

OWNER-ENGINEER AGREEMENT

THIS AGREEMENT made this ____ day September 2023. between Tighe & Bond, Inc. with a usual place of business at 53 Southampton Road, Westfield, MA 01085, hereinafter called the ENGINEER, and the TOWN OF GREAT BARRINGTON, acting by its TOWN MANAGER, with a usual place of business at 334 Main Street, Great Barrington, Massachusetts 01230, hereinafter called the OWNER.

The ENGINEER and the OWNER, for the consideration hereinafter named, agree as follows:

1. Scope of Work

The ENGINEER shall furnish all engineering labor to perform data collection and conceptual design services for the project known as the Town of Great Barrington Brookside Road Alternatives Analysis (the Project), in accordance with the Scope of Services set forth below:

- Attachment A: Scope of Services – ENGINEER's September 8, 2023, Proposal, attached hereto and made a part hereof

2. Contract Price

The Owner shall pay the ENGINEER for the performance of this Agreement, subject to any additions and deductions provided for herein, in current funds, the not to exceed sum lump sum of One Hundred Forty-Seven Thousand Dollars & 00/100 (\$147,000), invoiced monthly based on the percentage complete.

3. Commencement and Completion of Work

- A. It is agreed that time is of the essence of this Agreement. The ENGINEER shall commence and prosecute the work under this Agreement upon execution hereof and shall complete the work on or before February 28, 2024, weather permitting.
- B. Progress and Completion: ENGINEER shall commence work promptly upon execution of this Agreement and shall prosecute and complete the work regularly, diligently, and uninterruptedly at such a rate of progress as will assure completion in a timely manner.

4. Performance of the Work

- A. Direction of the Work: The ENGINEER shall supervise and direct the Work, using that degree of care and skill ordinarily exercised under similar circumstances by prudent members of the profession practicing in the same or similar locality for projects similar to the Project in scope, difficulty and location. The ENGINEER shall be solely responsible for coordinating all portions of the Work under the Agreement.

B. Responsibility for the Work:

- (1) The ENGINEER shall be responsible to the Owner for the acts and omissions of his employees, subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the ENGINEER. Consistent with the standard of care referenced in paragraph A. above, the ENGINEER shall be responsible for the professional and technical accuracy and the coordination of all designs, drawings, specifications, estimates and other work or services furnished by him or his consultants and subcontractors. The ENGINEER shall perform his work under this Agreement in such a competent and professional manner that detail checking and reviewing by the Owner shall not be necessary.
- (2) The ENGINEER shall not employ additional consultants not named in his proposal to the Owner, nor sublet, assign or transfer any part of his services or obligations under this Agreement without the prior approval and written consent of the Owner. Such written consent shall not in any way relieve the ENGINEER from his responsibility for the professional and technical accuracy and coordination of all data, designs, drawings, specifications, estimates and other work or services furnished under this Agreement.
- (3) All consultants must be registered and licensed in their respective disciplines if registration and licensure are required under the applicable provisions of Massachusetts law.
- (4) The ENGINEER and all consultants and subcontractors shall conform their work and services to any guidelines, standards and regulations of any governmental authority applicable to the type of work or services covered by this Agreement, including those of the Massachusetts Highway Department and the Department of Environmental Protection.
- (5) The ENGINEER shall not be relieved from his obligations to perform the Work in accordance with the requirements of this Agreement either by the activities or duties of the Owner in its administration of the Agreement, or by inspections, tests or approvals required or performed by persons other than the ENGINEER.
- (6) Neither the Owner's review, approval or acceptance of, nor payment for any of the work or services performed shall be construed to operate as a waiver of any rights under the Agreement or any cause of action arising out of the performance of the Agreement.

C. Deliverables, Ownership of Documents: One (1) reproducible copy of all drawings, plans, specifications and other documents prepared by the ENGINEER shall become the property of the Owner upon payment in full therefor to the ENGINEER. Ownership of stamped drawings and specifications shall not include the ENGINEER's certification or stamp. Any re-use of such documents without the ENGINEER's written verification of suitability for the specific purpose intended shall be without liability or legal exposure to the ENGINEER or to the

ENGINEER's independent professional associates, subcontractors or consultants. Distribution or submission to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as an act in derogation of the ENGINEER's rights under this Agreement.

D. Notices, Compliance With Laws:

- (1) The ENGINEER shall give all notices and comply with all applicable federal, state and local laws, ordinances, rules, regulations and lawful orders of any public authority relating to the performance of the Work. The ENGINEER shall provide the Owner with reproductions of all permits, licenses and receipts for any fees paid. The Owner represents that it has disclosed to the ENGINEER all orders and requirements known to the Owner of any public authority particular to this Agreement.
- (2) If the ENGINEER observes that any of the Owner's design schemes, outlines or goals are at variance with applicable laws, statutes, codes, and regulations in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be accomplished by appropriate modification.
- (3) In the performance of the Work, the ENGINEER shall comply with all applicable federal, state and local laws and regulations, including those relating to workplace and employee safety.

5. Site Information Not Guaranteed: ENGINEER's Investigation

The Owner shall furnish to the ENGINEER available surveys, data and documents relating to the area which is the subject of the Scope of Work. All such information, including that relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of the ENGINEER and is not guaranteed. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures will be the same as those indicated in the information furnished, and the ENGINEER must satisfy himself as to the correctness of such information. If, in the opinion of the ENGINEER, such information is inadequate, the ENGINEER may request the Owner's approval to verify such information through the use of consultants or additional exploration. ENGINEER shall not be responsible for damages to underground utilities or structures not marked. In no case shall the ENGINEER commence such work without the Owner's prior written consent. Such work shall be compensated as agreed upon by Owner and ENGINEER.

6. Payments to the ENGINEER

- A. The Owner shall make payment to the ENGINEER, monthly, upon approval of the ENGINEER's requisitions therefor. All requisitions shall be in the same proportionate amount of the Contract Price as the proportion of the work completed to the total scope of work.
- B. If there is a material change in the scope of work, the Owner and the ENGINEER shall mutually agree to an adjustment in the Contract Price.
- C. If the Owner authorizes the ENGINEER to perform additional services, the ENGINEER shall be compensated in an amount mutually agreed upon, in advance, in writing. Except in the case of an emergency, the ENGINEER shall not perform any additional services until such compensation has been so established.

7. Reimbursement

Except as otherwise included in the Contract Price or otherwise provided for under this Agreement, the ENGINEER shall be reimbursed by the Owner: (a) at 1.1 times the actual cost to the ENGINEER of consultants retained to obtain information pursuant to Article 5 hereof or otherwise. No such reimbursement shall be made unless the rates of compensation have been approved, in advance, by the Owner; (b) at 1.1 times the actual cost of additional or specially authorized expense items, as approved by the Owner.

8. Final Payment, Effect

The acceptance of final payment by the ENGINEER shall constitute a waiver of all claims by the ENGINEER arising under the Agreement.

9. Terms Required By Law

This Agreement shall be considered to include all terms required to be included in it by the Massachusetts General Laws, and all other laws, as though such terms were set forth in full herein.

10. Indemnification

- A. General Liability: The ENGINEER shall indemnify and hold harmless the Owner from and against any and all claims, damages, losses, and expenses, including attorney's fees to the extent they arise out of the performance of this Agreement and to the extent the same relate to matters of general commercial liability, when such claims, damages, losses, and expenses are caused by the negligent acts or omissions of the ENGINEER or his employees, agents, subcontractors or representatives.

- B. Professional Liability: The ENGINEER shall indemnify and hold harmless the Owner from and against any and all claims, damages, losses, and expenses, including attorney's fees to the extent arising out of the performance of this Agreement at to the extent the same relate to the professional competence of the ENGINEER's services when such claims, damages, losses, and expenses are caused by the negligent acts, negligent errors or omissions of the ENGINEER or his employees, agents, subcontractors or representatives.

11. Insurance

- A. The ENGINEER shall at his own expense obtain and maintain a Professional Liability Insurance policy for errors, omissions or negligent acts arising out of the performance of this Agreement in a minimum amount of \$1,000,000.00. Said amount shall be the limits of ENGINEER's liability.
- B. The coverage shall be in force from the time of the agreement to the date when all construction work for the Project is completed and accepted by the Owner. If, however, the policy is a claims made policy, it shall remain in force for a period of six (6) years after completion.

