 85 SECTION 35:

IN ACCORDANCE AND COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 85 SECTION 35 OF MASSACHUSETTS GENERAL LAWS, THE CONTRACTOR SHALL SUBMIT TO THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION ALL CONSTRUCTION DRAWINGS AND DESIGN CALCULATIONS THAT SHALL BE USED TO FABRICATE AND CONSTRUCT THE STRUCTURE DENOTED ON THESE PLANS FOR REVIEW AND APPROVAL. THIS APPROVAL SHALL CONSTITUTE THE FINAL APPROVAL AS STIPULATED BY CHAPTER 85 SECTION 35 OF THE MASSACHUSETTS GENERAL LAWS.

REVISIONS TO THE APPROVED PLANS SHALL ALSO BE SUBMITTED TO MASSDOT FOR APPROVAL.

DESIGN:

IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020, FOR HL-93 LOADING.

BENCHMARK:

VERTICAL DATUM BASED ON NAVD 88 AND SURVEY PROVIDED BY SHERMAN AND FRYDRYK. TEMPORARY BENCHMARKS WERE ESTABLISHED ON SITE. TBM, SPIKE UTILITY POLE #39, EL. 185.96 AND TBM SPIKE UTILITY POLE #2/40, EL. 190.38.

DATE:

TO BE PLACED ON THE INSIDE FACE OF THE NORTHWEST AND SOUTHEAST HIGHWAY GUARDRAIL TRANSITIONS. A SHEET SHOWING SIZE AND CHARACTER OF NUMERALS WILL BE FURNISHED. THE DATE USED SHALL BE THE LATEST YEAR OF CONTRACT COMPLETION AS OF THE DATE THE FIRST HIGHWAY GUARDRAIL TRANSITION IS CONSTRUCTED. BOTH HIGHWAY GUARDRAIL TRANSITIONS SHALL FEATURE THE SAME DATE.

SCALES:

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF-SIZE PRINTS (A3).

FOUNDATIONS:

FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL:

ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION SPECIFICATIONS:

ALL CONSTRUCTION WORK TO BE PERFORMED IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2024 EDITION.

CONSTRUCTION REQUIREMENTS AND PROCEDURES:

THE EXISTING BRIDGE TO BE REPLACED IS TO REMAIN CLOSED DURING CONSTRUCTION OF THE NEW BRIDGE REPLACEMENT. ADDITIONALLY, THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS DURING DEMOLITION AND CONSTRUCTION. REFER TO APPROVED DEMOLITION/ERECTION PLANS.

EXCAVATION:

ALL EXCAVATION FOR THE PROPOSED BRIDGE SHALL BE PAID FOR UNDER ITEM NO. 123., MUCK EXCAVATION OR ITEM NO. 140.1, BRIDGE EXCAVATION WITHIN COFFERDAM, EXCEPT THAT REMOVAL OF ANY BOULDERS LARGER THAN 1 CUBIC YARD SHALL BE PAID FOR UNDER ITEM NO. 121., CLASS A ROCK EXCAVATION.

EXISTING CONSTRUCTION:

DIMENSIONS SHOWN ARE TAKEN FROM SURVEY AND VARIOUS FIELD MEASUREMENTS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE AND NOT ORDER ANY MATERIAL OR COMMENCE FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

UTILITIES:

AS ENCOUNTERED, THE CONTRACTOR SHALL LOCATE, NOT DAMAGE AND PROTECT ALL UTILITIES, POLES, ETC. WHEN LOCATING, TEMPORARILY RELOCATING AND PERMANENTLY RECONSTRUCTING ALL EXISTING AND NEWLY CONSTRUCTED UTILITIES AS NOTED HEREIN THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY OWNERS ALL UTILITIES THAT ARE TO BE TEMPORARILY OR PERMANENTLY RELOCATED DURING ALL PHASES OF BRIDGE REPLACEMENT CONSTRUCTION.

AREAS SURROUNDING THE CONSTRUCTION SITE AND UTILITIES OUTSIDE THE LIMITS OF PROPOSED WORK DISRUPTED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

DOWEL BAR SPLICERS:

DOWEL BAR SPLICERS SHALL HAVE THE SAME COATINGS AS THE REINFORCING BARS THEY ARE SPLICING.

PRECAST CONCRETE ELEMENTS NOTES:

1. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS FOR THE THREE-SIDED FRAME, INCLUDING THE HEADWALL CONNECTION TO THE FRAME, THE FRAME EXTENSIONS TO THE WINGWALL, AND WINGWALL CONNECTION TO THE FRAME EXTENSIONS IN ACCORDANCE WITH THE LATEST AASHTO LRFD DESIGN SPECIFICATIONS AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION'S LRFD BRIDGE DESIGN MANUAL FOR HL-93 VEHICULAR LIVE LOADING (WITH LESS THAN 2 FEET OF COVER) FOR APPROVAL OF THE ENGINEER. THE DESIGN COMPUTATIONS SHALL CONSIDER ALL LOADINGS AS APPROPRIATE DURING FABRICATION, SHIPMENT, ERECTION, CONSTRUCTION, AND AFTER COMPLETION OF CONSTRUCTION BASED ON THESE CONSTRUCTION DRAWINGS. THE RAIL POST ANCHORAGE SPACING SHALL BE DETAILED ON SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. THE FRAME DIMENSIONS PROVIDED ARE SHOWN TO ESTABLISH THE SIZE OF THE PROPOSED OPENING OF 184 SQUARE FEET. THE WIDTHS AND THICKNESSES OF EACH FRAME UNIT MAY VARY DEPENDING UPON THE MANUFACTURER'S SPECIFICATIONS. A FRAME TYPE STRUCTURE SHALL BE REQUIRED. THE CONTRACTOR, AT NOT ADDITIONAL COMPENSATION, HAS THE OPTION TO PROPOSE AN ALTERNATE FRAME DESIGN WITH THE SAME OR LARGER OPENING AREA. IF AN ALTERNATE DESIGN IS PROPOSED, THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, SHALL PROVIDE ALTERNATE FOOTING AND RISER DESIGNS, AS APPLICABLE.
3. THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, HAS THE OPTION TO PROVIDE PRECAST CONCRETE FOOTINGS, AND SHALL SUBMIT THE FINAL DESIGN OF THE PRECAST CONCRETE FOOTINGS.
4. THE PRECAST ELEMENTS ARE TO BE PARALLEL AND ALIGNED WITH THE CONSTRUCTION LINE AS SHOWN ON THESE CONSTRUCTION DRAWINGS.
5. THE TOP OF FOOTING ELEVATION AS SHOWN ON THESE PLANS SHALL BE MAINTAINED.
6. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF LIFT HOOKS FOR ALL PRECAST ELEMENTS. PLANS PROVIDING SPACING AND LOCATION OF LIFTING DEVICES AND HANDLING STRESS CALCULATIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OF THE PRECAST ELEMENTS.
7. SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS.
8. PRECAST CONCRETE ELEMENTS SHALL CONFORM TO THE APPLICABLE PARTS OF SECTION 901 OF THE SPECIFICATIONS.
9. ALL TOLERANCES BETWEEN THE PRECAST ELEMENTS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH PCI REQUIREMENTS.

ADDITIONAL NOTES:

CONCRETE:

UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE 5000 HP CONCRETE.

ALL CIP AND PRECAST CONCRETE POURS SHOWN ON THESE CONSTRUCTION DRAWINGS WHERE ALL VOLUMETRIC DIMENSIONS ARE 4 FEET OR GREATER SHALL BE CONSIDERED TO BE MASS CONCRETE PLACEMENTS AND SHALL REQUIRE A HEAT OF HYDRATION ANALYSIS AND THERMAL CONTROL PLAN, AS SPECIFIED IN THE MASSDOT STANDARD SPECIFICATIONS.

THE USE OF REMAIN-IN-PLACE FORMS ON THIS STRUCTURE IS NOT ALLOWED.

EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS DIMENSIONED OTHERWISE.

PRECAST: THREE SIDED RIGID FRAME (CONTRACTOR DESIGNED), HIGHWAY GUARDRAIL TRANSITIONS

CAST-IN-PLACE: FRAME RISERS, WINGWALLS, FOUNDATIONS, CURBS/HEADWALLS, APPROACH SLABS

REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60 AND SHALL BE EPOXY COATED. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

MODIFICATION CONDITION	#4 BARS	#5 BARS	#6 BARS
1. NONE	16"	17"	21"
2. 12" OF CONCRETE BELOW BAR	18"	22"	27"
3. EPOXY COATED BARS, COVER $3d_b$ OR CLEAR SPACING $6d_b$	21"	26"	31"
4. COATED BARS, ALL OTHER CASES	17"	21"	25"
5. CONDITION 2 AND 3	23"	29"	35"
6. CONDITION 2 AND 4	21"	27"	32"

ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

ALL REINFORCEMENT SHALL HAVE 3" COVER AT BOTTOM OF FOOTINGS AND 2" COVER ELSEWHERE UNLESS DIMENSIONED OTHERWISE.

GEOTECHNICAL/H&H NOTES:

1. SEE GEOTECHNICAL REPORT BY O'REILLY, TALBOT & OKUN, DATED JUNE 10, 2024. REVISED APRIL 13, 2026.
2. SEE HYDRAULIC REPORT, DATED FEBRUARY, 2024. REVISED NOVEMBER, 2025.

SURVEY NOTES:

1. NATIONAL VERTICAL DATUM NAVD 88 IS USED THROUGHOUT.

BACKFILL MATERIALS:

- A. GRAVEL BORROW (MASSDOT M1.03.0, TYPE B) SHALL BE USED ABOVE AND BEHIND THE RIGID FRAME AND BEHIND WINGWALLS.
- B. CRUSHED STONE (M2.01.4) SHALL BE USED BELOW FOOTINGS, AND IN DRAINAGE STRUCTURES IN PLACE OF GRAVEL BORROW.

CONSTRUCTION JOINTS:

CONSTRUCTION JOINTS, OTHER THAN SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

BELCHERTOWN WARREN WRIGHT ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	02	14
PROJECT FILE NO.		N/A	

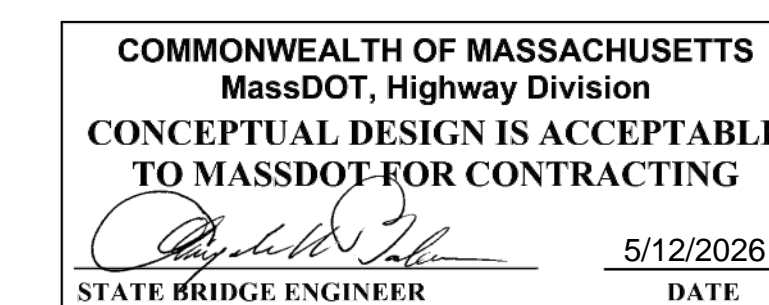
GENERAL NOTES

SEISMIC DESIGN CRITERIA	
DESIGN RETURN PERIOD:	1000
DESIGN SPECTRA	
As	0.094
SDs	0.210
SD1	0.093
SITE CLASS	D
SEISMIC DESIGN CATEGORY (SDC)	A

HYDRAULIC DESIGN DATA	
DRAINAGE AREA (SQ. MILES)	7
DESIGN FLOOD DISCHARGE (C.F.S.)	312
DESIGN FLOOD FREQUENCY (YEARS)	10
DESIGN FLOOD VELOCITY (F.P.S.)	1.2
DESIGN FLOOD ELEVATION (FEET, NAVD)	184.6
BASE (100-YEAR) FLOOD DATA	
BASE FLOOD DISCHARGE (C.F.S.)	1,035
BASE FLOOD ELEVATION (FEET, NAVD)	186.6
DESIGN AND CHECK SCOUR DATA	
DESIGN SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	25
DESIGN FLOOD ABUTMENT SCOUR DEPTH (FEET)	4.5
DESIGN FLOOD PIER SCOUR DEPTH (FEET)	N/A
CHECK SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	50
CHECK FLOOD ABUTMENT SCOUR DEPTH (FEET)	5.3
CHECK FLOOD PIER SCOUR DEPTH (FEET)	N/A
FLOOD OF RECORD	
DISCHARGE (C.F.S.)	UNKNOWN
FREQUENCY (IF KNOWN, YEARS)	UNKNOWN
MAXIMUM ELEVATION (FEET, NAVD)	UNKNOWN
DATE (MM/YYYY)	UNKNOWN
HISTORY OF ICE FLOES	UNKNOWN
EVIDENCE OF SCOUR AND EROSION	YES

TEMPORARY WATER CONTROL DESIGN DATA	
DESIGN FLOOD DISCHARGE (C.F.S.)	55
DESIGN FLOOD FREQUENCY (YEARS)	2
DESIGN FLOOD VELOCITY (F.P.S.)	0.6
DESIGN FLOOD ELEVATION (FEET, NAVD)	183.6

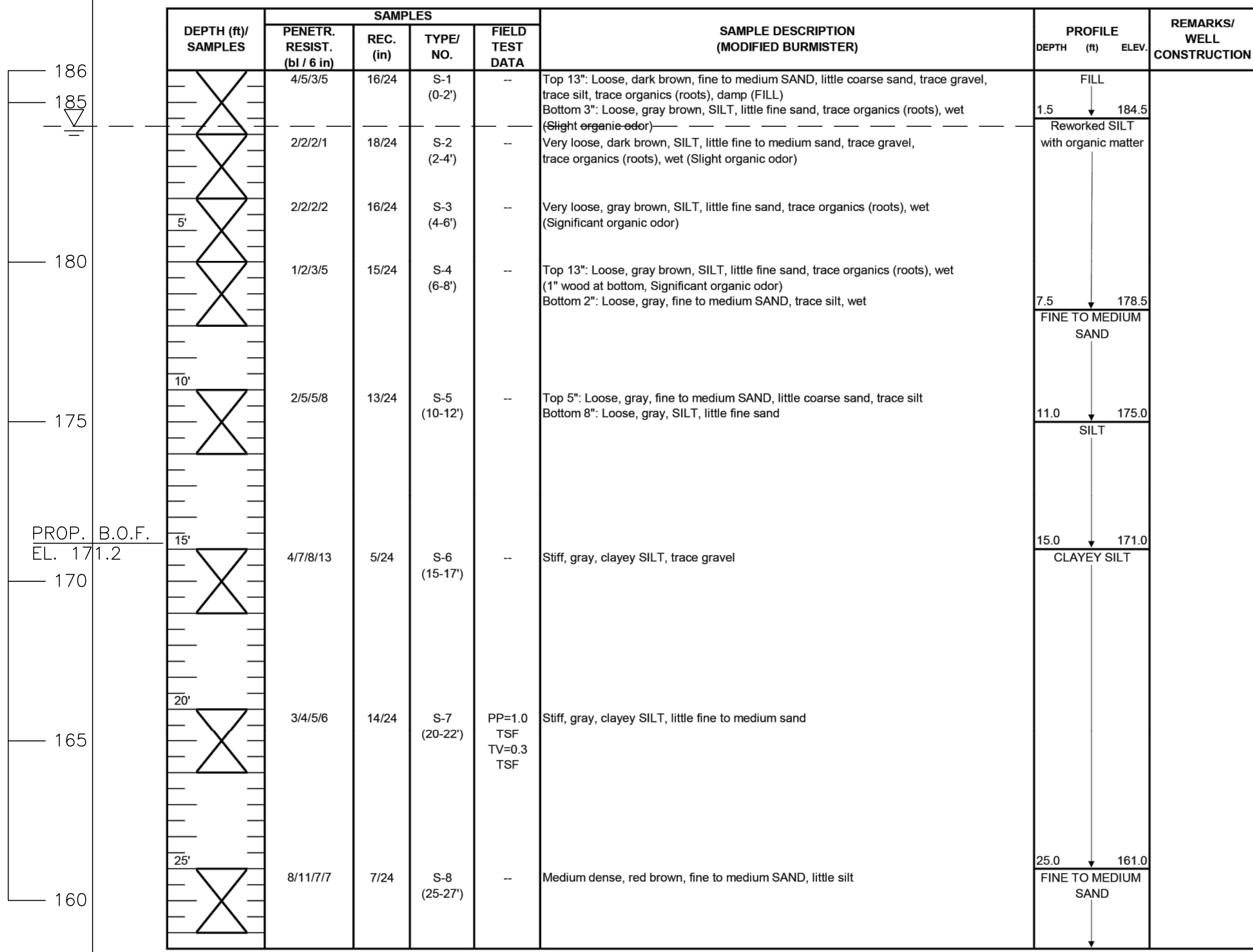
NOTE: A TEMPORARY STREAM BYPASS WILL BE UTILIZED TO THE WEST SIDE OF THE STREAM CROSSING. SEE CIVIL PLANS FOR MORE DETAILS.