Since this insurance is normally written on a year-to-year basis, the ENGINEER shall notify the Owner should coverage become unavailable.
- C. The ENGINEER shall, before commencing performance of this Agreement, provide by insurance for the payment of compensation and the furnishing of other benefits in accordance with M.G.L. c.152, as amended, to all its employees and shall continue such insurance in full force and effect during the term of the Agreement.
- D. The ENGINEER shall carry insurance in a sufficient amount to assure the restoration of any plans, drawings, computations, field notes or other similar data relating to the work covered by this Agreement in the event of loss or destruction until the final fee payment is made or all data are turned over to the Owner.
- E. The ENGINEER shall also maintain public liability insurance, including property damage, bodily injury or death, and personal injury and motor vehicle liability insurance against claims for damages because of bodily injury or death of a person or damage to property.
- F. Certificates and any and all renewals substantiating that required insurance coverage is in effect shall be filed with the Agreement. Any cancellation of insurance, whether by the insurers or by the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the Owner at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice.
- G. Upon request of the ENGINEER, the Owner reserves the right to modify any conditions of this article.

12. Notice

All notices required to be given hereunder shall be in writing and delivered to, or mailed first class to, the parties' respective addresses stated above. In the event that immediate notice is required, it may be given by telephone or facsimile, but shall, to the extent possible, be followed by notice in writing in the manner set forth above.

13. Termination

- A. Each party shall have the right to terminate this Agreement in the event of a failure of the other party to comply with the terms of the Agreement. Such termination shall be effective upon seven days' notice to the party in default and the failure within that time of said party to cure its default.
- B. The Owner shall have the right to terminate the Agreement without cause, upon ten (10) days' written notice to the ENGINEER. In the event that the Agreement is terminated pursuant to this subparagraph, the ENGINEER shall be reimbursed in accordance with the Agreement for all work performed up to the termination date.

14. Miscellaneous

- A. Assignment: The ENGINEER shall not assign or transfer any of its rights, duties or obligations under this Agreement without the written approval of the Owner.
- B. Governing Law: This Agreement shall be governed by and construed in accordance with the law of the Commonwealth of Massachusetts.
- C. Certification of Tax Compliance: By its execution of this Agreement, the ENGINEER certifies, pursuant to General Laws Chapter 62C, Section 49A and under the pains and penalties of perjury, that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Included as Attachment A:

- Scope Of Services – Engineer's September 8, 2023 Proposal

Included as Attachment B:

- Supplemental Provisions

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

A handwritten signature in dark ink, appearing to read "Chetl M. Maut", written over a horizontal line.

Signature/Title

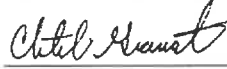
Tighe & Bond, Inc.

Company/Firm Name

CERTIFICATE AS TO PAYMENT OF STATE TAXES

Pursuant to M.G.L. Chapter 62C, Section 49A, I certify under the penalties of perjury that I have complied with the laws of the Commonwealth of Massachusetts relating to taxes.

04-2821431
Social Security Number
or Federal Identification Number


TIGHE & BOND, INC.

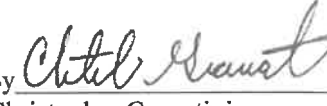
By Christopher O. Granatini
Vice President

IN WITNESS WHEREOF, the parties hereto have set their hands and seals, the Owner by its authorized representatives who, however, incur no personal liability by reason of the execution hereof or of anything herein contained, as of the day and year first above written.

TOWN OF GREAT BARRINGTON

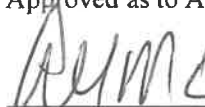
TIGHE & BOND, INC.

By 
Mark Pruhenski
Town Manager

By 
Christopher Granatini
Vice President

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this contract is available therefore and that the Town Manager has been authorized to execute the contract and approve all requisitions and change orders.

Approved as to Availability of Funds:


Name:
Town Accountant

Contract Sum: \$ 147,000.00

VT# 2025

ACU# 32620-58900

P.O. 240627

Attachment A

Scope of Services – Engineer's September 8, 2023 Proposal

G-5000-017A
September 8, 2023

Joe Aberdale, Superintendent
Town of Great Barrington
Department of Public Works
334 Main St
Great Barrington, MA 01230

**Re: Proposal for the Brookside Road Bridge over the Housatonic River
Superstructure Replacement**

Dear Mr. Aberdale:

At the request of the Town, Tighe & Bond has prepared this proposal to begin collecting existing condition information and develop a conceptual design to replace the Brookside Road through truss (Bridge Number G-11-008) with the single lane prefabricated modular truss. Currently the truss is being used at the Division Street Temporary Superstructure Replacement but will be removed when MassDOT builds a replacement bridge that is currently scheduled for 2025.

Project Understanding

The existing bridge is a single-span structure categorized by MassDOT as a simply supported riveted steel through truss. The bridge carries traffic east and west across the Housatonic River, which flows north to south. According to MassDOT inspection reports, the Brookside Road bridge was constructed in 1949, carries two 10-foot lanes of traffic, and does not have breakdown lanes or a sidewalk. The bridge currently has a posted weight restriction for 15 tons on two axles, 19 tons on three axles, and 24 tons on five axles. Per the original drawings for construction, the bridge was designed for an H-15 loading.

In June 2021, MassDOT conducted Routine and Fracture Critical Inspections of the bridge. The MassDOT inspection noted that the structure is generally in fair to satisfactory condition and the substructure is generally in satisfactory to good condition. The Brookside Bridge is considered a sister bridge to the former Division Street Bridge as they have similar spans, are the same through truss design, and were constructed within a year of each other. Therefore, the Town is being proactive in developing a design for its replacement rather than waiting for a similar fate as the Division Street bridge closure that occurred in September 2019.

The closure of the Division Street bridge resulted in the Town installing a single lane prefabricated modular truss bridge to mitigate the five-mile detour. The temporary solution allowed the road to be reopened to traffic while MassDOT actively designs a full bridge replacement. The temporary structure is anticipated to be replaced in 2025 and the Town is planning to have the temporary bridge removed and stored on a Town owned parcel of land adjacent to the Brookside Bridge. Once the temporary structure is removed from the Division Street abutments and relocated to Town land, demolition of the existing Brookside Bridge can commence followed by installation of the modular truss. The Town has performed a traffic analysis to confirm the bridge can operate as a single lane bridge with alternating one-way flow without significant impacts to existing traffic patterns.

In anticipation of the Division Street temporary modular truss structure removal in 2025, the Town is ready to advance existing condition data collection and perform the conceptual bridge

replacement design utilizing that truss. The conceptual design will help identify project impacts and allow for the development of an environmental permitting strategy and initial correspondence with MassDOT. This proposal is intended to lay the groundwork for the future design, bidding, and construction that aligns with MassDOT's Division Street replacement schedule.

Scope of Services

As presented in the Project Understanding, the following tasks will obtain existing site conditions and develop the conceptual temporary bridge replacement design. This scope is the first phase of a multi-phase design process that will eventually include environmental permitting, MassDOT Chapter 85 permitting, final design, bidding, and construction phase services, which will occur over the next couple of years in alignment with the schedule to replace the Division Street bridge.

Data Collection

1.1 Project Kickoff

Upon Notice to Proceed, Tighe & Bond will arrange a project kickoff meeting with the Town to discuss design approach, project schedule, as well as any coordination or tasks required of the Town.

1.2 Wetland Resource Area Delineation

A Tighe & Bond wetland scientist will delineate wetland resource areas within approximately 100 feet of the proposed limits of work in accordance with local, state, and federal criteria. Each wetland flag location will be surveyed and added to the base mapping for design and permitting purposes.

1.3 Survey

Tighe & Bond will retain a land surveying subcontractor to collect existing condition information, visible surface and overhead utilities, and topographic information in conformance with MassDOT survey requirements, Bridge Detail Survey, Bridge Grid Survey, and Stream Survey. The grid survey shall extend 350 feet beyond the existing east and west abutments for a distance of 25 feet from each edge of the existing road. The survey will be performed on NAD 83 horizontal and NAVD 88 vertical datums with a one-foot contour interval.

Information to be collected will include the existing limits of the bridge deck, concrete abutments including physical limits as well as top of wall elevations and bridge seat elevations, foundations, streambed elevation, top of water elevation, utility structures (manholes, catch basins, water valves and boxes, hydrants, gas valves and boxes, utility poles), as well as curbs, sidewalks/walkways, driveways, walls, fences, and trees/shrubs within the survey limits. Pipe invert elevations will be collected at drainage catch basins and manholes, if observed within the survey area. All wetland resource area boundaries delineated under Task 1.2 within the survey area will also be located.

The stream survey will consist of cross sections taken at 200, 300, 400, and 500 feet upstream and downstream of the face of the existing bridge. In addition,, cross sections will also be taken at 10 feet from the upstream face and five feet and 45 feet from the downstream face of the bridge. Cross sections will extend 50 feet beyond the top of bank. Those 200 feet and closer to the bridge will be taken using conventional methods along the section. Those greater

than 200 feet from the bridge will use conventional survey methods from the baseline of the stream to the edge of river where data beyond will be obtained using existing LIDAR mapping.

1.4 Subsurface Exploration

Tighe & Bond will coordinate a subsurface exploration program to collect data to support the evaluation of the subsurface conditions.

1.4.1 Site History and Geologic Conditions

Tighe & Bond will review record drawings and available existing United States Geologic Survey (USGS) mapping for the area to aid in preparation of the subsurface exploration and sampling program. Based on a preliminary review of 1949 boring data, subsurface conditions at the site are anticipated to consist of approximately 10 feet of fill, overlying approximately 20 to 30 feet of coarse-grained floodplain alluvium (gravel, sand, and silt), overlying approximately 20 to 30 feet of fine-grained floodplain alluvium (fine sand, silt, and clay), overlying thick valley glacial till and fine-grained deposits, overlying bedrock. Bedrock, mapped as calcitic dolomite marble, is not anticipated to be encountered within 70 feet of the existing ground surface.

1.4.2 Exploration Layout and Coordination

Tighe & Bond will mark the proposed exploration locations in the field and coordinate the required Dig Safe utility clearance notification with our drilling subcontractor.

Reasonable care will be exercised in locating underground structures in the vicinity of proposed subsurface explorations. This may include contact with the local agency coordinating subsurface utility information and/or a review of plans provided by the Town representatives for the site to be investigated. Tighe & Bond shall be entitled to rely upon any information or plans prepared or made available by others. In the absence of confirmed underground structure locations, the Town agrees to accept the risk of damage and costs associated with repair and restoration of damage resulting from the exploration work or provide authorization of retention of a utility clearing company.

In soils, groundwater, and other subsurface investigations, conditions may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made, including the existence or possible existence of hazardous materials substances at the site. Because of the variability of conditions and the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that may affect overall project costs and/or execution. These variable conditions, or related impacts on cost, project execution, are not the responsibility of Tighe & Bond. By authorizing Tighe & Bond to proceed with the site investigation services, the Town confirms that Tighe & Bond has not created nor contributed to the presence of any existing hazardous substances or conditions at or near the site.

1.4.3 Test Borings

Tighe & Bond will subcontract with a drilling contractor to complete three days of drilling with a truck-mounted drill rig. It is anticipated that two borings (one behind each abutment) will be completed within the time budgeted. Borings not completed within this timeframe will either be truncated, eliminated, or completed under a contract amendment. Borings will be advanced with flush-joint casing using drive-and-wash methods to target depths of 80 feet below the existing ground surface, or refusal, whichever is shallower.

Split-spoon samples using Standard Penetration Test (SPT) procedures will be obtained at 5-foot intervals and up to 10 feet of rock coring will be performed in each boring, if refusal is encountered within the proposed exploration depths. Groundwater monitoring wells are not

proposed but groundwater levels will be noted during drilling, if encountered. The locations, depths, and sampling intervals of the proposed borings may be modified in the field based on actual conditions encountered during drilling.

Boreholes will be backfilled with cuttings or grout if there is an insufficient amount of cuttings to fill the hole. An asphalt "cold patch" will be used at borings completed in paved areas and the area will be swept clean. No other surface repair is included. Any cuttings unable to be returned to the hole will be spread near the boring location in a vegetated upland area.

We anticipate and this proposal assumes that no investigation derived waste (IDW) requiring off-site disposal will be generated. However, if IDW is generated that should not be placed on the ground surface, the excess soils will then be drummed, and the cost of the drum and analytical testing and disposal of drummed soils will be mutually agreed upon under a contract amendment.

Tighe & Bond will be on site to coordinate the drilling subcontractor, observe drilling and in-situ testing, log soil samples using the Modified Burmister classification method, and record rock core recovery and rock quality designation (RQD).

1.4.4 Coordination

Scheduling of our field work will be coordinated with Great Barrington DPW personnel. As the proposed exploration locations are within the public right-of-way, we have included an allowance of \$1,000 for traffic control devices (signs, cones, etc.). As the project is being performed for the Town, it is assumed that any permit fees will be waived, that a bond will not be required by our drilling subcontractor, and that costs for police detail(s) will be paid directly by the Town. If these assumptions are not valid, we will amend our scope and fee accordingly.

Noise from the test boring drill rig can be disruptive. However, it is assumed that explorations can be performed within an 8-hour period during weekdays sometime between 7 am and 5 pm without interruption to avoid premium costs associated with overnight or weekend work.

1.4.5 Material Testing

Tighe & Bond will conduct three index property tests (grain size analyses or Atterberg Limits tests) on select samples obtained in the explorations to aid in soil classification, assist with correlating properties of the subsurface materials, and evaluation of the suitability of materials for re-use as fill on-site. The geotechnical test results will be included in our geotechnical memorandum report.

1.5 Geotechnical Evaluation and Recommendations

Tighe & Bond will prepare a geotechnical evaluation technical memorandum report to aid the design of the bridge. The report will be composed of the following information.

1.5.1 Substructure and Foundation Re-Use Suitability

Conduct an evaluation of the adequacy of the existing substructure to be re-used based on condition, load carrying capacity, and scour considerations. This evaluation will be based on observed subsurface conditions, material testing results, and a review of record drawings and historical inspection reports.

1.5.2 Lateral Earth Pressures

Provide recommendations for anticipated lateral earth pressures for bridge abutments and wingwalls in accordance with AASHTO LRFD Bridge Design Specifications and MassDOT LRFD Bridge Design Manual.

1.5.3 Seismic Design Criteria

Identify the seismic design parameters as specified in the AASHTO LRFD Bridge Design Specifications, including Site Class and mapped spectral response accelerations for short and 1-second periods. This will include a brief analysis of liquefaction susceptibility based on the SPT data collected during the subsurface exploration program and observed groundwater depth. If a more detailed evaluation to estimate the factor of safety against liquefaction and anticipated seismic induced settlements is recommended based on the results of this brief review, the cost to provide the study will be mutually agreed upon under a contract amendment.

1.6 Hydrology and Hydraulics

The Brookside Road bridge crosses the Housatonic River approximately 800 feet east of the intersection with Main Street (U.S. Route 7). The Housatonic River in this area is located within a Federal Emergency Management Agency (FEMA) 100-year Special Flood Hazard Area (SFHA) and is a regulatory floodway.

The hydraulic evaluation will include the 10%-, 2%-, 1%-, and 0.2% Annual Exceedance Probability (AEP) storm events available from FEMA. Tighe & Bond will estimate the 4%- AEP (25-year frequency storm event) by interpolating between flows published in FEMA's Flood Insurance Study (FIS). The capacity of the existing and proposed structures will be evaluated and compared to recommended industry standards (e.g., MassDOT Project Development and Design Guide), and local regulations.

Tighe & Bond will develop hydraulic models and confirm that the proposed design results in no-rise in the FEMA base flood elevation for the Housatonic River by:

- Obtaining the existing effective (i.e., "current") hydraulic models from the FEMA Engineering Library. Based on past experience, we believe that the modeling will only be available in paper format, requiring the information from FEMA's paper records to be manually digitized into the HEC-2 modeling software.
- Running the model provided by FEMA, or reconstructed from the data provided by FEMA, and comparing it to the floodplain elevations established in the FIS. This model, referred to as the Duplicate Effective Model, establishes the ability to develop a model that conforms to the FEMA model.
- Converting the HEC-2 modeling to HEC-RAS. HEC-RAS is the successor software to HEC- 2 and is now the MassDOT standard for modeling.
- Preparing a corrected effective conditions model of the watercourse by modeling the existing channel alignment and bridge and culvert structures within 1,000 feet of the project area.
- Using the corrected effective model as a basis for the development of a proposed conditions model. The proposed conditions model will reflect the temporary bridge.
- Preparing a table comparing the change in the water surface elevation between existing and proposed conditions to verify that "No-Rise" in the FEMA Base Flood Elevation is anticipated.

Tighe & Bond will collect a sample of stream bed material within the channel upstream of the existing bridge, and another within the floodplain upstream of the bridge. The samples will be submitted to a laboratory for grain size analysis to support a scour analysis in the future.

Tighe & Bond will prepare a hydraulic design report summarizing the hydraulic analyses performed as part of the of the proposed superstructure replacement. A draft report will be

provided to the Town in accordance with the requirements of MassDOT's Chapter 85 Review process.

1.7 Hazardous Material Testing

Upon Notice to Proceed, Tighe & Bond will visit the site to assess the painted metal components that will be disturbed as part of the demolition. The purpose of this assessment is to evaluate constituents in the paint application to help the contractor characterize the intended painted disposal waste stream and to identify appropriate levels of worker protection.

During the assessment, we will collect and analyze up to four composite samples and submit them to a certified laboratory for Resource Recovery and Conservation Act (RCRA) 8 Toxicity Characteristic Leaching Procedure (TCLP) analysis and polychlorinated biphenyls (PCB) TCLP analyses, via one-week laboratory turnaround. Sample quantity is contingent upon the adherence strength of the paint to the substrate, accessibility of the painted systems and the presence of loose and peeling paint as each sample requires a minimum of 100 grams weight for proper qualification of the sample.