LOG OF BORING HB-1 Page 1 of 2

PROJECT	Hop Brook, Warren Wright Culvert Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-12-01	FINAL DEPTH (ft)	42.0	DRILLING EQUIPMENT	B-53 Truck Mounted Rig		
LOCATION	Belchertown, MA	SURFACE ELEV (ft)	186.0	FOREMAN	Mike G.	CASING	
START DATE	11/8/2021	DISTURBED SAMPLES	11	HELPER	Nick C.	CASE DIAMETER	4"
FINISH DATE	11/8/2021	UNDISTURBED SAMPLES	--	BIT TYPE	Roller Bit with Wash	HAMMER WGT	300 lb
ENGINEER/SCIENTIST	Jhonatan Escobar	WATER LEVEL		ROD TYPE	N (2 3/8" O.D.)	HAMMER DROP	30"
BORING LOCATION	Northeast of Existing Culvert	FIRST (ft)	1.75	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION	
		LAST (ft)	--	HAMMER TYPE	Safety	TYPE	N/A
		TIME (hr)	--	HAMMER WGT/DROP	140 lb / 30" Wire Line	SIZE	N/A



REMARKS:	1. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft ² .	PROJECT NO. 2950-12-01
	2. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft ² .	
		LOG OF BORING HB-1



LOG OF BORING HB-1 Page 2 of 2

DEPTH (ft)/ SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA		DEPTH (ft)	ELEV.	
30'	2/2/3/2	15/24	S-9 (30-32)	--	Loose, red brown, fine SAND and SILT, little medium sand	30.0	156.0	FINE TO MEDIUM SAND (CONTINUED) FINE SAND AND SILT
35'	8/9/10/13	15/24	S-10 (35-37)	--	Medium dense, red brown, fine SAND, some silt, some medium sand	35.0	151.0	SILTY SAND
40'	9/8/8/7	10/24	S-11 (40-42)	--	Very stiff, red brown, clayey SILT, little fine sand	40.0	146.0	CLAYEY SILT
45'					End of exploration at 42'	42.0	144.0	

BELCHERTOWN WARREN WRIGHT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	03	14
PROJECT FILE NO.		N/A	

BORING LOGS

BORING NOTES:

- LOCATION OF BORINGS SHOWN ON THE PLANS, SEE SHEET 1. THUS: ●
- BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
- WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
- FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
- BORINGS PERFORMED BY SEABOARD ENVIRONMENTAL DRILLING, INC. LOCATED AT 649 MEADOW STREET, CHICOPEE, MA 01013.
 - BORINGS HB-1 & HB-2 TAKEN IN NOVEMBER, 2021.
 - BORINGS HB-101 & HB-102 TAKEN IN NOVEMBER & DECEMBER, 2022.
- THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
CONCEPTUAL DESIGN IS ACCEPTABLE
TO MASSDOT FOR CONTRACTING

STATE BRIDGE ENGINEER 5/12/2026
 DATE

20020548E:\BORING-08 (BORING)\DWG 04-May-2026 12:28 PM Final Structural Submittal (SF)



LOG OF BORING HB-2 Page 1 of 2

PROJECT	Hop Brook, Warren Wright Culvert Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-12-01	FINAL DEPTH (ft)	42.0	DRILLING EQUIPMENT	B-53 Truck Mounted Rig		
LOCATION	Belchertown, MA	SURFACE ELEV (ft)	188.5	FOREMAN	Mike G.	CASING	
START DATE	11/8/2021	DISTURBED SAMPLES	12	HELPER	Nick C.	CASE DIAMETER	4"
FINISH DATE	11/8/2021	UNDISTURBED SAMPLES	--	BIT TYPE	Roller Bit with Wash	HAMMER WGT	300 lb
ENGINEER/SCIENTIST	Jhonatan Escobar	WATER LEVEL		ROD TYPE	N (2 3/8" O.D.)	HAMMER DROP	30"
BORING LOCATION	Southeast of Existing Culvert		FIRST (ft)	3.5	SAMPLER	2" O.D. Split Spoon	ROCK CORING INFORMATION
			LAST (ft)	--	HAMMER TYPE	Safety	TYPE
			TIME (hr)	--	HAMMER WGT/DROP	140 lb / 30" Wire Line	SIZE
							N/A

DEPTH (ft) SAMPLES	SAMPLES			FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.			DEPTH (ft)	ELEV.	
0-2'	5/9/13/10	12/24	S-1 (0-2')	--	Top 5" Medium dense, dark brown, fine to medium SAND, trace gravel, trace silt, trace debris (asphalt), trace organics (roots), damp (FILL)	1.0	187.5	FILL
2-4'	4/4/4/4	11/24	S-2 (2-4')	--	Bottom 7" Medium dense, brown, fine to medium SAND, little gravel, little coarse sand, trace silt, damp			FINE TO MEDIUM SAND
4-6'	7/7/13/14	2/24	S-3 (4-6')	--	Loose, gray brown, fine to medium SAND, little to trace silt, wet at bottom 6"		185.0	
6-8'	10/11/13/15	4/24	S-4 (6-8')	--	Medium dense, brown, fine to medium SAND, trace silt, trace gravel, wet			
8-10'	16/14/10/8	11/24	S-5 (8-10')	--	Medium dense, gray brown, fine to medium SAND, little coarse sand, trace gravel, trace silt, wet			
10-12'	5/13/15/16	11/24	S-6 (10-12')	--	Medium dense, gray, SILT, little fine sand	10.0	178.5	SILT
15-17'	6/7/9/9	18/24	S-7 (15-17')	PP=1.25 TSF TV=0.55 TSF	Very stiff, gray brown, clayey SILT, trace fine sand	15.0	173.5	CLAYEY SILT
20-22'	4/5/5/6	19/24	S-8 (20-22')	--	Stiff, gray brown, clayey SILT, some fine sand			
25-27'	4/8/8/10	10/24	S-9 (25-27')	--	Medium dense, red brown, SILT, some fine sand	25.0	163.5	SANDY SILT

Remarks:
 1. Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft².
 2. Unconfined compressive strength estimated in field using Pocket Penetrometer (PP). Values in tons/ft².

PROJECT NO. 2950-12-01
LOG OF BORING HB-2

NOTE:
 FOR BORING NOTES, SEE SHEET 3.



LOG OF BORING HB-2 Page 2 of 2

DEPTH (ft) SAMPLES	SAMPLES			FIELD TEST DATA	SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.			DEPTH (ft)	ELEV.	
30'	9/9/11/10	7/24	S-10 (30-32')	--	Medium dense, red brown, fine SAND, little silt, trace medium sand			SANDY SILT (CONTINUED)
35'	5/9/7/7	17/24	S-11 (35-37')	--	Medium dense, red brown, SILT, little fine sand			FINE SAND
40'	12/12/13/17	5/24	S-12 (40-42')	--	Medium dense, red brown, fine to medium SAND, little coarse sand, trace silt			SILT
42'					End of exploration at 42'	40.0	148.5	FINE TO MEDIUM SAND
42'						42.0	146.5	

BELCHERTOWN WARREN WRIGHT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	04	14
PROJECT FILE NO.		N/A	

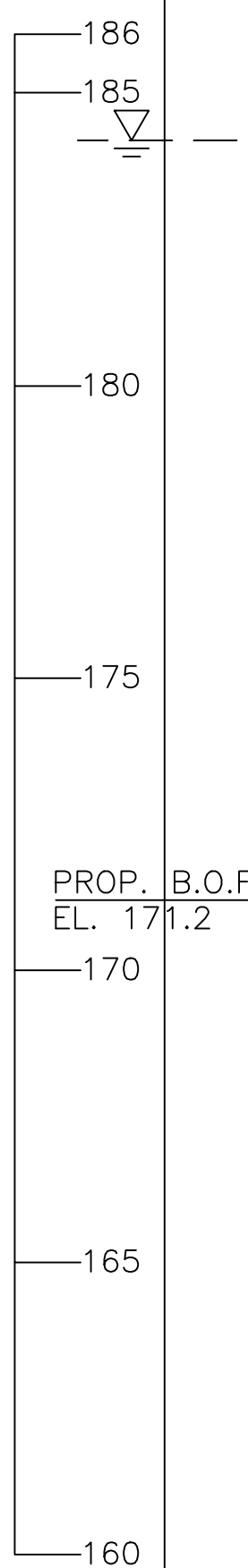
BORING LOGS

COMMONWEALTH OF MASSACHUSETTS
 MassDOT, Highway Division
 CONCEPTUAL DESIGN IS ACCEPTABLE
 TO MASSDOT FOR CONTRACTING

[Signature] 5/12/2026
 STATE BRIDGE ENGINEER DATE

20020548E:\BORING-08 (BORING).DWG Plotted on 4-May-2026 12:28 PM Final Structural Submittal (SF)

PROJECT	Hop Brook, Warren Wright Culvert Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-12-02	FINAL DEPTH (ft)	120.0	DRILLING EQUIPMENT	Track Mounted Rig		
LOCATION	Belchertown, MA	SURFACE ELEV (ft)	186.0	FOREMAN	Doug		
START DATE	11/29/2022	DISTURBED SAMPLES	19	HELPER	Jarrett		
FINISH DATE	11/30/2022, 12/2/2022	UNDISTURBED SAMPLES	0	BIT TYPE	Roller Bit with Wash		
ENGINEER/SCIENTIST	Caren Irgang		WATER LEVEL	ROD TYPE	N (2 3/8" O.D.)		
BORING LOCATION	North side of existing culvert	FIRST (ft)	1.8	SAMPLER	2" O.D. Split Spoon		
		LAST (ft)	N/A	HAMMER TYPE	Automatic		
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"		
					ROCK CORING INFORMATION		
				TYPE	N/A		
				SIZE	N/A		

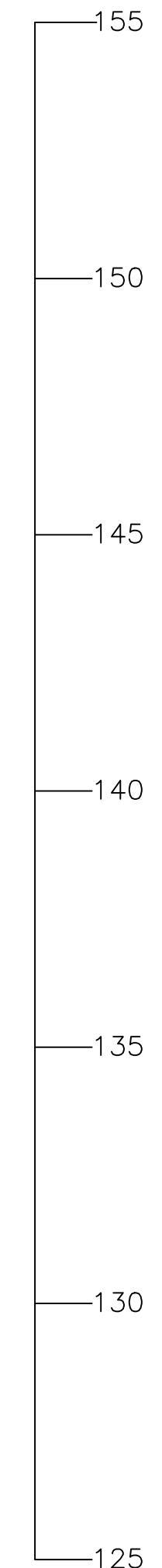


DEPTH (ft) / SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA			
0-2'	4/24/1	13/24	S-1 (0-2)	--	Top 11": Loose, brown, medium SAND, little fine sand, little coarse sand, little fine gravel, trace organics (roots in top 2"), damp (1" black layer near top) Bottom 2": Medium stiff, dark brown, clayey SILT, little fine sand, trace organics (straw), wet	1.5 → 184.5 FILL SILT AND SAND with organic matter	1
2-4'	WOH for 6"/ 1/1/1	4/24	S-2 (2-4)	--	Very loose, brown to dark brown, fine SAND, some silt, trace organics (straw), wet		
4-6'	1/1/2/1	15/24	S-3 (4-6)	--	Top 13": Soft, red to dark brown, clayey SILT, little to some fine sand (in bottom 6"), wet Bottom 2": Very loose, gray brown, fine SAND, some silt, little medium sand, wet (1.5" piece of gravel at tip)		
6-8'	WOH for 24"	14/24	S-4 (6-8)	--	Very loose, dark brown, fine to medium SAND, little to some silt, little fine gravel, little to trace coarse sand, trace organics (straw in top 1"), wet (2" layer of clayey silt near top, 1.5" piece of gravel at tip)		
8-10'	3/3/3/4	24/24	S-5 (8-10)	--	Top: 2": Loose, brown, medium SAND, little fine gravel, little coarse sand, wet Next 3": Loose, dark brown, SILT, little to some fine sand, trace organics (wood chips), wet (organic odor) Next 7": Loose, gray, medium SAND, little fine sand, trace silt, wet Next 9": Loose, dark brown, SILT, trace fine sand, wet (seam of clay near bottom) Bottom: 3": Loose, gray, fine to medium SAND, trace organics (wood chips), wet Top 7": Loose, gray, fine SAND, trace silt, trace gravel (1/2" seam silt near center) Bottom 8": Loose, gray, varved fine SAND and SILT (1/8" clay seam near center)	10.0 → 178.0 SAND AND SILT	
10-12'	1/3/1/2	15/24	S-6 (10-12)	--			
15'	2/2/1/2	10/24	S-7 (15-17)	--	Top 5": Very loose, gray, fine SAND and SILT, trace fine gravel Bottom 5": Soft, red gray to gray, clayey SILT, little fine sand, trace fine gravel	16.0 → 170.0 CLAYEY SILT	
20'	WOH for 6"/ 1/4/4	20/24	S-8 (20-22)	PP = 0.75 TSF TV = 0.15 TSF	Medium stiff, red gray, clayey SILT, trace to little fine sand		2 3
25'	2/2/2/4	14/24	S-9 (25-27)	--	Loose, brown gray, fine SAND, trace to little silt, trace coarse sand (fine sand and silt in top 1')	25.0 → 161.0 FINE SAND	

- Remarks:
- WOH = Weight of rods and 140 lb. hammer.
 - Undrained shear strength estimated in field using E285 Pocket Torvane (TV). Values in tons/ft².
 - Unconfined compressive strength estimated using Pocket Penetrometer (PP). Values in tons/ft².
 - Difficult to advance casing from 58.5' to 75'.
 - End of drilling on 11/29/2022 after advancing casing to 65'.
 - Hammer bouncing at 67' and 73'.
 - Wash water changed to lighter color at 73'.
 - More difficult drilling conditions at 82.5'.
 - End of drilling on 11/30/2022 after advancing casing to 90'.
 - 100 blows to advance casing 5" at 90', begin open hole drilling

PROJECT NO.
2950-12-02
LOG OF BORING
HB-101

NOTE:
FOR BORING NOTES, SEE SHEET 3.