Tighe & Bond will also collect samples of the insulation on the gas line that is supported by the bridge to test for asbestos.

Tighe & Bond is not responsible for the identification of emerging contaminants for which no current regulatory provisions exist nor shall be held liable for not identifying or discussing these compounds even if those compounds are detected at a later date. The services included in this proposal are those agreed to.

By performing the environmental site investigation services, the Town confirms that Tighe & Bond has not created nor contributed to the presence of any existing hazardous substances or conditions at or near the site.

Conceptual Design

2.1 Project Drawing Development

During conceptual design, Tighe & Bond will begin developing the design drawings and identifying project specific requirements. Project specific requirements to be graphically represented include:

- Vertical highway geometry including grades and elevations
- General notes and design specifications including loading, hydraulic, traffic, and seismic data as needed
- Boring sheets
- Dimensioning of bridge foundations in plan, elevation, and section
- Identifying the dimensions and shape of the proposed hydraulic opening
- Identify proposed freeboard for the functional classification of the road
- Identify site constraints and parameters as they relate to constructability, include stage construction details
- Structure details sheet including longitudinal section, transverse section, and channel section

Possible Construction staging and sequencing will be considered with regard to defining limits of work, utility coordination, staging areas, as well as determining and evaluating construction loads on the existing superstructure and abutments.

The following conceptual drawing list is anticipated at this time:

- Bridge Key Plan, and Profile
- Standard Legend and Abbreviations
- Geotechnical Borings
- Existing Conditions and Demolition Plan
- Existing Bridge Superstructure Demolition
- Existing Bridge West Abutment Selective Demolition
- Existing Bridge East Abutment Selective Demolition
- Proposed Site Plan & Roadway Improvements
- Temporary Traffic Control Signal Plan
- Temporary Traffic Control Details
- Proposed Abutment Plan
- Proposed Abutment Plan
- Proposed Abutment Sections and Elevations
- Proposed Superstructure Framing Plan and Cross Section
- Bridge Details

In addition to the development of the conceptual plans, Tighe & Bond will prepare a conceptual schedule as well as an opinion of probable construction cost (OPCC) to a level of accuracy commensurate with a level of design. An appropriate contingency will be included.

At the completion of this phase, Tighe & Bond will meet with the Town to discuss the design approach, OPCC, and schedule. Comments and feedback will be considered as the design documents are advanced through final design in the future phase of work.

2.2 Structural Analysis

Tighe & Bond will perform a comparative analysis of the existing and proposed truss loading conditions to support the assumption that the substructure elements can continue to serve in their existing capacity. The existing abutments were originally designed "According to American Association of State Highway Officials (1944 Edition) for H15 loading," and the structure is accordingly posted for an H15 truck, carrying two travel lanes of vehicular traffic. The comparative analysis will be supported by the subsurface explorations and Geotech analysis completed under Task 1. The comparative analysis of the substructure will be used to determine if the abutments are sufficient to continue to act in their existing capacity and therefore carry the proposed modular truss and HL93 live load.

Tighe & Bond will use the prefabricated bridge approved shop drawings from the Division Street Temporary Superstructure Replacement to develop the Brookside Road design drawings to a 25% level of completion.

Tighe & Bond will coordinate with Acrow on the additional length of truss needed to span the Housatonic River at Brookside Road. The span length of the truss at Division Street is approximately 140' and approximately 150' will be needed at Brookside Road.

2.3 Utility Coordination

Tighe & Bond will contact the local utility companies and request record plan information from each. Our understanding at this time is that there are overhead electric and communication lines downstream of the bridge as well as a natural gas line supported by the bridge.

The design drawings will identify impacts to the utilities from the proposed improvements. A utility coordination meeting will be held with the appropriate utilities to discuss the proposed modifications and identify project schedules. The proposed utility improvements as agreed to by all parties will be shown on the 25% conceptual design drawings.

2.4 Design Meetings

Tighe & Bond will attend one in-person meeting to present the 25% conceptual design drawings to the Town to solicit feedback. Detailed notes will be developed following the meeting and distributed to the Town. The notes that include the Town's comments will serve as the future starting point to advance the concept design towards 75% design documents under a future phase of work.

Environmental Permits

The proposed activities will occur within and near wetland resource areas and, as such, require authorization under the *Massachusetts Wetlands Protection Act (MAWPA; M.G.L. c. 131 § 40)*, which is administered by the Great Barrington Conservation Commission (Commission). Vegetated wetlands and streams are also regulated as "wetlands and waters of the United States" under Sections 401 and 404 of the Federal Clean Water Act as administered by MassDEP and United States Army Corps of Engineers (Corps), respectively.

Tighe & Bond will perform a desktop analysis of the mapped resource areas identified by MassDEP. Following our data collection and conceptual design, Tighe & Bond will assess the project for the following local, state, and federal permitting triggers:

- Massachusetts Environmental Policy Act (MEPA)
- ACOE Section 404
- MassDEP 401 Water Quality Certificate
- Notice of Intent to the Great Barrington Conservation Commission
- Chapter 91 Notice of Minor Modification
- Natural Heritage and Endangered Species

The permitting approach that will be developed following review and assessment of the regulations will be summarized in a memorandum. The approach will be used as the roadmap for future permitting work as the design is advanced.

MassDOT Coordination

Tighe & Bond will coordinate and attend one virtual meeting with MassDOT District 1 and the Town to discuss the proposed preliminary design. This meeting is to inform and solicit initial feedback from MassDOT on the design and design approach. Feedback will be received and implemented as the design is advanced through final design in the next phase of work. The intent of the initial meeting and review with MassDOT is to expedite their review process and intervene with design changes as early as possible.

Excluded Services

In an effort to provide you with a reasonable fee for the desired services, we have prepared a detailed scope of services based on our understanding of the project needs. In this same regard, the following section defines services that are excluded from our fee. If additional services are required, we will modify our scope of services and fee accordingly to meet your needs.

- Environmental Permitting including rare species surveys
- RDA for borings as they are assumed to be within the roadway/bridge approaches and therefore outside of Bordering Lands Subject to Flooding
- MassDOT compliant inspection of the existing structure
- Scour Analysis
- Bridge Alternatives Analysis
- Load Rating Analysis
- Global analysis of the substructure elements
- Destructive and/or non-destructive testing to determine existing material properties of steel and concrete elements
- Design of repair details or supplemental support for the existing substructure elements
- Test pit explorations to confirm conditions of subsurface foundation
- Traffic control measures, including police detail, if required for survey and soil borings
- Subgrade and underwater investigation
- Right-of-way acquisition / permanent easements
- Construction Documents

Schedule & Fee

Tighe & Bond remains committed to advancing design as outlined in this proposal. An anticipated schedule for completing the work is summarized in Table 1 and the fee summary in Table 2.

Table 1

Estimated Design Duration

Task	Duration (weeks)
Data Collection	12
Conceptual Design	12
Environmental Permitting Review	4*
MassDOT Coordination	2
Total Estimated Duration	30

* Assumes timely responses to requests for information by third parties

Table 2**Fee Summary**

Task	Fee
Data Collection	\$87,000*
Conceptual Design	\$50,000
Environmental Permitting Review	\$7,000
MassDOT Coordination	\$3,000
Total Fee	\$147,000

* Includes subcontractor costs of \$24,000 for Survey and \$15,000 for Geotechnical Explorations.

Tighe & Bond will perform the above services for the lump sum fee of \$147,000, Invoiced monthly based on percentage complete. In the event that the scope is increased for any reason, the lump sum fee to complete the work shall be mutually revised by written amendment. Services will be provided in accordance with the standard Great Barrington Owner-Engineer Agreement.

We appreciate the opportunity to provide this proposal for the Town and look forward to working with you on this project. If this proposal is acceptable, please draft an Owner-Engineer Agreement for signature. If you have any questions regarding our proposal, please contact Andrea Lacasse at 413.572.3246/amlacasse@tighebond.com or Dan Holmes at 413.572.3255/dsholmes@tighebond.com.