DEPTH (ft) / SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE DEPTH (ft) ELEV.	REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA			
30'	1/4/4/6	20/24	S-10 (30-32)	--	Loose, red gray, fine SAND, little to some silt	30.0 → 156.0 FINE SAND (Continued) FINE SAND AND SILT	
35'	5/6/6/7	18/24	S-11 (35-37)	--	Top 12": Medium dense, brown gray, SILT, little fine sand, trace coarse gravel (few clayey layers) Bottom 6": Medium dense, brown gray, fine SAND and SILT	36.5 → 149.5 SILTY SAND	
40'	3/2/4/4	13/24	S-12 (40-42)	--	Loose, brown gray, varved SILT and fine SAND		
45'	4/3/5/7	14/24	S-13 (45-47)	--	Loose, light brown, fine SAND and SILT, trace coarse gravel		
50'	5/6/6/9	17/24	S-14 (50-52)	--	Medium dense, gray red, fine SAND, little to some clayey silt (1/8" seams of clayey silt spaced approximately 1" apart)		
55'	6/4/12/31	13/24	S-15 (55-57)	--	Top 2": Medium dense, brown red, fine SAND, little to some silt Next 3": Medium dense, orange, medium SAND, trace fine sand, trace silt (rust staining) Next 4": Medium dense, brown red, fine to coarse SAND and fine GRAVEL, some silt Bottom 4": Medium dense, gray, fine to medium SAND and GRAVEL, some silt, some coarse sand	56.5 → 129.5 SAND AND GRAVEL	4
60'	50 for 2"	0/2	S-16 (60-60.2)	--	(from wash water at 59": brown, fine to coarse sand and fine gravel) NO RECOVERY (likely gravel)		

BELCHERTOWN
WARREN WRIGHT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	05	14
PROJECT FILE NO.		N/A	

BORING LOGS

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
CONCEPTUAL DESIGN IS ACCEPTABLE
TO MASSDOT FOR CONTRACTING
[Signature]
STATE BRIDGE ENGINEER DATE 5/12/2026

LOG OF BORING HB-102

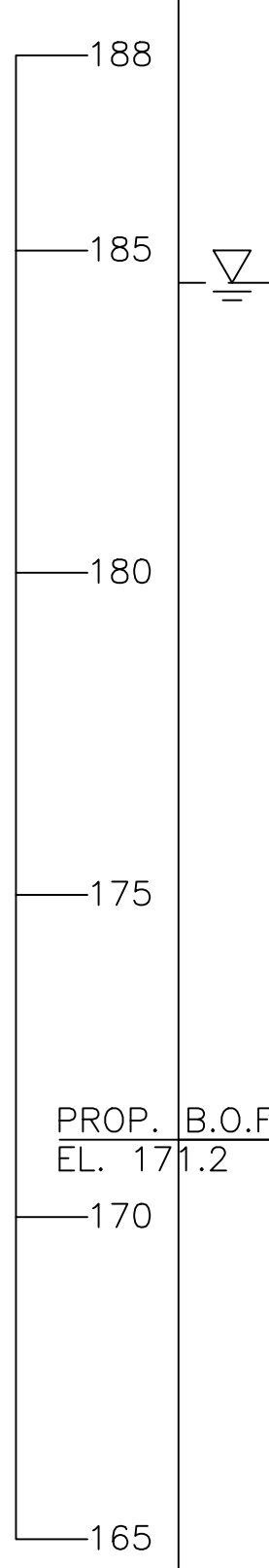
Page 1 of 3

PROJECT	Hop Brook, Warren Wright Culvert Replacement			CONTRACTOR	Seaboard Environmental Drilling		
JOB NUMBER	2950-12-02			DRILLING EQUIPMENT	Track Mounted Rig		
LOCATION	Belchertown, MA	SURFACE ELEV (ft)	188.0	FOREMAN	Mike	CASING	
START DATE	12/7/2022	DISTURBED SAMPLES	6	HELPER	Ben	CASE DIAMETER	4"
FINISH DATE	12/7/2022	UNDISTURBED SAMPLES	0	BIT TYPE	Roller Bit with Wash	HAMMER WGT	300 lb
ENGINEER/SCIENTIST	Caren Irgang		WATER LEVEL	ROD TYPE	N (2 3/8" O.D.)		
BORING LOCATION	South side of existing culvert	FIRST (ft)	3.5	SAMPLER	2" O.D. Split Spoon		
		LAST (ft)	N/A	HAMMER TYPE	Automatic		
		TIME (hr)	N/A	HAMMER WGT/DROP	140 lb / 30"		

DEPTH (ft)/ SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA		DEPTH (ft)	ELEV.	
						1.0	187.0	FILL
								FINE TO MEDIUM SAND
							184.5	
5'					(from wash water at 8-15': gray, silt and fine sand, little medium sand)			
10'						10.0	178.0	SILT
15'						15.0	173.0	CLAYEY SILT
25'						25.0	163.0	SANDY SILT

Remarks:
1. Soil profile above 30' adopted from boring log HB-2.
2. Rod jumping at 54'.
3. Hammer bouncing during sampling of S-4, S-5, and S-6.
4. Bit grinding at 57', after sampling S-4.

PROJECT NO.
2950-12-02
LOG OF BORING
HB-102

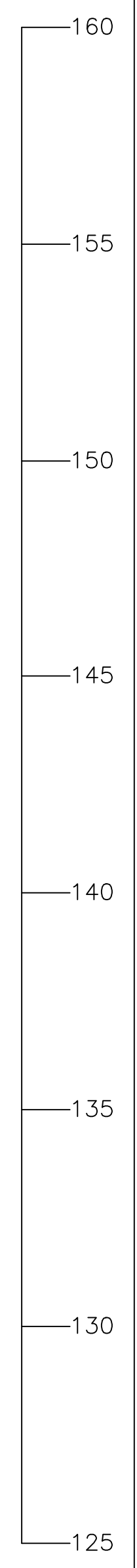


LOG OF BORING HB-102

Job No. 2950-12-02

Page 2 of 3

DEPTH (ft)/ SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA		DEPTH (ft)	ELEV.	
								SANDY SILT (Continued)
30'	2/3/4/4	18/24	S-1 (30-32')	--	Loose, brown, fine SAND, little to trace silt		156.0	FINE SAND
35'					(from wash water at 36': dark red brown clayey silt, little medium to coarse sand)		150.0	SILT
40'	3/4/4/6	18/24	S-2 (40-42')	--	Loose, red brown, fine SAND, little medium sand, little to trace silt (1/4" layers of silt near top and bottom)		146.0	FINE SAND
45'								
50'	3/4/5/6	23/24	S-3 (50-52')	--	Top 16": Loose, red brown, medium SAND, some fine sand, little coarse sand, trace silt Bottom 7": Loose, red brown, fine to medium SAND, little coarse sand, trace silt		136.0	MEDIUM SAND
55'	50 for 4"	4/4	S-4 (55-55.3')	--	Very dense, gray, fine to medium SAND, little silt, little coarse sand, trace gravel		134.0	SAND AND GRAVEL
60'	47/50 for 3"	5/9	S-5 (60-60.8')	--	Very dense, gray, fine GRAVEL, little coarse gravel, little fine to medium sand, trace silt			



BELCHERTOWN
WARREN WRIGHT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	07	14
PROJECT FILE NO.		N/A	

BORING LOGS

NOTE:
FOR BORING NOTES, SEE SHEET 3.

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
CONCEPTUAL DESIGN IS ACCEPTABLE
TO MASSDOT FOR CONTRACTING
[Signature]
STATE BRIDGE ENGINEER DATE 5/12/2026

**BELCHERTOWN
WARREN WRIGHT ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	08	14
PROJECT FILE NO.		N/A	

BORING LOGS



Job No. 2950-12-02

LOG OF BORING HB-102

Page 3 of 3

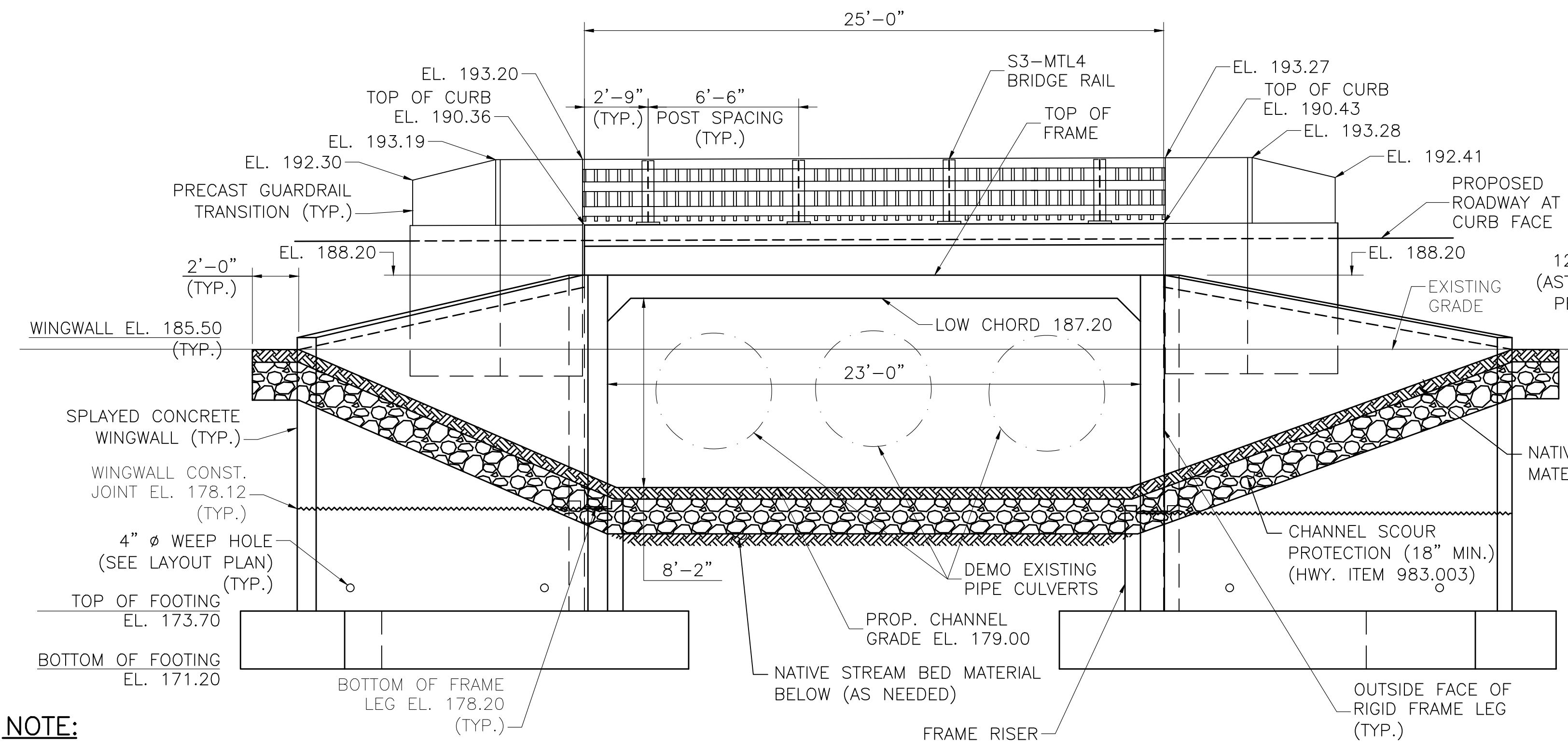
125
122.5

DEPTH (ft)/ SAMPLES	SAMPLES				SAMPLE DESCRIPTION (MODIFIED BURMISTER)	PROFILE		REMARKS/ WELL CONSTRUCTION
	PENETR. RESIST. (bl / 6 in)	REC. (in)	TYPE/ NO.	FIELD TEST DATA		DEPTH (ft)	ELEV.	
65'	100 for 5"	3/5	S-6 (65-65.4')	--	Very dense, gray, fine GRAVEL, some fine to medium sand, little silt, little coarse gravel	65.5	122.5	3
					End of Exploration at 65.5'			
70'								
75'								
80'								
85'								
90'								
95'								

NOTE:

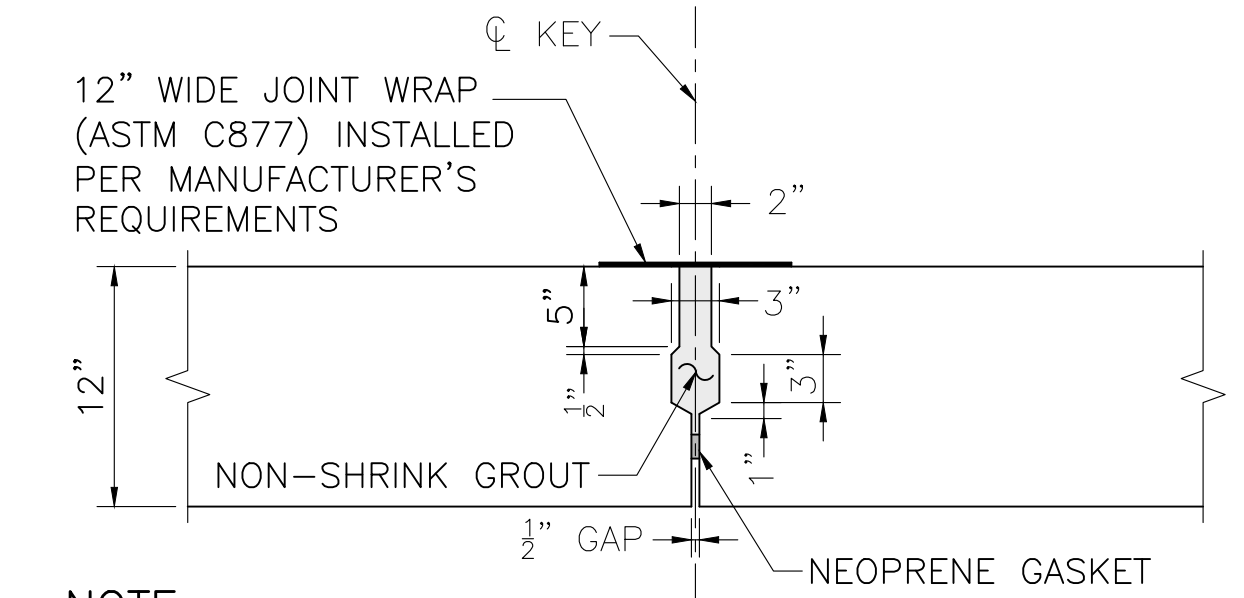
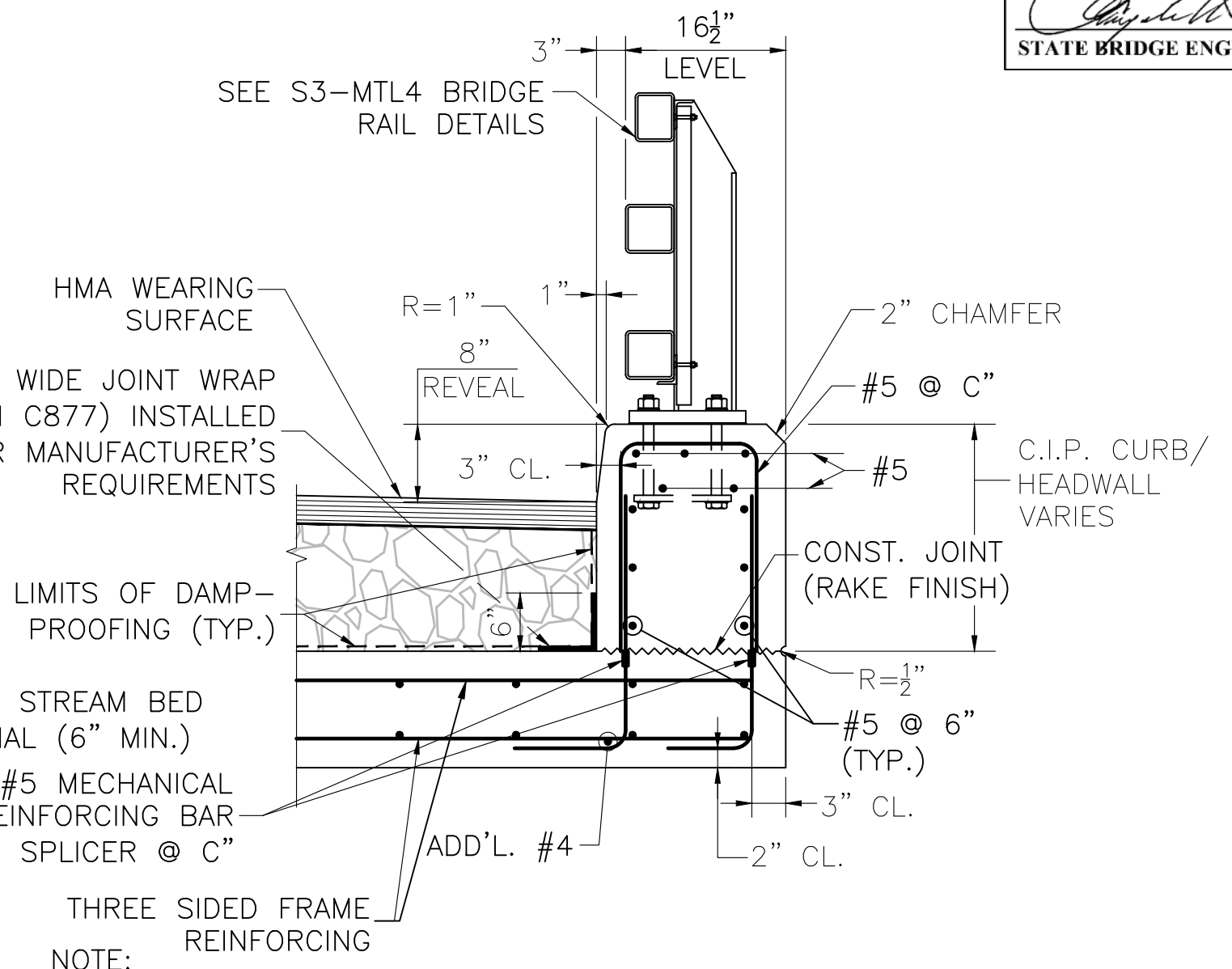
FOR BORING NOTES, SEE SHEET 3.

COMMONWEALTH OF MASSACHUSETTS
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STATE BRIDGE ENGINEER DATE 5/12/2026



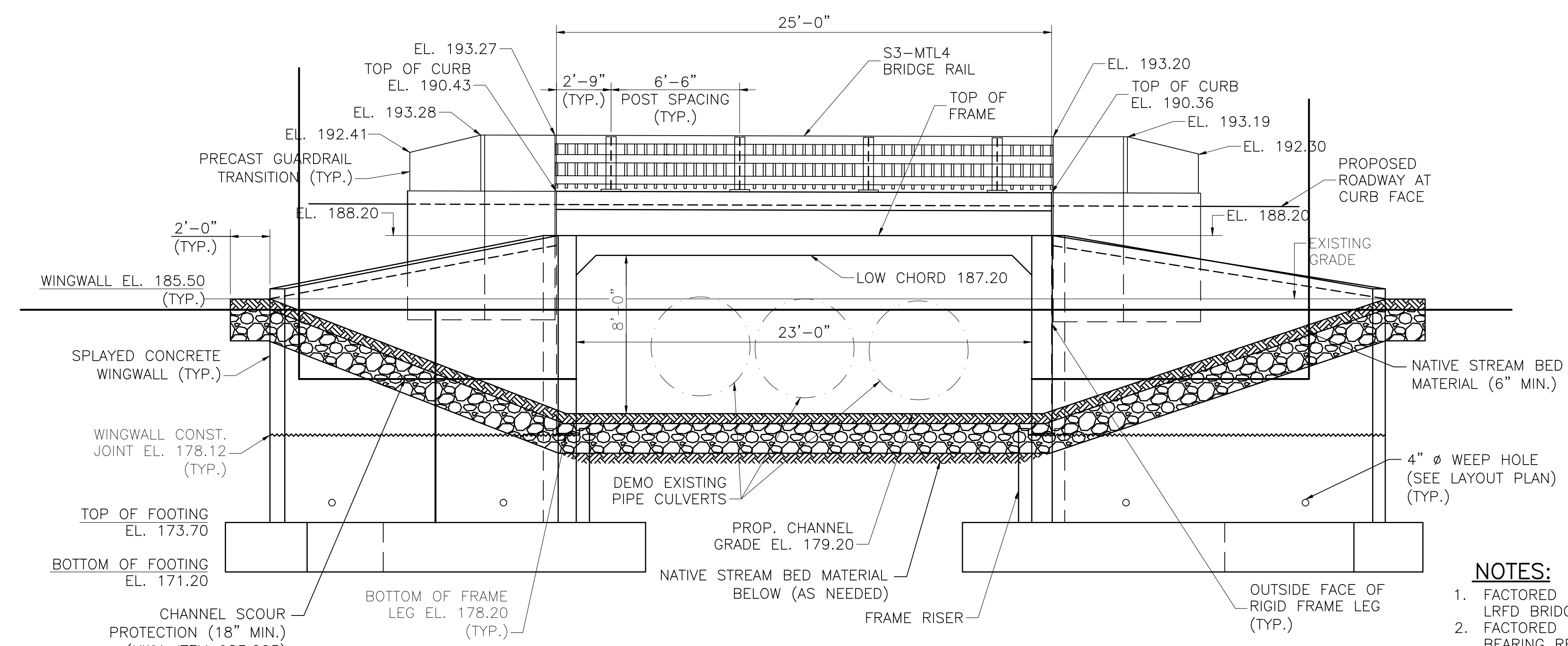
EAST ELEVATION
 SCALE: 1/4" = 1'-0"

NOTE:
 CRUSHED STONE BELOW FOOTINGS NOT SHOWN FOR CLARITY.



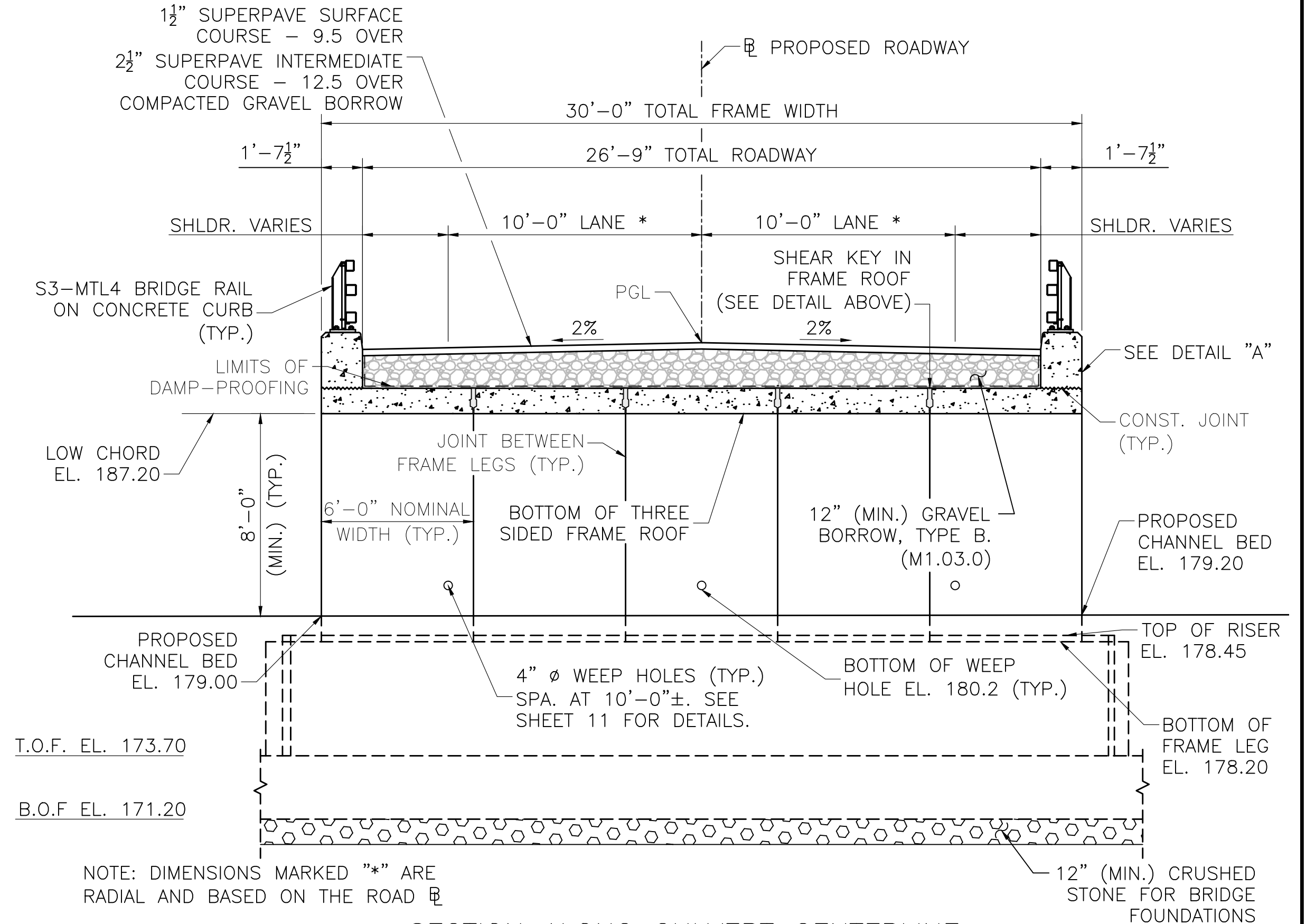
NOTE:
 DETAILS AND DIMENSIONS ARE CONCEPTUAL AND MAY BE ALTERED BY THE FABRICATOR TO SUIT THEIR OPERATIONS, HOWEVER THE FUNCTION AND INTENT OF THE DETAIL MUST BE MET.

FRAME SHEAR KEY
 SCALE: 1" = 1'-0"



WEST ELEVATION
 SCALE: 1/4" = 1'-0"

NOTE:
 CRUSHED STONE BELOW FOOTINGS NOT SHOWN FOR CLARITY.