Very truly yours,

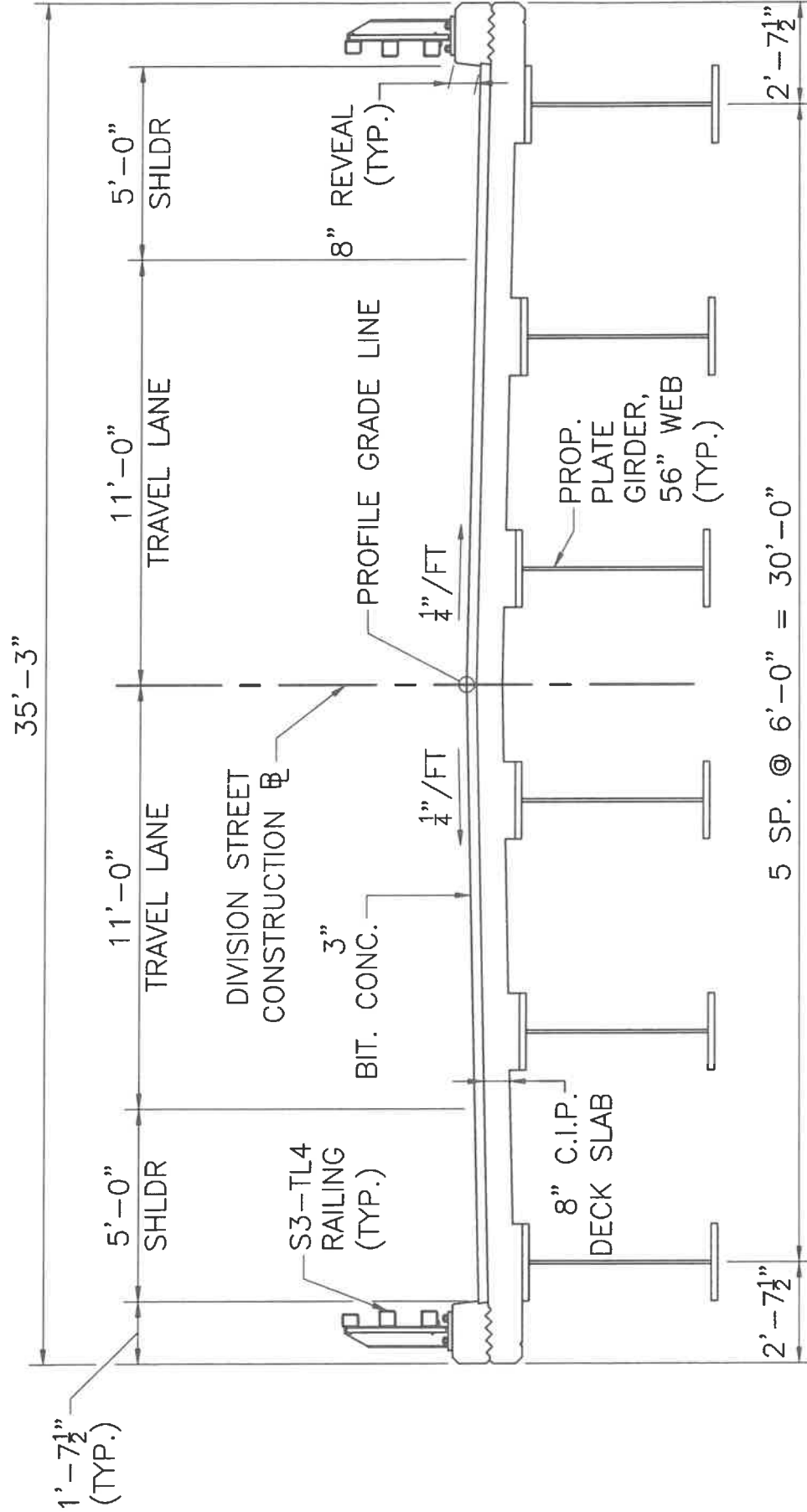
TIGHE & BOND, INC.



Daniel S. Holmes, PE, LEED AP
Senior Project Manager



Christopher O. Granatini
Vice President



	PROJECT TITLE: GREAT BARRINGTON DIVISION STREET OVER HOUSATONIC RIVER	APPENDIX NO. 9.3
		BRIDGE NO. G-11-002
GREEN PROJ. NO.: 21058.01XX DATE: JUNE, 2023 DESIGNED BY: MDL DRAWN BY: AD CHECKED BY: MAC	DRAWING TITLE: ALTERNATIVE A - BRIDGE TYPICAL SECTION	SKETCH/PAGE NO. 9.3.4

Attachment B

Supplemental Provisions

ENGINEER's Obligations while on site during construction – Applicable to all on-site services

The following provisions shall be applicable should the AGREEMENT be amended and the ENGINEER be requested to provide Construction Phase Services in connection with the PROJECT:

The presence of ENGINEER's personnel at a construction site, whether as onsite representatives or otherwise, does not make ENGINEER or ENGINEER's personnel in any way responsible for the obligations, duties, and responsibilities of the OWNER and/or the construction contractors or other entities, and does not relieve the construction contractors or any other entity of their respective obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction contract documents and for providing and/or enforcing all health and safety precautions required for such construction work.

Contractor Control - ENGINEER and ENGINEER's personnel have no authority or obligation to monitor, to inspect, to supervise, or to exercise any control over any construction contractor or other entity or their employees in connection with their work or the health and safety precautions for the construction work and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except ENGINEER's own personnel.

On-site Responsibility - The presence of ENGINEER's personnel at a construction site is for the purpose of providing to OWNER an increased degree of confidence that the completed construction work will conform generally to the construction documents and that the design concept as reflected in the construction documents generally has been implemented and preserved by the construction contractor(s). ENGINEER neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

Design Without Construction Phase Services

The following provisions shall be applicable should the ENGINEER not provide Construction Phase Services in connection with the PROJECT:

It is understood and agreed that the ENGINEER's Scope of Services under this proposal does not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the OWNER or others. The OWNER assumes all responsibility for interpretation of the Contract Documents and for construction observation, and the OWNER waives any claims against the ENGINEER that may be in any way connected thereto.

In addition, the client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, ENGINEER) against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the ENGINEER.

2-DIST
01B.I.N.
04K

STRUCTURES INSPECTION FIELD REPORT

BR. DEPT. NO.
G-11-008

ROUTINE INSPECTION

CITY/TOWN GREAT BARRINGTON	8-STRUCTURE NO. G11008-04K-MUN-NBI	11-Kilo. POINT 000.241	41-STATUS P:POSTED	90-ROUTINE INSP. DATE JUN 8, 2021
07-FACILITY CARRIED HWY BROOKSIDE RD	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1949	106-YR REBUILT 0000	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER HOUSATONIC RIVER	26-FUNCTIONAL CLASS Urban Local	DIST. BRIDGE INSPECTION ENGINEER L. A. Briggs		
43-STRUCTURE TYPE 310 : Steel Truss - Thru	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER M. Tozier	PROJ MGR AI Engineers Inc
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER Clear	TEMP. (air) 29°C	TEAM MEMBERS E. WYATT, P. ANDREWS	

ITEM 58		6	
DECK			DEF
1.Wearing surface	5	M-P	
2.Deck Condition	6	M-P	
3.Stay in Place Forms	N	-	
4.Curbs	6	M-P	
5.Median	N	-	
6.Sidewalks	N	-	
7.Parapets	N	-	
8.Railing	4	S-A	
9.Anti Missile Fence	N	-	
10.Drainage System	N	-	
11.Lighting Standards	N	-	
12.Uilities	7	-	
13.Deck Joints	5	M-P	
14.	N	-	
15.	N	-	
16.	N	-	

	N	S
CURB REVEAL (In millimeters)	274	267

APPROACHES			DEF
a. Appr. pavement condition	6	M-P	
b. Appr. Roadway Settlement	6	M-P	
c. Appr. Sidewalk Settlement	N	-	
d.	N	-	

OVERHEAD SIGNS (Attached to bridge)		(Y/N)	N
			DEF
a. Condition of Welds	N	-	
b. Condition of Bolts	N	-	
c. Condition of Signs	N	-	

ITEM 59		5	
SUPERSTRUCTURE			DEF
1.Stringers	5	S-A	
2.Floorbeams	5	S-A	
3.Floor System Bracing	N	-	
4.Girders or Beams	N	-	
5.Trusses - General	6	M-P	
a. Upper Chords	6	M-P	
b. Lower Chords	6	M-P	
c. Web Members	6	M-P	
d. Lateral Bracing	6	M-P	
e. Sway Bracings	6	M-P	
f. Portals	6	M-P	
g. End Posts	6	M-P	
6.Pin & Hangers	N	-	
7.Conn Plt's, Gussets & Angles	6	M-P	
8.Cover Plates	N	-	
9.Bearing Devices	4	S-A	
10.Diaphragms/Cross Frames	N	-	
11.Rivets & Bolts	6	M-P	
12.Welds	N	-	
13.Member Alignment	7	-	
14.Paint/Coating	4	S-P	
15.	N	-	

Year Painted X

COLLISION DAMAGE: Please explain
None () Minor (X) Moderate () Severe ()LOAD DEFLECTION: Please explain
None (X) Minor () Moderate () Severe ()LOAD VIBRATION: Please explain
None () Minor () Moderate (X) Severe ()