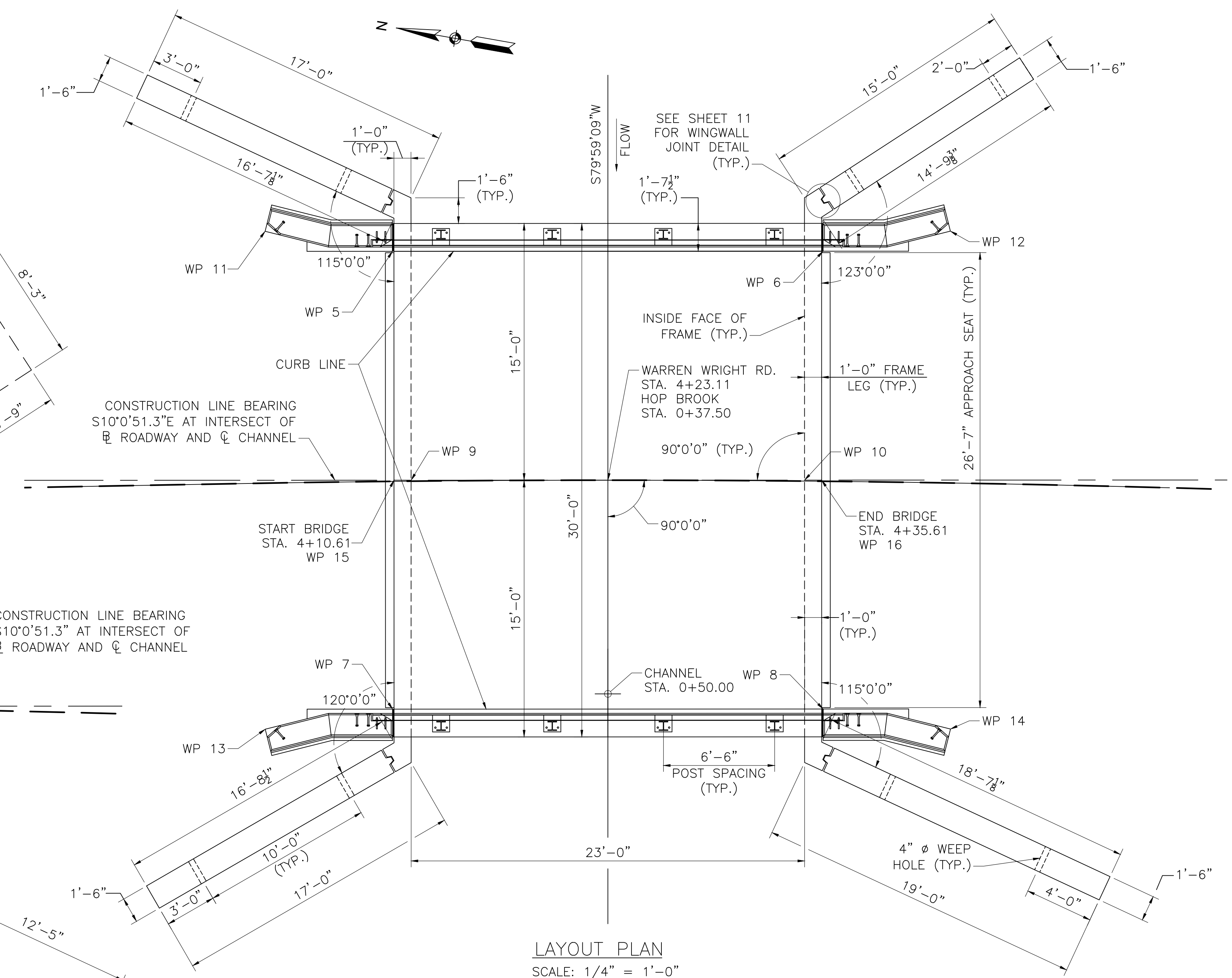
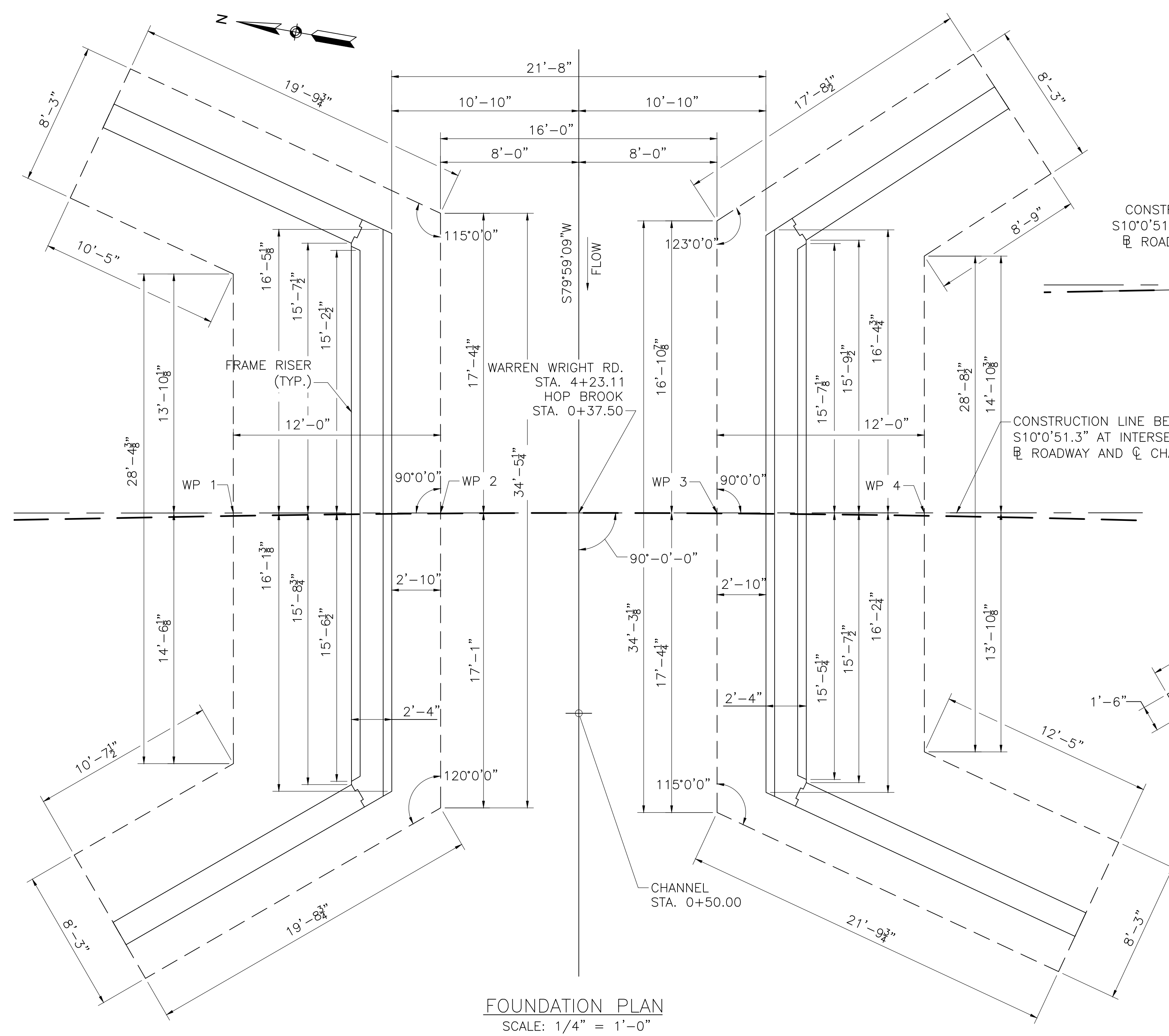


NOTE: DIMENSIONS MARKED "*" ARE RADIAL AND BASED ON THE ROAD

NOTES:

- FACTORED BEARING PRESSURE FOR FRAME FOOTINGS = 4.0 KSF PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION.
- FACTORED BEARING RESISTANCE FOR FRAME FOOTINGS = 4.2 KSF. FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE OF 9.2 KSF AND A RESISTANCE FACTOR OF 0.45.
- BEARING PRESSURE AND BEARING RESISTANCE CALCULATIONS DONE UNDER PRELIMINARY DESIGN.
- THE FRAME DIMENSIONS PROVIDED AS SHOWN TO ESTABLISH THE SIZE OF PROPOSED CLEAR OPENING. THE WIDTH AND THICKNESS OF EACH FRAME UNIT MAY VARY DEPENDING UPON THE MANUFACTURER'S SPECIFICATIONS, PROVIDED THE CLEAR OPENING IS MAINTAINED.

WP	COMMENTS	STA.	OFFSET (FT)
1	INTERSECT OF CONST. LINE & FOOTING	4+03.11	-0.17
2	INTERSECT OF CONST. LINE & FOOTING	4+15.11	-0.12
3	INTERSECT OF CONST. LINE & FOOTING	4+31.11	-0.03
4	INTERSECT OF CONST. LINE & FOOTING	4+43.11	-0.26
5	START OF BRIDGE RAIL/HEADWALL	4+10.75	-13.44
6	END OF BRIDGE RAIL/HEADWALL	4+35.47	-13.44
7	START OF BRIDGE RAIL/HEADWALL	4+10.47	13.31
8	END OF BRIDGE RAIL/HEADWALL	4+35.75	13.31
9	INTERSECT OF CONST. LINE & INSIDE FACE OF FRAME	4+11.61	-0.07
10	INTERSECT OF CONST. LINE & INSIDE FACE OF FRAME	4+34.61	-0.07
11	GUARDRAIL TRANSITION BLOCK	4+03.32	-14.72
12	GUARDRAIL TRANSITION BLOCK	4+42.89	-14.72
13	GUARDRAIL TRANSITION BLOCK	4+02.83	14.38
14	GUARDRAIL TRANSITION BLOCK	4+43.38	14.38
15	START BRIDGE	4+10.61	-0.07
16	END BRIDGE	4+35.61	-0.07

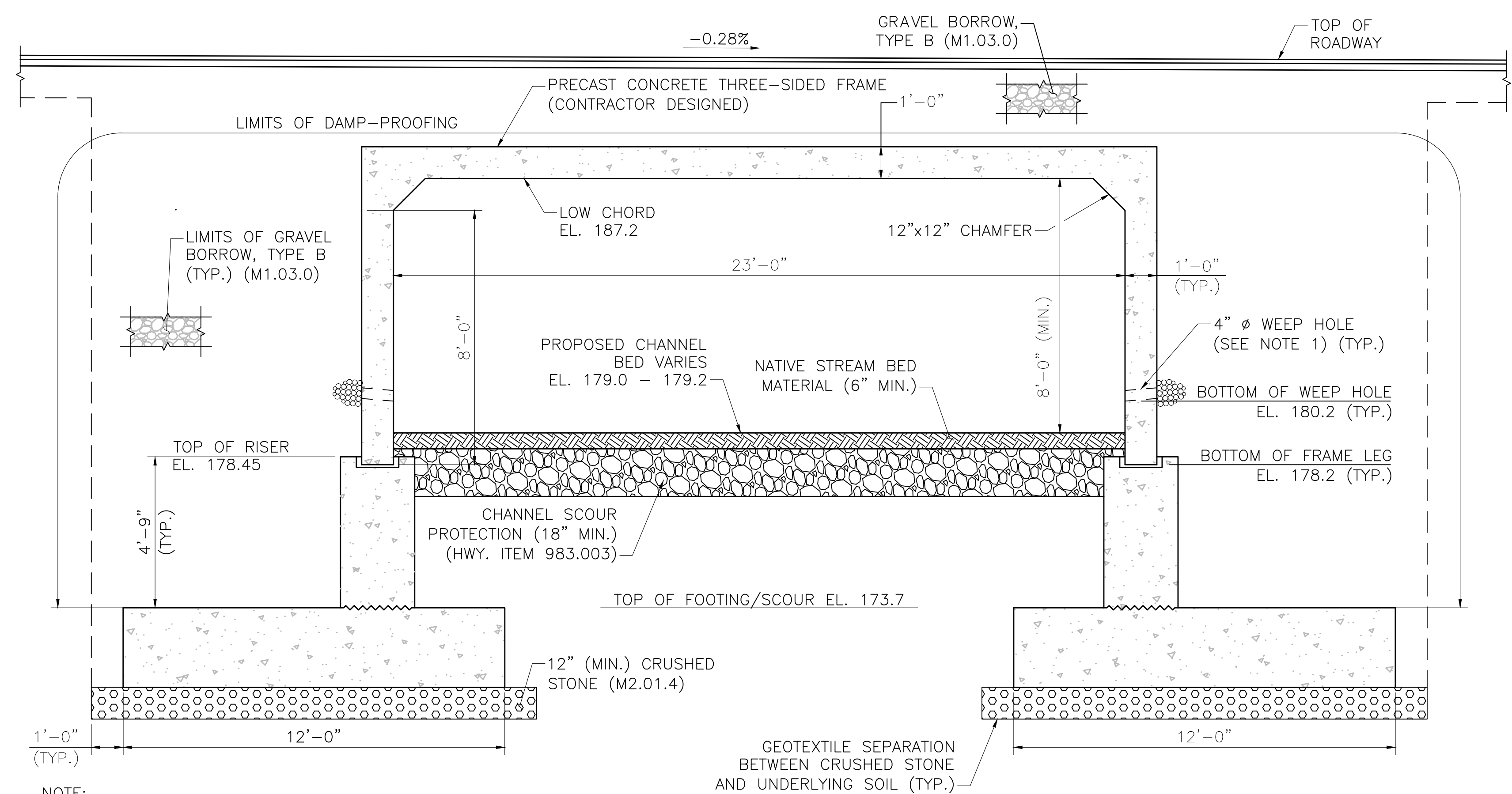


NOTE:
BRIDGE IS SQUARE TO THE CONSTRUCTION LINE THAT IS TANGENT TO THE ROADWAY AT STATION 4+23.11 AND CHANNEL STATION 00+37.50. DIMENSIONS ARE SHOWN OFF THE CONSTRUCTION LINE AND ALL WORKING POINTS SHOWN ARE BASED OFF THE ROADWAY ALIGNMENT.

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
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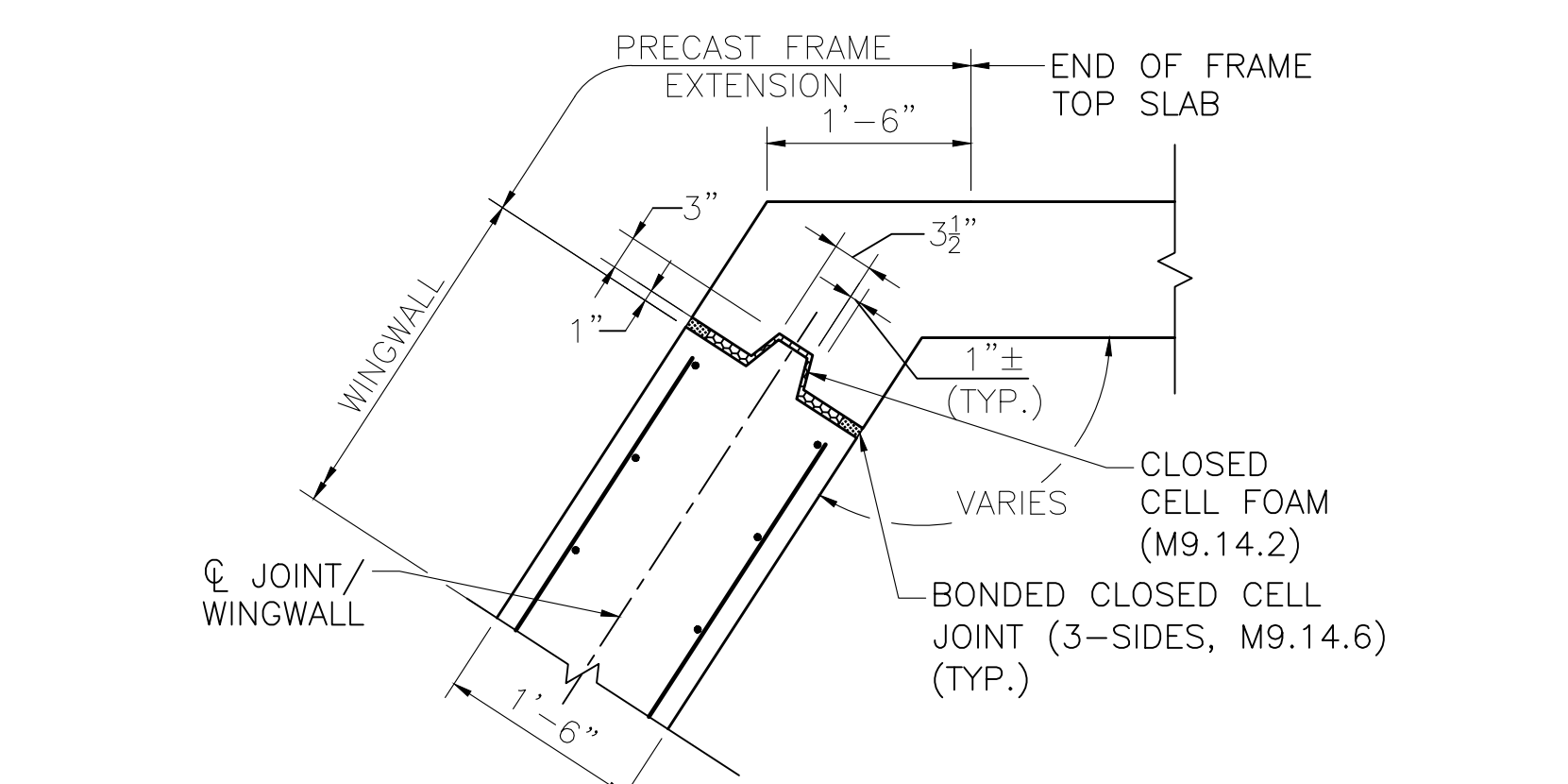
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STATE BRIDGE ENGINEER 5/12/2026
DATE

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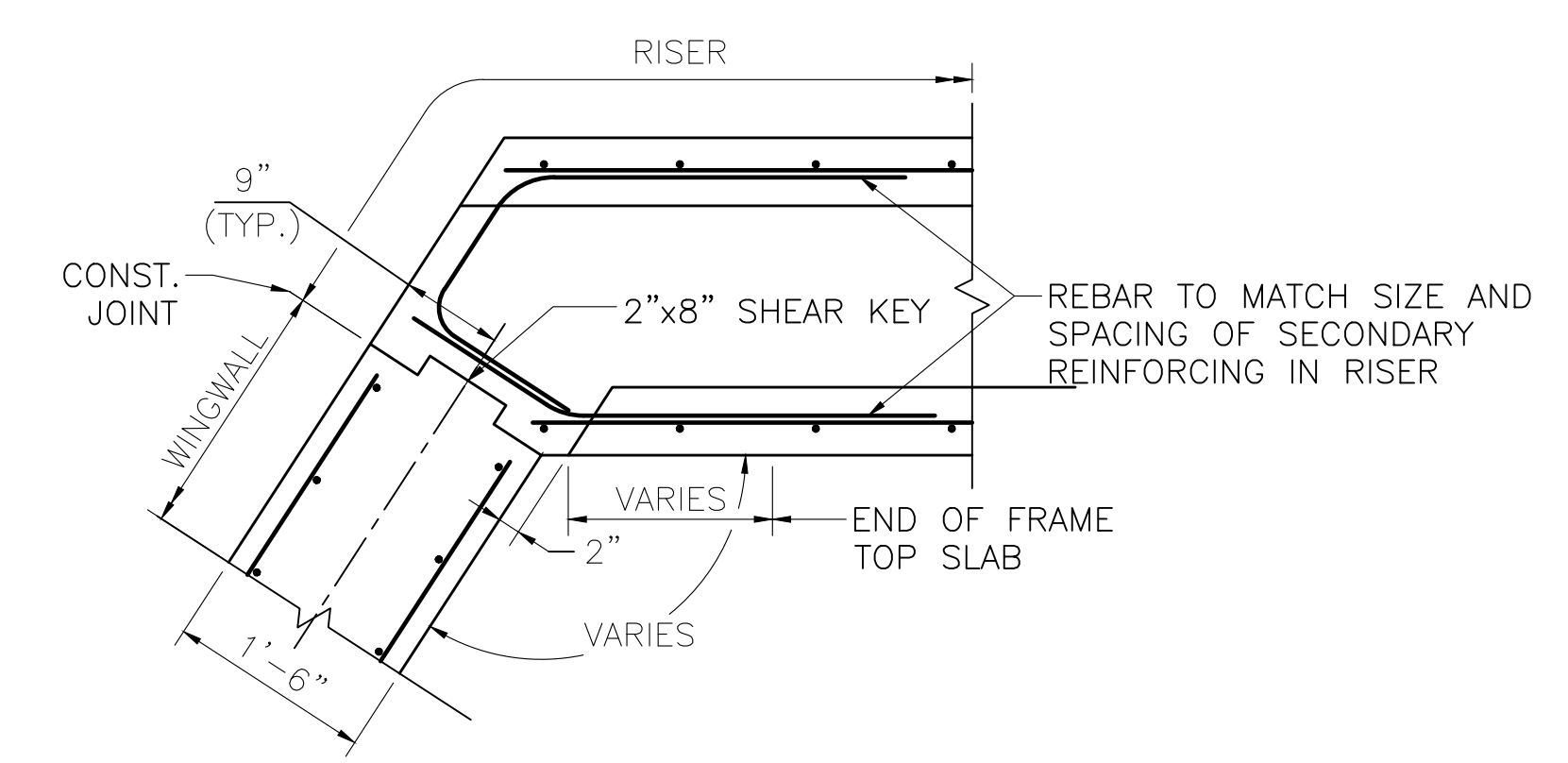


TYPICAL FRAME SECTION
SCALE: 3/8" = 1'-0"

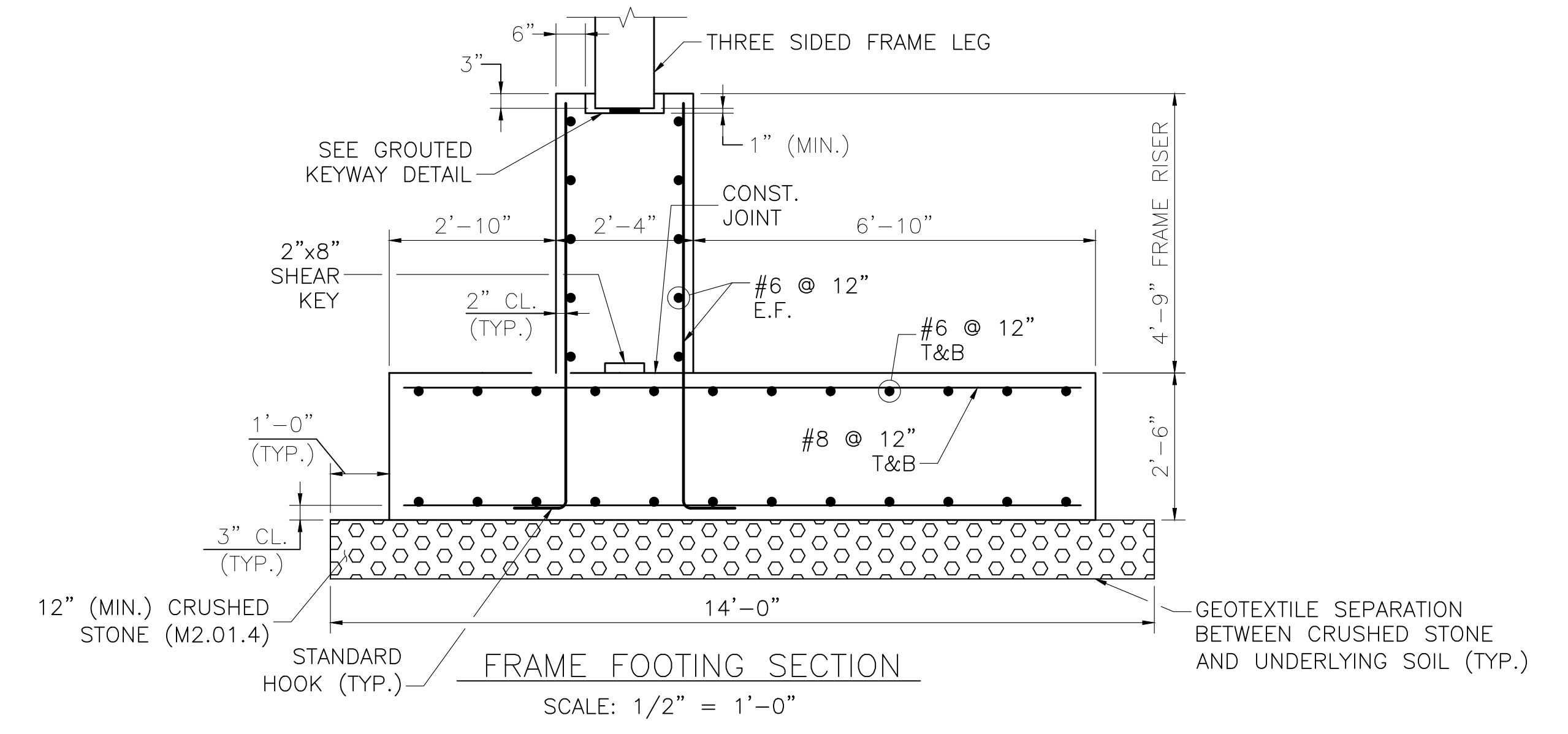
NOTE:
RISER AND FOUNDATION DESIGN ARE BASED ON PRELIMINARY FRAME DIMENSIONS. CONTRACTOR TO DETERMINE FINAL FRAME DIMENSIONS. DESIGNER SHALL VERIFY FOUNDATION ADEQUACY BASED ON FINAL DIMENSIONS. SEE PRECAST CONCRETE ELEMENT NOTES ON SHEET 2.



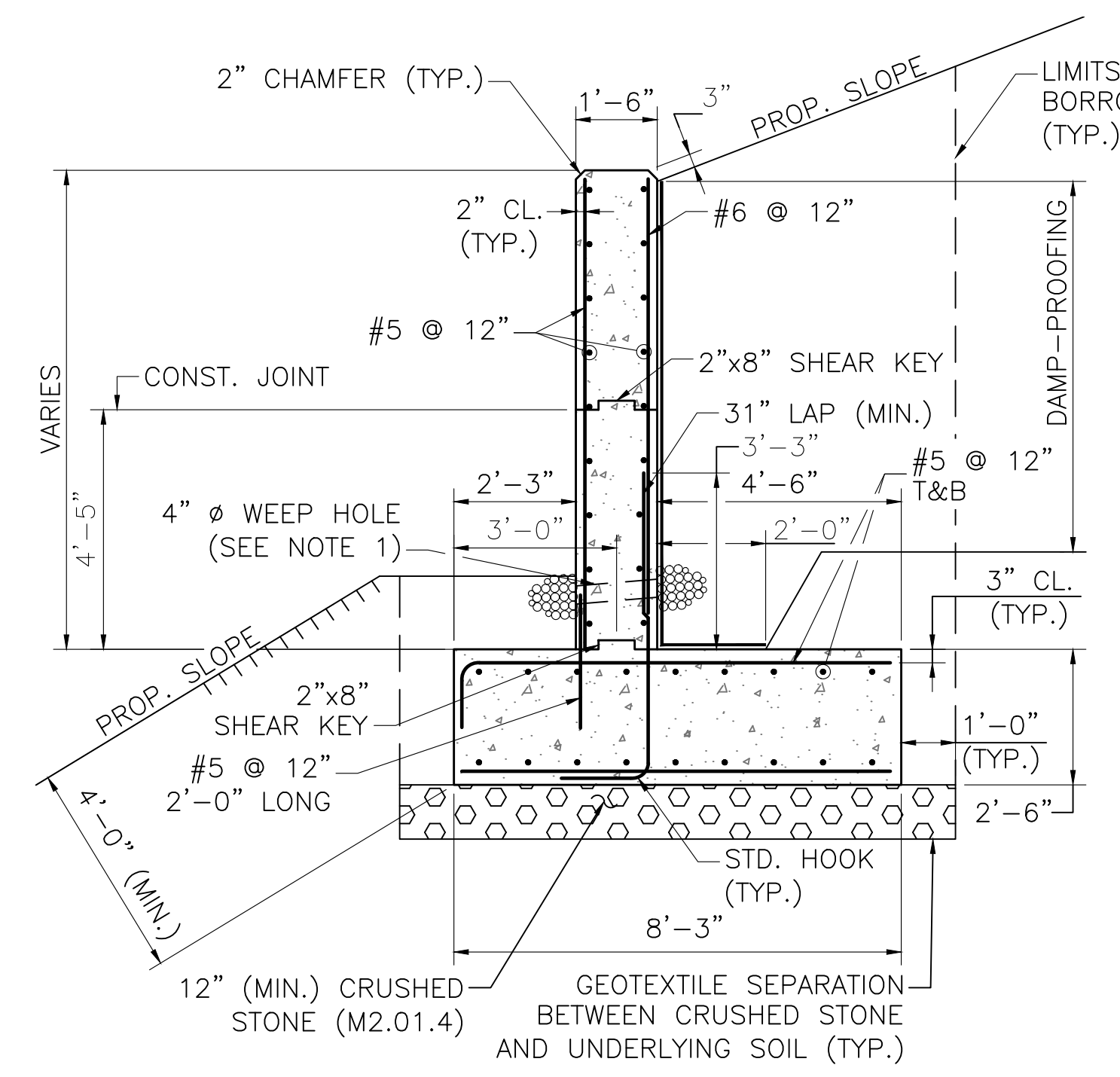
**WINGWALL TO FRAME
JOINT DETAIL**
SCALE: 3/4" = 1'-0"



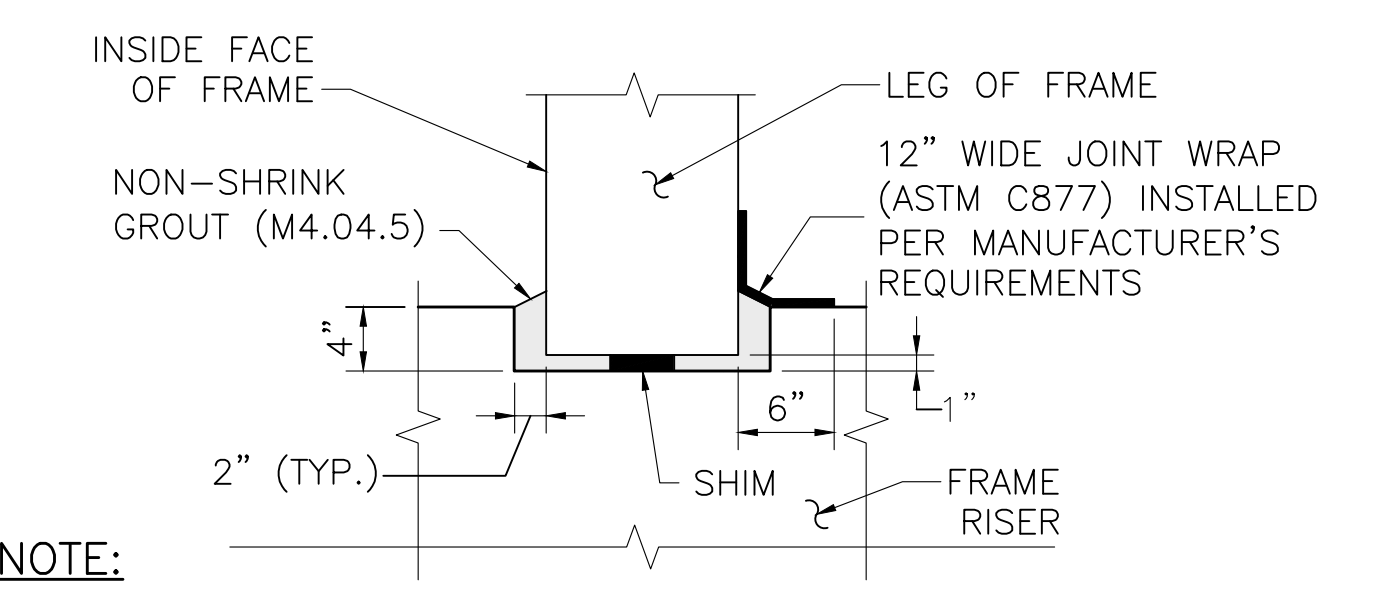
**WINGWALL TO RISER
JOINT DETAIL**
SCALE: 3/4" = 1'-0"



FRAME FOOTING SECTION
SCALE: 1/2" = 1'-0"



TYPICAL WINGWALL SECTION
SCALE: 3/8" = 1'-0"