Any Fracture Critical Member: (Y/N) Y

Any Cracks: (Y/N) N

ITEM 60		6	
SUBSTRUCTURE			DEF
1. Abutments	Dive	Cur	6
a. Pedestals	N	N	-
b. Bridge Seats	N	7	-
c. Backwalls	N	6	-
d. Breastwalls	N	7	-
e. Wingwalls	N	7	-
f. Slope Paving/Rip-Rap	N	6	M-P
g. Pointing	N	N	-
h. Footings	N	H	-
i. Piles	N	H	-
j. Scour	N	N	-
k. Settlement	N	8	-
l.	N	N	-
m.	N	N	-
2. Piers or Bents		N	
a. Pedestals	N	N	-
b. Caps	N	N	-
c. Columns	N	N	-
d. Stems/Webs/Pierwalls	N	N	-
e. Pointing	N	N	-
f. Footing	N	N	-
g. Piles	N	N	-
h. Scour	N	N	-
i. Settlement	N	N	-
j.	N	N	-
k.	N	N	-
3. Pile Bents		N	
a. Pile Caps	N	N	-
b. Piles	N	N	-
c. Diagonal Bracing	N	N	-
d. Horizontal Bracing	N	N	-
e. Fasteners	N	N	-

UNDERMINING (Y/N) If YES please explain N

COLLISION DAMAGE:
None (X) Minor () Moderate () Severe ()SCOUR: Please explain
None (X) Minor () Moderate () Severe ()

I-60 (Dive Report): N I-60 (This Report): 6

93B-U/W (DIVE) Insp 00/00/0000

X=UNKNOWN

N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE

R=REMOVED

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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ITEM 61 CHANNEL & CHANNEL PROTECTION 7 <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Dive</th> <th>Cur</th> <th>DEF</th> </tr> </thead> <tbody> <tr><td>1.Channel Scour</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>2.Embankment Erosion</td><td>N</td><td>6</td><td>M-P</td></tr> <tr><td>3.Debris</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>4.Vegetation</td><td>N</td><td>7</td><td>-</td></tr> <tr><td>5.Utilities</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>6.Rip-Rap/Slope Protection</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>7.Aggradation</td><td>N</td><td>N</td><td>-</td></tr> <tr><td>8.Fender System</td><td>N</td><td>N</td><td>-</td></tr> </tbody> </table> STREAM FLOW VELOCITY: Tidal () High () Moderate (X) Low () None () ITEM 61 (Dive Report): N ITEM 61 (This Report): 7 93b-U/W INSP. DATE: 00/00/0000		Dive	Cur	DEF	1.Channel Scour	N	7	-	2.Embankment Erosion	N	6	M-P	3.Debris	N	7	-	4.Vegetation	N	7	-	5.Utilities	N	N	-	6.Rip-Rap/Slope Protection	N	N	-	7.Aggradation	N	N	-	8.Fender System	N	N	-	ITEM 36 TRAFFIC SAFETY <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>36</th> <th>COND</th> <th>DEF</th> </tr> </thead> <tbody> <tr><td>A. Bridge Railing</td><td>0</td><td>4</td><td>S-A</td></tr> <tr><td>B. Transitions</td><td>0</td><td>6</td><td>M-P</td></tr> <tr><td>C. Approach Guardrail</td><td>0</td><td>6</td><td>M-P</td></tr> <tr><td>D. Approach Guardrail Ends</td><td>0</td><td>7</td><td>-</td></tr> </tbody> </table> WEIGHT POSTING <i>Not Applicable</i> ☐ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>H</th> <th>3</th> <th>3S2</th> <th>Single</th> </tr> </thead> <tbody> <tr> <td>Actual Posting</td> <td>15</td> <td>19</td> <td>24</td> <td>N</td> </tr> <tr> <td>Recommended Posting</td> <td>15</td> <td>19</td> <td>24</td> <td>N</td> </tr> </tbody> </table> Valued Date: 00/00/0000 EJDMT Date: 00/00/0000 At bridge <table border="1" style="border-collapse: collapse;"> <tr><td>E</td><td>Y</td></tr> <tr><td>W</td><td>Y</td></tr> <tr><td>8</td><td>8</td></tr> </table> Other Advance <table border="1" style="border-collapse: collapse;"> <tr><td>E</td><td>Y</td></tr> <tr><td>W</td><td>Y</td></tr> <tr><td>8</td><td>8</td></tr> </table>		36	COND	DEF	A. Bridge Railing	0	4	S-A	B. Transitions	0	6	M-P	C. Approach Guardrail	0	6	M-P	D. Approach Guardrail Ends	0	7	-		H	3	3S2	Single	Actual Posting	15	19	24	N	Recommended Posting	15	19	24	N	E	Y	W	Y	8	8	E	Y	W	Y	8	8	ACCESSIBILITY (Y/N/P) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Needed</th> <th>Used</th> </tr> </thead> <tbody> <tr><td>Lift Bucket</td><td>Y</td><td>Y</td></tr> <tr><td>Ladder</td><td>P</td><td>Y</td></tr> <tr><td>Boat</td><td>N</td><td>N</td></tr> <tr><td>Waders</td><td>N</td><td>N</td></tr> <tr><td>Inspector 50</td><td>N</td><td>N</td></tr> <tr><td>Rigging</td><td>Y</td><td>Y</td></tr> <tr><td>Staging</td><td>N</td><td>N</td></tr> <tr><td>Traffic Control</td><td>Y</td><td>Y</td></tr> <tr><td>RR Flagger</td><td>N</td><td>N</td></tr> <tr><td>Police</td><td>Y</td><td>Y</td></tr> <tr><td>Other:</td><td></td><td></td></tr> </tbody> </table> TOTAL HOURS 117 PLANS (Y/N): Y (V.C.R.) (Y/N): N TAPE#: _____ List of field tests performed: Steel Superstructure thickness gauge measurements		Needed	Used	Lift Bucket	Y	Y	Ladder	P	Y	Boat	N	N	Waders	N	N	Inspector 50	N	N	Rigging	Y	Y	Staging	N	N	Traffic Control	Y	Y	RR Flagger	N	N	Police	Y	Y	Other:		
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RATING Rating Report (Y/N): Y Date: 08/05/2009 Inspection data at time of existing rating 1 58: 6 1 59: 7 1 60: 7 Date :06/29/2007	Recommend for Rating or Rerating (Y/N): Y REASON: <u>Superstructure deterioration</u> If YES please give priority: HIGH () MEDIUM (X) LOW ()
--	---

CONDITION RATING GUIDE			(For Items 58, 59, 60 and 61)
CODE	CONDITION	DEFECTS	
N	NOT APPLICABLE		
G	9 EXCELLENT	Excellent condition.	
G	8 VERY GOOD	No problem noted.	
G	7 GOOD	Some minor problems.	
F	6 SATISFACTORY	Structural elements show some minor deterioration.	
F	5 FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.	
P	4 POOR	Advanced section loss, deterioration, spalling or scour.	
P	3 SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
C	2 CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.	
C	1 "IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.	
0	FAILED	Out of service - beyond corrective action.	

DEFICIENCY REPORTING GUIDE	
DEFICIENCY:	A defect in a structure that requires corrective action.
CATEGORIES OF DEFICIENCIES:	
M= Minor Deficiency	Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.
S= Severe/Major Deficiency	Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.
C-S= Critical Structural Deficiency	A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.
C-H= Critical Hazard Deficiency	A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.
URGENCY OF REPAIR:	
I = Immediate-	[Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].
A = ASAP-	[Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].
P = Prioritize-	[Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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REMARKS

BRIDGE ORIENTATION

Bridge No. G-11-008 (04K) carries Brookside Road over the Housatonic River in the town of Great Barrington (**see Sketch 1**). The bridge is oriented east - west and the elevations are north and south. The trusses are labeled North and South. The truss panel points L0 through L8, U1 through U7, and Floorbeams FB0 through FB8 are labeled from west to east. The stringers S1 through S5 are labeled from north to south. The approaches and abutments are labeled East and West. This orientation matches the convention set forth in the design plans and previous inspection reports (**see Sketches 2 & 3**).

GENERAL REMARKS

The bridge superstructure consists of a single span simply supported riveted steel through truss with a stringer/floorbeam system supporting a 6" thick reinforced concrete deck with a 2-1/4" thick bituminous wearing surface. There is a bridge railing with a concrete base along the interior of the North and South Trusses. The substructure consists of two reinforced concrete gravity abutments founded on timber piles.

ACCESS NOTES

The underside was inspected during daytime hours using a rigging system provided by All Access Rigging. The topside was inspected during daytime hours using alternating single lane closures with one-way traffic and the assistance of two Great Barrington Police details.

Field inspection was started on 06/08/2021 and completed on 06/09/2021.

MINIMUM VERTICAL CLEARANCE

The minimum vertical clearance of 14'-2" was measured at Panel Point U6 over the double yellow lines. There are At-Bridge and Advance clearance posting signs of 13'-11" located along both bounds (**see Photos 1 and 2**).