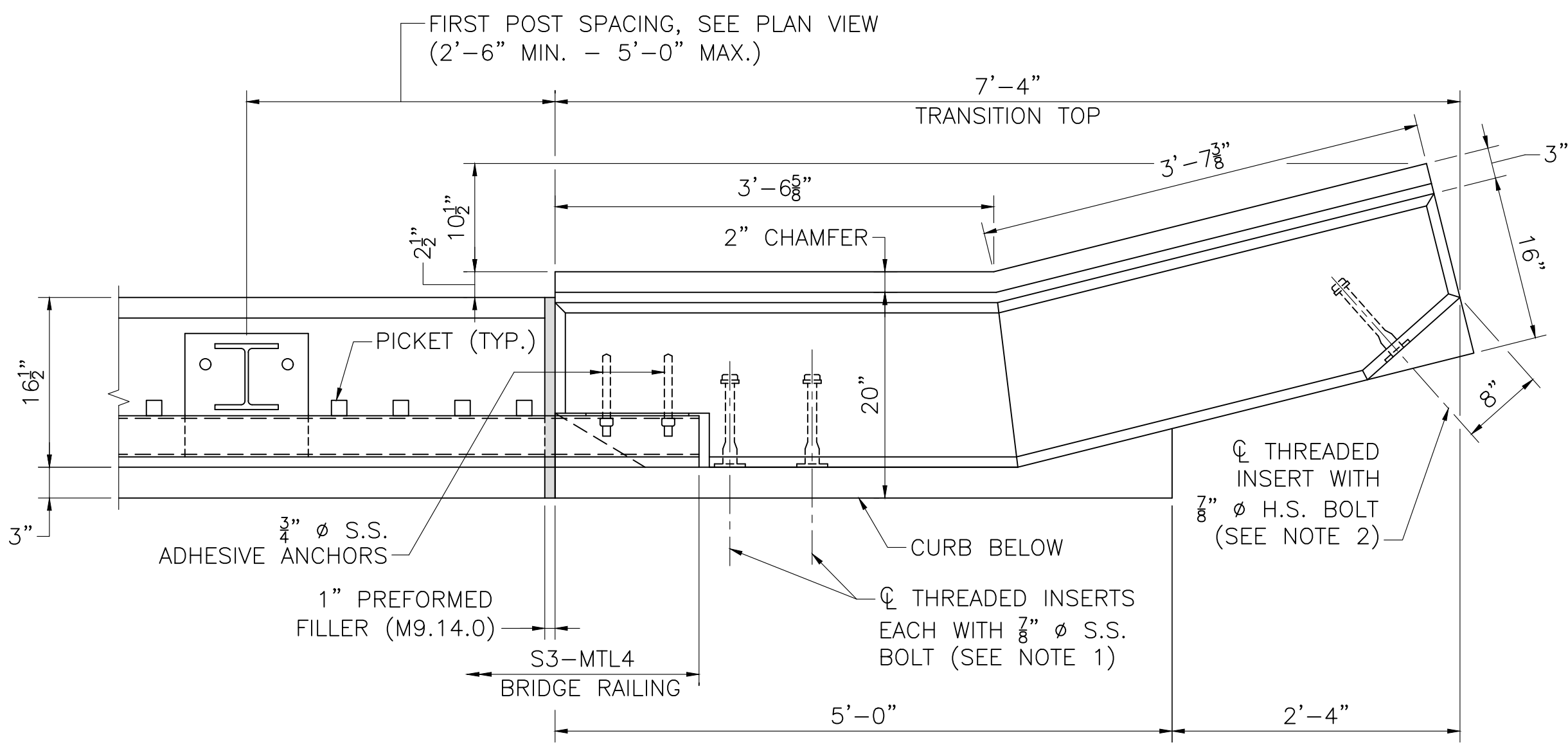
GROUTED KEYWAY
SCALE: 1" = 1'-0"

NOTE:
DETAILS AND DIMENSIONS ARE CONCEPTUAL AND MAY BE ALTERED BY THE FABRICATOR TO SUIT THEIR OPERATIONS, HOWEVER THE FUNCTION AND INTENT OF THE DETAIL MUST BE MET.

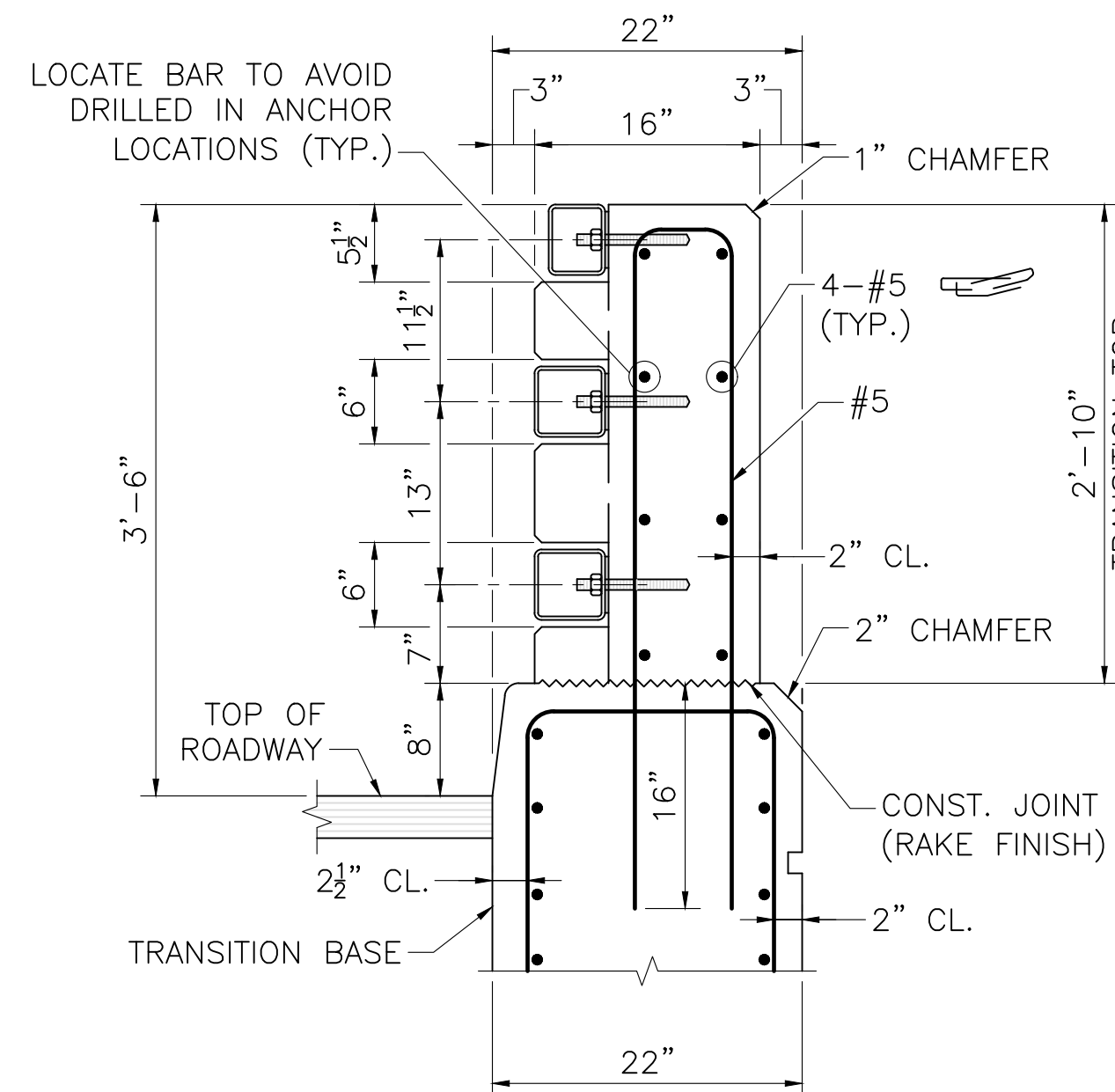
- NOTES:**
- 4" Ø WEEP HOLES 10'-0" O.C. LOCATED 12" ABOVE THE HEEL OF THE FOOTING OR BOTTOM OF FRAME SLOPING 1" PER FOOT TOWARDS THE FRONT FACE. PROVIDE 1 CUBIC YARD OF CRUSHED STONE AT EACH END OF WEEP HOLE.
 - FACTORED BEARING PRESSURE FOR WINGWALL FOOTINGS = 2.0 KSF PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION.
 - FACTORED BEARING RESISTANCE FOR WINGWALL FOOTINGS = 3.2 KSF. FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE OF 7.0 KSF AND A RESISTANCE FACTOR OF 0.45.

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
**CONCEPTUAL DESIGN IS ACCEPTABLE
TO MASSDOT FOR CONTRACTING**

[Signature]
STATE BRIDGE ENGINEER 5/12/2026
DATE

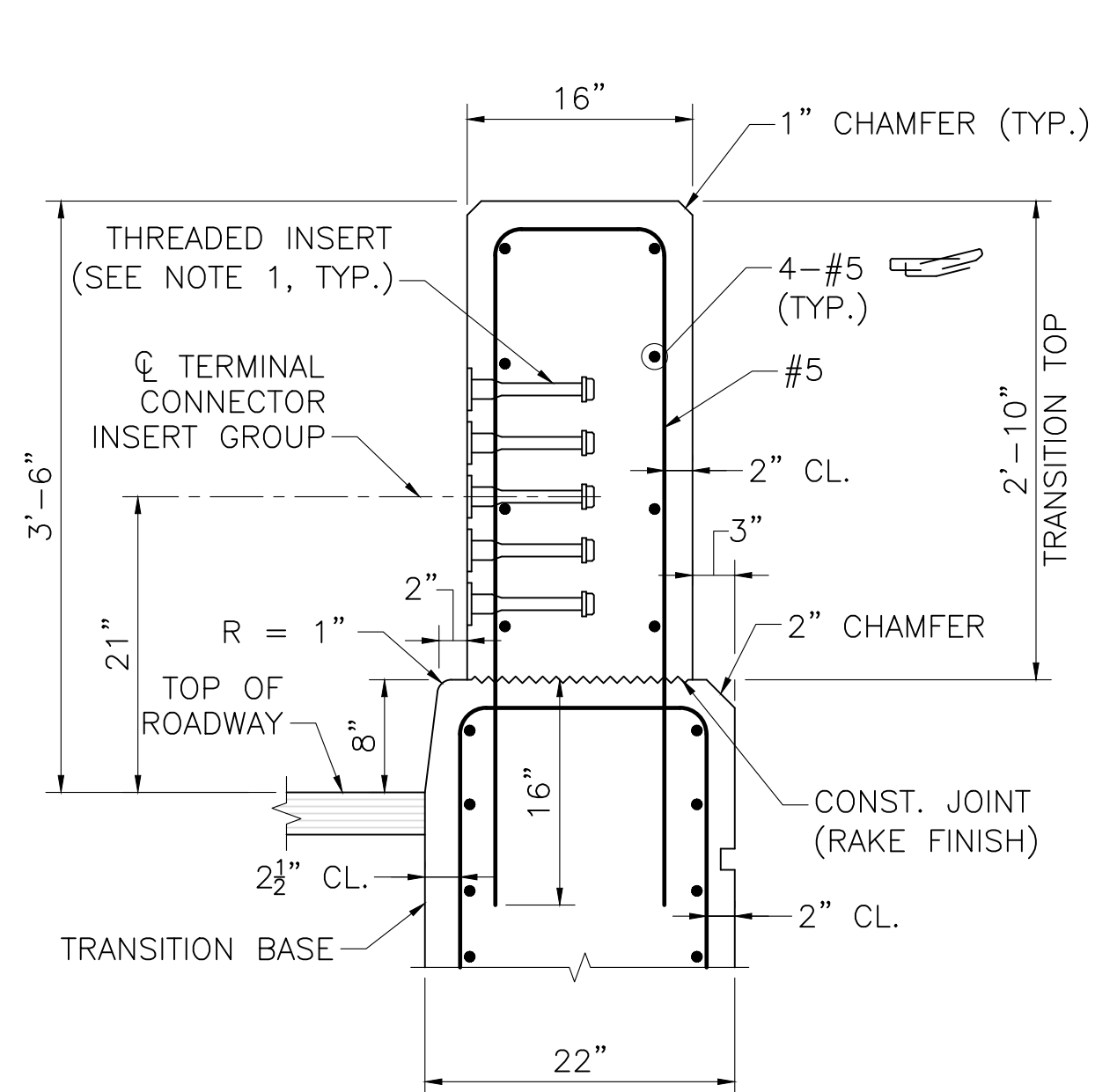


PLAN AT SAFETY CURB
SCALE: 1" = 1'-0"



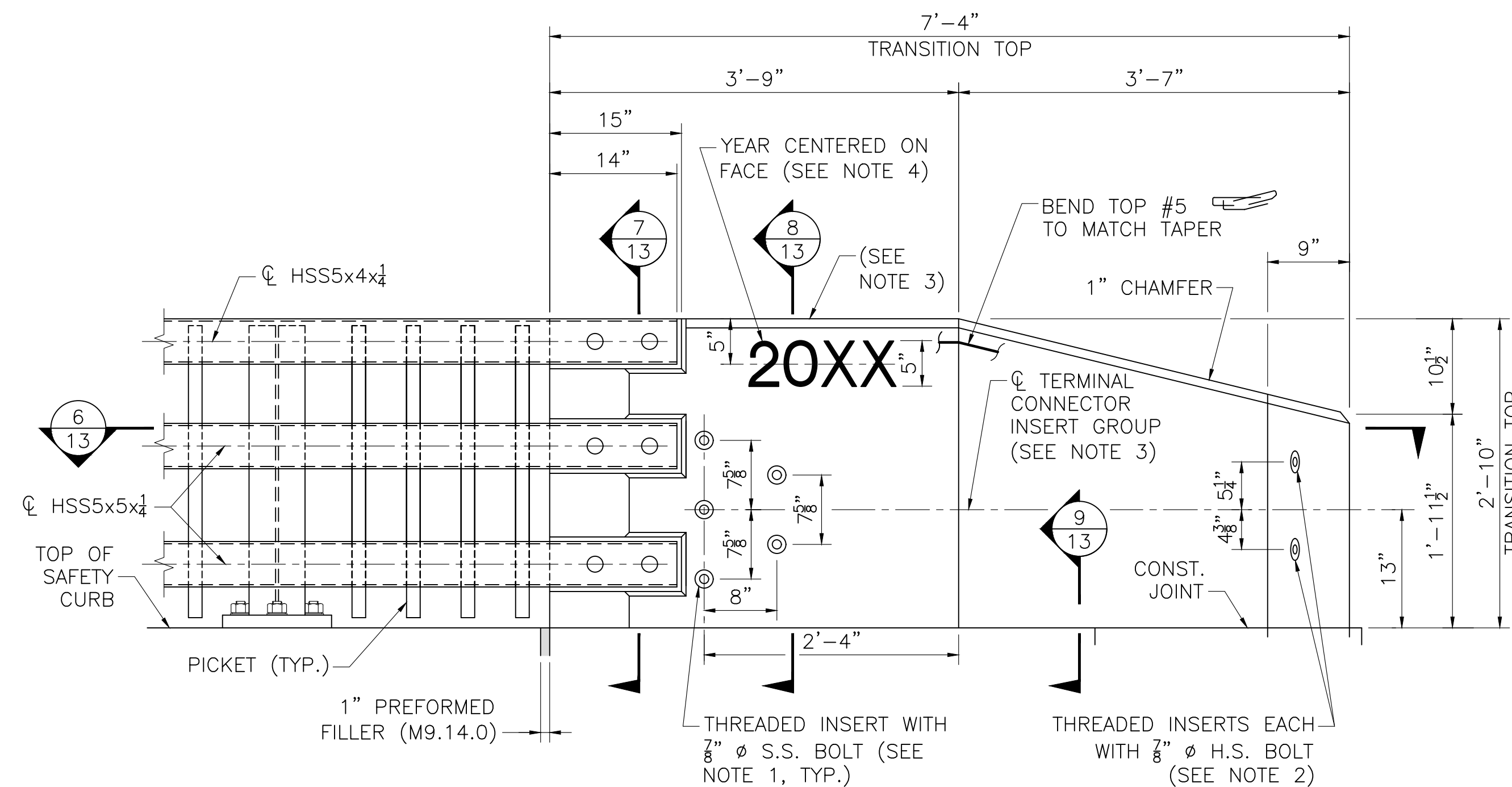
SECTION AT SAFETY CURB

SECTION 7
SCALE: 1" = 1'-0" 13

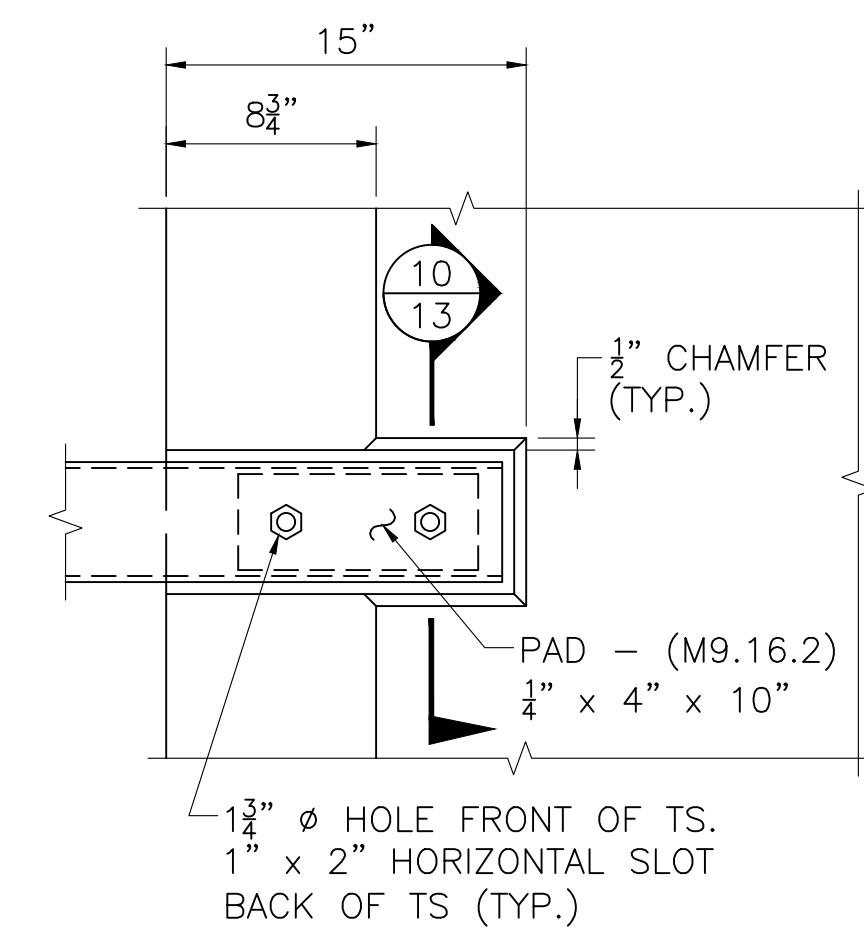


SECTION AT SAFETY CURB

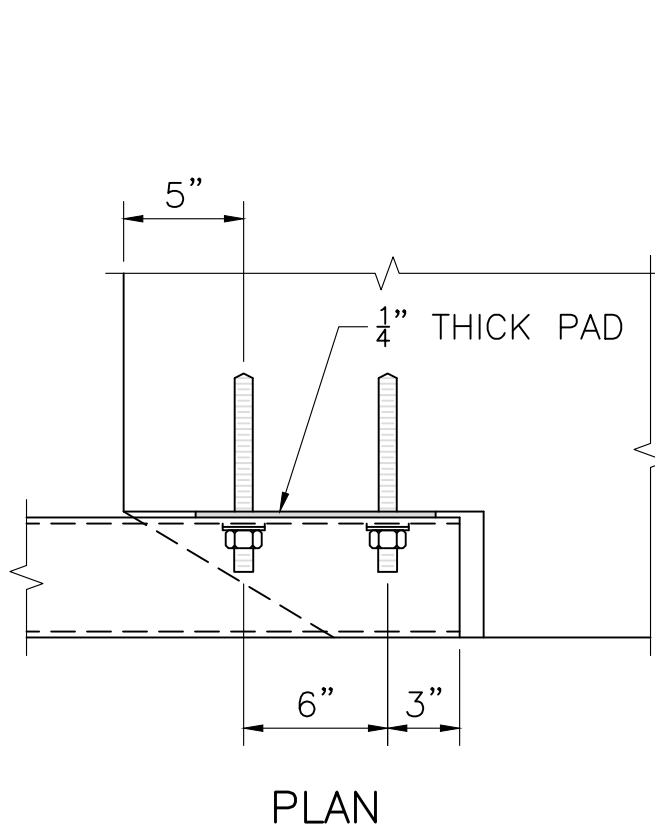
SECTION 8
SCALE: 1" = 1'-0" 13



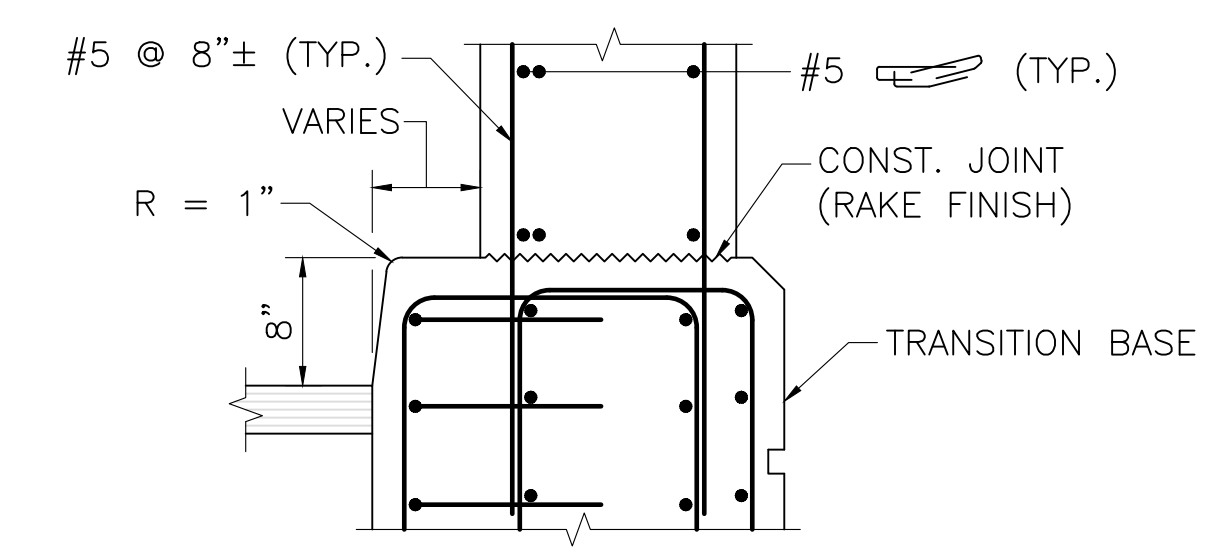
ELEVATION AT SAFETY CURB
SCALE: 1" = 1'-0"



RAIL ATTACHMENT
SCALE: 1 1/2" = 1'-0"

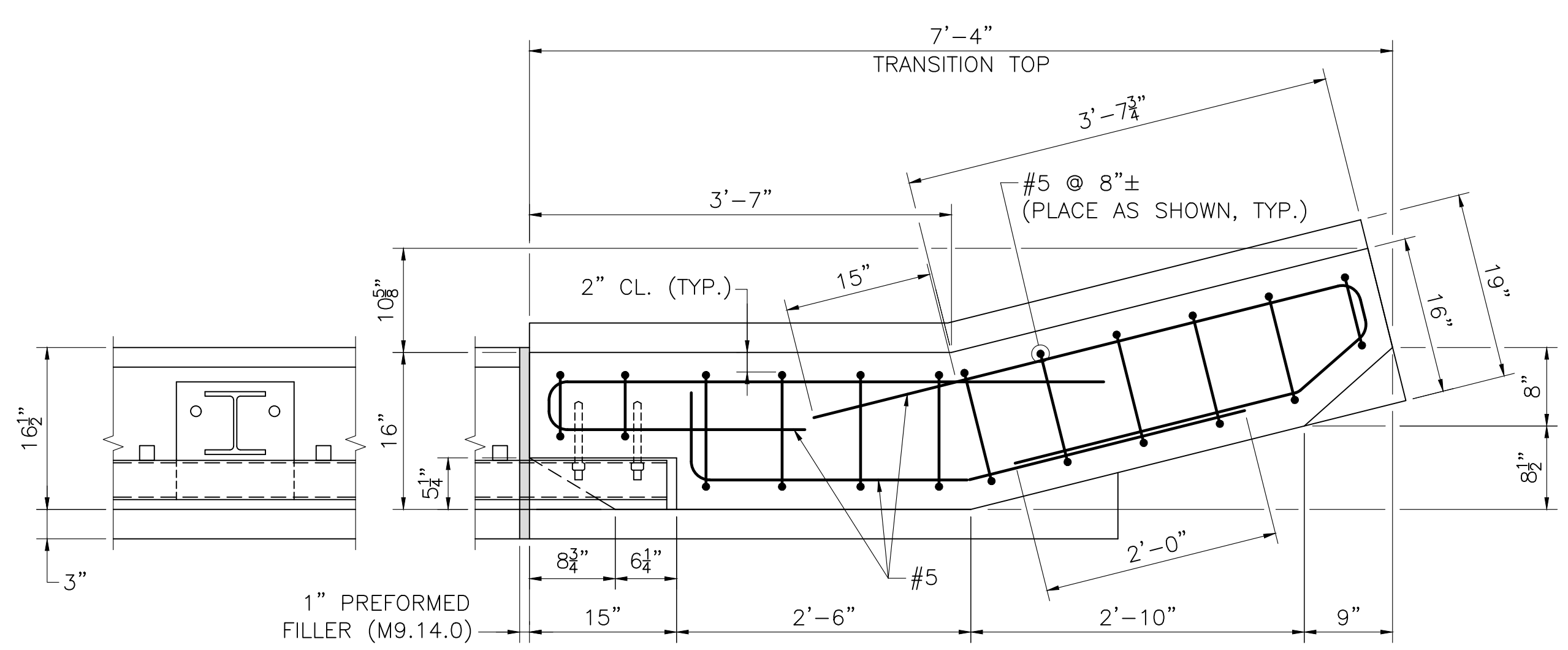


PLAN



SECTION AT SAFETY CURB

SECTION 9
SCALE: 1" = 1'-0" 13



SECTION 6
SCALE: 1" = 1'-0" 13

NOTES:

1. THREADED INSERTS SHALL BE PREQUALIFIED BY THE MANUFACTURER AS BEING CAPABLE OF DEVELOPING A NOMINAL SHEAR RESISTANCE OF 20 KIPS PER 7/8" Ø S.S. (STAINLESS STEEL) BOLT. S.S. BOLTS SHALL BE 7/8" Ø x 1 1/2" LONG FULLY THREADED CONFORMING TO ASTM F593D WITH AISI TYPE 304N S.S. WASHERS. INSERTS FOR 7/8" S.S. BOLTS SHALL BE GALVANIZED AND CAST INTO THE TRANSITION.
2. 7/8" Ø HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125 AND BE GALVANIZED. USE ADDITIONAL WASHERS AS REQUIRED TO PROPERLY ENGAGE THE BOLTS.
3. FOR AN APPROACH GRADE IN EXCESS OF 3%, THE TRANSITION TOP AND THE TOP OF CURB SHALL FOLLOW THE APPROACH GRADE. THE HEIGHT OF THE TRANSITION TOP SHALL VARY PROVIDED THAT THE MINIMUM DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE MET. THE BOTTOM OF THE TRANSITION BASE SHALL BE SET LEVEL WITH THE MINIMUM EMBEDMENT DEPTH SHOWN. THE TERMINAL CONNECTOR INSERT GROUP SHALL BE SLOPED TO FOLLOW THE APPROACH GRADE.

FOR AN APPROACH GRADE UP TO 3%, THE TRANSITION MAY BE CAST SQUARE AND SET PLUMB WITH THE MINIMUM EMBEDMENT DEPTH SHOWN. THE TERMINAL CONNECTOR INSERT GROUP SHALL BE SQUARE TO THE POST.
4. USE LATEST CONTRACT COMPLETION YEAR IN EFFECT WHEN THE FIRST GUARDRAIL TRANSITION IS CAST. USE THIS YEAR FOR ALL GUARDRAIL TRANSITIONS.
5. ALL CONCRETE FOR THE PRECAST HIGHWAY GUARDRAIL TRANSITION SHALL BE 5000 HP CEMENT CONCRETE.
6. LIFTING DEVICES (NOT SHOWN), INCLUDING THEIR NUMBER AND LOCATION, SHALL BE DESIGNED AND DETAILED BY THE PRECASTER. THEY SHALL BE GALVANIZED AND SHALL BE PLACED AND RECESSED IN POCKETS TO PROVIDE 1 1/2" CLEAR COVER TO THE FACE OF THE TRANSITION CONCRETE. THESE DEVICES SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS ALONG WITH ALL SUPPORTING CALCULATIONS AND/OR CATALOG CUTS. ONCE THE PRECAST TRANSITION IS SET IN PLACE, THE LIFTING DEVICE POCKETS SHALL BE FILLED WITH A NON-SHRINK GROUT THAT MATCHES THE COLOR OF THE TRANSITION CONCRETE WHEN CURED AND THE FILLED POCKETS SHALL BE RUBBED WITH A CORUNDUM STONE TO BLEND OUT THE JOINTS.

**BELCHERTOWN
WARREN WRIGHT ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	13	14
PROJECT FILE NO.		N/A	

HIGHWAY GUARDRAIL TRANSITION DETAILS

**COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division**
CONCEPTUAL DESIGN IS ACCEPTABLE
TO MASSDOT FOR CONTRACTING

STATE BRIDGE ENGINEER: [Signature] DATE: 5/12/2026

Plotted on 4-May-2026 12:29 PM
S3-MTL4_BRIDGE_RAILING_TRANSITION.DWG
04-May-2026
Final Structural Submitter (SF)