WEIGHT POSTING

The bridge has a posted weight restriction for 15 tons on two axles, 19 tons on three axles and 24 tons on five axles. There are At-Bridge and Advance weight posting signs located along both bounds (**see Photos 3 and 4**).

ITEM 58 - DECK

Item 58.1 - Wearing surface

Along the north and south curbs, the bituminous concrete wearing surface is breaking up up to 4'-0" wide x 2" deep for the full length of the bridge, with impacted sand, debris accumulation, and light vegetation growth. Throughout the wearing surface there are sealed and unsealed alligator cracks, and scattered sealed and unsealed longitudinal and transverse cracks up to 1/8" wide. There are scattered minor potholes up to 1'-0" long x 4" wide x 1" deep (**see Photo 5**). Specific deficiencies are as follows:

Westbound Travel Lane

- At the 8th rail post from the East Abutment, near the center of the lane, there is a pothole 1'-10" long x 11" wide x 1/2" deep.
- Since the previous inspection, the 7" long x 1'-10" wide x 3" deep pothole near the center of the lane has been patched.

Eastbound Travel Lane

- At the West Abutment deck joint, there is a pothole 3'-6" long x 2'-0" wide x 1-1/4" deep with impacted sand (**see Photo 6**).
- Adjacent to the 13th rail post from the West Abutment, near the center of the lane, there is a pothole up to 1'-8" long x 1'-0" wide x 1-1/2" deep (**see Photo 7**).

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REMARKS

Refer to Sketch 4 for additional information.

Item 58.2 - Deck Condition

Throughout the underside of the reinforced concrete deck, there are scattered transverse hairline cracks and areas of hairline map cracking with and without efflorescence. The north and south overhangs have longitudinal cracking with heavy efflorescence and stalactites. Specific deficiencies are as follows:

West Abutment Deck Joint:

- Between Stringer S2 and Stringer S3, there is a spall 2'-0" long x 6" wide x 3" deep with exposed and corroded rebar (**see Photo 8**).
- At Stringer S3, there is a spall 6" long x 2" wide x 1" deep.

Item 58.4 - Curbs

Along the full length of the north and south curb, there are gaps up to 1/2" (1/4" average) between the curb and the concrete rail base with light vegetation growth. There are areas of missing mortar between curb sections. The approach curb and bridge curb interfaces are generally misaligned vertically up to 5" (**see Photo 9**).

At the south curb at the East Abutment, there is a gap up to 3-1/2" wide between the bridge curb and the approach curb (**see Photo 10**).

Refer to Sketch 4 for additional information.

Item 58.8 - Railing

The concrete rail bases typically have vertical and horizontal hairline cracks with and without efflorescence. The exterior faces of the rail bases have scattered map cracks with efflorescence and moderate efflorescence along the longitudinal construction joint.

The metal bridge rails and posts generally exhibit moderate to heavy rust with peeling paint, and laminated rust at the lower webs of the posts. The posts exhibit collision damage up to 6" long x 1" out of plane. The south upper rails typically have areas of 100% section loss at the post connections, up to 2" wide and 50% circumference. The south lower rails and the north upper rails have localized holes/perforations up to 1-1/2" long x 1" high at the post connections. The anchor bolts are generally heavily rusted with up to 50% section loss and flush with the nuts. Specific deficiencies are as follows:

North Railing (posts and panels numbered from east to west)

- Several post anchor bolts and/or nuts with 100% section loss, including one (1) at Post 11, and (2) two at Post 7 (**see Photo 11**).
- **DEF=S-A: The 3rd panel upper rail is disconnected.**
- Adjacent to the 9th panel at the top face of the concrete rail base, there is a spall 8" long x 6-1/2" high x 2-1/2" deep.
- At the 11th post, there is a perforation in the lower web 2" high x 1" wide with section loss down to knives edge remaining (**see Photo 12**).

South Railing (posts and panels numbered from west to east)

- Several post anchor bolts and/or nuts with 100% section loss, including two (2) at Post 2, one (1) at Post 4, two (2) at Post 5, one (1) at Post 6, one (1) at Post 9, one (1) at Post 13, one (1) at Post 16, and two (2) at Post 19.
- **DEF=S-A: The 1st, 2nd, 13th, and 17th panel upper rails are missing (see Photo 13).**

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REMARKS

- DEF=S-A: The 3rd, 8th, 10th, 12th, and 18th panel upper rails are fully detached/disconnected at one end (see Photo 14).
- At Post 9, there is a perforation in the lower web 3" high x 1" wide with section loss down to knives edge remaining.
- The 11th panel upper rail is bent with 80% section loss at the connection to Post 12.

Refer to Sketch 4 for additional information.

Item 58.12 - Utilities

There is a gas main that has been relocated to the south side of the bridge behind the railing (see Photo 15). There are power lines located along the south side of the bridge.

Item 58.13 - Deck Joints

The ends of the abutment deck joints are corroded up to 2'-0" long x full width of the armor plate. There is sand and debris impaction along the full length of both joints. The east and west edges of each abutment joint are partially exposed. Evidence of leakage was observed beneath the joints, but no active leakage was found at the time of inspection. Specific deficiencies are as follows:

East Abutment Joint:

- The concrete header as been partially patched with hot asphalt mix and exhibits alligator cracking (see Photo 16).
- The joint header and/or bituminous patches has spalls up to 3' wide x 6" long x 1/2" deep, exposing the vertical face of the joint armor (see Photo 17).

West Abutment Joint:

- The bituminous paved over deck joint header is breaking up along the full length of the joint with longitudinal and transverse cracks up to 1/8" wide (see Photo 18).
- There are spalls in the wearing surface up to 9" long x 4" wide x 1" deep exposing the edge of the joint armor (see Photo 18).

APPROACHES

Approaches a - Appr. pavement condition

The approaches exhibit sealed and unsealed longitudinal, transverse, and alligator cracks throughout. There are scattered minor potholes less than 6" diameter x up to 1-1/2" deep with pavement breaking up along the deck joint headers. Specific deficiencies are as follows:

East Approach

- The pavement is breaking up over a 2'-0" wide area along the joint header with cracking up to 1/2" wide (see Photos 16 & 17).
- Since the previous inspection, the 3'-4" long x 6" wide x 1-1/2" deep pothole at the center line has been patched.

Approaches b - Appr. Roadway Settlement

The pavement at the East Abutment deck joint has settled up to 1" and ramps up to the joint.

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REMARKS

ITEM 59 - SUPERSTRUCTURE

Item 59.1 - Stringers

Stringers S1 and S5 typically have moderate and laminated rust and efflorescence staining throughout the web and flanges 2'-0" from the connection to the floorbeams (most notably at the fascias). There are areas of heavy rusting with section loss up to 1/8" deep x full height of the web x full width of the flanges, and localized holes/perforations up to 2" long x 3/4" high in the webs.

Stringers S1 and S5 located beneath deck drain pipes typically have areas of heavy rust at the midspan. These stringers typically have up to approximately 1/16" web loss and 1/4" bottom flange loss within 2'-6" of the deck drain pipes.

Specific deficiencies are as follows:

- **DEF=S-A: Stringer S1 between West Abutment and Floorbeam FB0: See Sketch 5.**
- **Stringer S1 6'-6" east of Floorbeam FB0: See Sketch 5.**
- **DEF=S-A: Stringer S5 between West Abutment and Floorbeam FB0: See Sketch 6 and Photo 19.**
- **Stringer S5 at east face of Floorbeam FB0: See Sketch 6.**
- **DEF=S-A: Stringer S1 9'-0" east of Floorbeam FB2: See Sketch 7 and Photo 20.**
- **Stringer S5 at west face of Floorbeam FB2: See Sketch 7.**
- **Stringer S5 at east face of Floorbeam FB2: See Sketch 7.**
- **Stringer S5 at east face of Floorbeam FB3: See Sketch 8 and Photo 21.**
- **DEF=S-A: Stringer S5 between Floorbeams FB5 and FB6: See Sketch 8 and Photo 22.**
- **DEF=S-A: Stringer S1 between East Abutment and Floorbeam FB8: See Sketch 9 and Photo 23.**
- **DEF=S-A: Stringer S5 between East Abutment and Floorbeam FB8: See Sketch 9 and Photo 24.**

Item 59.2 - Floorbeams

The floorbeams generally exhibit peeling paint and moderate rust throughout, extending 3'-0" onto the adjacent lower chords.

The floorbeam ends typically have moderate to heavy laminated rust for the full flange width x full height of the web x 2'-0" in length from the connection to the lower chord to the first stringer. The floorbeam webs have isolated holes/perforations up to 2" high x 4" wide x up to full height of the web and up to 75% section loss. The bottom flanges at the floorbeam ends have 5" wide x 12" long areas with up to 50% section loss adjacent to the lower lateral connection plates.

Specific deficiencies are as follows:

- **DEF=S-A: Floorbeam FB0 at Northwest Bearing: See Sketch 10.**
- **DEF=S-A: Floorbeam FB0 at Southwest Bearing: See Sketch 10 and Photo 25.**
- **Floorbeam FB1 at North Truss: See Sketch 11.**
- **Floorbeam FB1 at South Truss: See Sketch 11 and Photo 26.**
- **Floorbeam FB2 east face at North Truss: See Sketch 12.**
- **Floorbeam FB2 west face at North Truss: See Sketch 12.**
- **DEF=S-A: Floorbeam FB2 at South Truss: See Sketch 13 and Photo 27.**
- **Floorbeam FB3 at North Truss: See Sketch 13.**
- **DEF=S-A: Floorbeam FB3 at South Truss: See Sketch 14 and Photo 28.**
- **DEF=S-A: Floorbeam FB4 at North Truss: See Sketch 14 and Photo 29.**

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REMARKS

- Floorbeam FB4 at South Truss: **See Sketch 15.**
- Floorbeam FB5 at North Truss: **See Sketch 15 and Photo 30.**
- Floorbeam FB5 at South Truss: **See Sketch 16 and Photo 31.**
- DEF=S-A: Floorbeam FB6 at North Truss: **See Sketch 16 and Photo 32.**
- Floorbeam FB6 at South Truss: **See Sketch 17.**
- Floorbeam FB7 at South Truss: **See Sketch 17.**
- DEF=S-A: Floorbeam FB8 at Northeast Bearing: **See Sketch 18 and Photo 33.**
- DEF=S-A: Floorbeam FB8 at Southeast Bearing: **See Sketch 18 and Photo 34.**

Item 59.5 - Trusses - General

Item 59.5.a - Upper Chords

The upper chords have peeling paint and moderate rust throughout (**see Photo 35**). Specific deficiencies are as follows:

North Truss

- U4U5 at U4: The lower batten plate is bent down 1/4" over a 6" length.
- U1 and U7: There are two (2) depressions/cupped areas on the gusset plate at the angle up to 8" long x 3" wide x 1/4" deep around the rivets (**see Photo 36**).

South Truss

- U3U4, south channel, at U3: There is a missing rivet in the top flange (**see Photo 37**).
- U1 and U7: There are two (2) depressions/cupped areas on the gusset plate at the angle up to 8" long x 3" wide x 1/4" deep around the rivets.

Item 59.5.b - Lower Chords

The lower chords have peeling paint and heavy rust with negligible loss throughout, with accumulation of debris at the lower chord panel points (**see Photo 38**).

Item 59.5.c - Web Members

The web members typically have areas of peeling paint with moderate rust throughout.

Item 59.5.d - Lateral Bracing

The upper lateral bracing has typically moderate rust and peeling paint throughout.

The lower lateral bracing typically has light rust and peeling paint throughout with heavy rust and debris at the connection to the lower chord.

The gusset plate at the connection of the diagonal at U2 and U3 is bent 1/4" downward due to misalignment of the U2 North Truss and U3 South Truss diagonal. The diagonal member between U3 North Truss and U4 South Truss is bent 1/8".

Item 59.5.e - Sway Bracings

The sway bracings have peeling paint and typically have moderate rust throughout with localized areas of heavy rust. Specific deficiencies are as follows:

At U2, the sway brace is bent 3/4" out of plane downward over a 1'-8" length and is pinched upward in the center (**see Photo 39**).

At U6, the sway brace is bent 1/2" out of plane downward over a 1'-4" length. The full westbound portion of the brace is bent up to 3" out of plane to the west (**see Photo 40**).

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Item 59.5.f - Portals

There is peeling paint and moderate rust throughout the east and west portals. The lower chord of the east portal has up to a 2-1/2" buildup of debris at the interface of the horizontal and vertical leg of the angle.

Item 59.5.g - End Posts

There is peeling paint and moderate rust throughout east and west end posts. The construction date plate at the northwest end post is missing, with an area of section loss to member L0U1 up to 1'-3" wide x 11-1/2" long x 1/16" deep.

Item 59.7 - Conn Plt's, Gussets & Angles

The gusset plates above the roadway typically have peeling paint and moderate rust. The gusset plates beneath the roadway typically have peeling paint with heavy rust, and moderate laminated rust.

The nose/splice plate at North Truss Panel Point U1 is bent upwards up to 1/2" high x 1'-7" wide x 6" long at the northwest corner, resulting in a gap between the top of the upper chord and the underside of the plate.

Item 59.9 - Bearing Devices

There is peeling paint and heavy rust to the bearings and anchor bolts at all four bearings with scattered anchor bolts and nuts having up to 50% section loss. There is an accumulation of sand and debris up to 8" deep at all four bearings (see Photos 41 and 42).

The expansion bearings at the West Abutment consist of a sliding plates with long slotted holes that are attached to masonry plates by anchor bolts. **DEF=S-A: The expansion bearings at the West Abutment are over expanded up to 1-1/2" and beyond the tolerance of the long slotted holes. As a result, all four anchor bolts at the expansion bearings are bent to the west (see Photos 41 and 42).**

At the Southeast Bearing, the northeast anchor bolt nut is backed off 1".

Item 59.11 - Rivets & Bolts

The rivets typically have peeling paint and moderate rust throughout the bridge with areas of moderate to heavy rust to rivet heads at the connections of the floorbeams to the lower chords. Numerous rivets connecting the lower lateral bracing plate to the floorbeam are heavily rusted and rose budding with up to 50% loss to the rivet heads throughout. Isolated rivets at the floorbeam to gusset plate connections have up to 100% section loss (see Sketches 11, 12, & 14-17).

Item 59.14 - Paint/Coating

The superstructure paint system has failed over approximately 75% of the structure above the roadway with areas of peeling and cracking paint and various degrees of corrosion throughout. The full length of lower chord, end 1'-0" of the stringers, and end 3'-0" of the floorbeams are heavily rusted with varying degrees of section loss.

SuperStructure Collision Notes

See Item 59.5e Sway Braces for comments.

SuperStructure Load Vibration Notes

There is moderate vibration under live load.

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REMARKS

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments

Item 60.1.b - Bridge Seats

There is a moderate accumulation of sand and debris on the East and West Abutment bridge seats (**see Photo 43**).

Item 60.1.c - Backwalls

There are scattered vertical and horizontal hairline cracks throughout the concrete backwalls at both abutments. Specific deficiencies are as follows:

- East Abutment - **see Sketch 19.**
- West Abutment - **see Sketch 20 and Photo 44.**

Item 60.1.d - Breastwalls

Both breastwalls have moderate scaling and scattered areas of minor honeycombing and areas of graffiti throughout. Specific deficiencies are as follows:

- East Abutment - **see Sketch 19.**
- West Abutment - **see Sketch 20.**

Item 60.1.e - Wingwalls

The wingwalls have moderate scaling and scattered vertical and horizontal hairline cracks with and without efflorescence throughout. In addition, there is moss growth throughout the Northeast and Northwest wingwalls. Specific deficiencies are as follows:

- Northwest and Southwest Wingwalls - **see Sketch 21.**
- Northeast and Southeast Wingwalls - **see Sketch 22.**

Item 60.1.f - Slope Paving/Rip-Rap

There is rip-rap at the west embankment only which primarily covers the toe of the slope.

ITEM 61 - CHANNEL AND CHANNEL PROTECTION

Item 61.2 - Embankment Erosion

There is evidence of minor erosion to the east embankment with a 16'-0" long x 6'-0" wide x up to 1'-8" deep depression at the base of the East Abutment at the south end (**see Photo 45**). The east embankment near the shoreline has three erosion pockets up to 2'-0" diameter x 6" deep.

TRAFFIC SAFETY

Item 36a - Bridge Railing

The railing consists of two longitudinal steel pipes supported by steel railing posts, mounted on concrete rail bases, and is non-standard. See **Item 58.8 - Railing** for more details.

Item 36b - Transitions

There are no transitions on this bridge. There is a gap between the bridge railing and the approach guardrails with guardrail boxing glove ends that terminate just short of the bridge railing (**see Photo 9**).

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REMARKS

Item 36c - Approach Guardrail

The approach guardrail consists of W-beam guardrail with steel posts and spacers at all four corners of the bridge.

The southeast approach guardrail has a 25'-0" long area of moderate collision damage with scrapes and gouges. The third steel post from the bridge on the northwest approach guardrail is twisted 5" to the west.

Item 36d - Approach Guardrail Ends

The approach guardrail end at all four corners of the bridge are terminal end boxing glove sections that flare away from the roadway.

The southwest approach guardrail has minor collision damage between the 2nd and 3rd posts from the guardrail end.

The southeast approach guardrail has minor collision damage between the 4th and 5th posts from the bridge end.

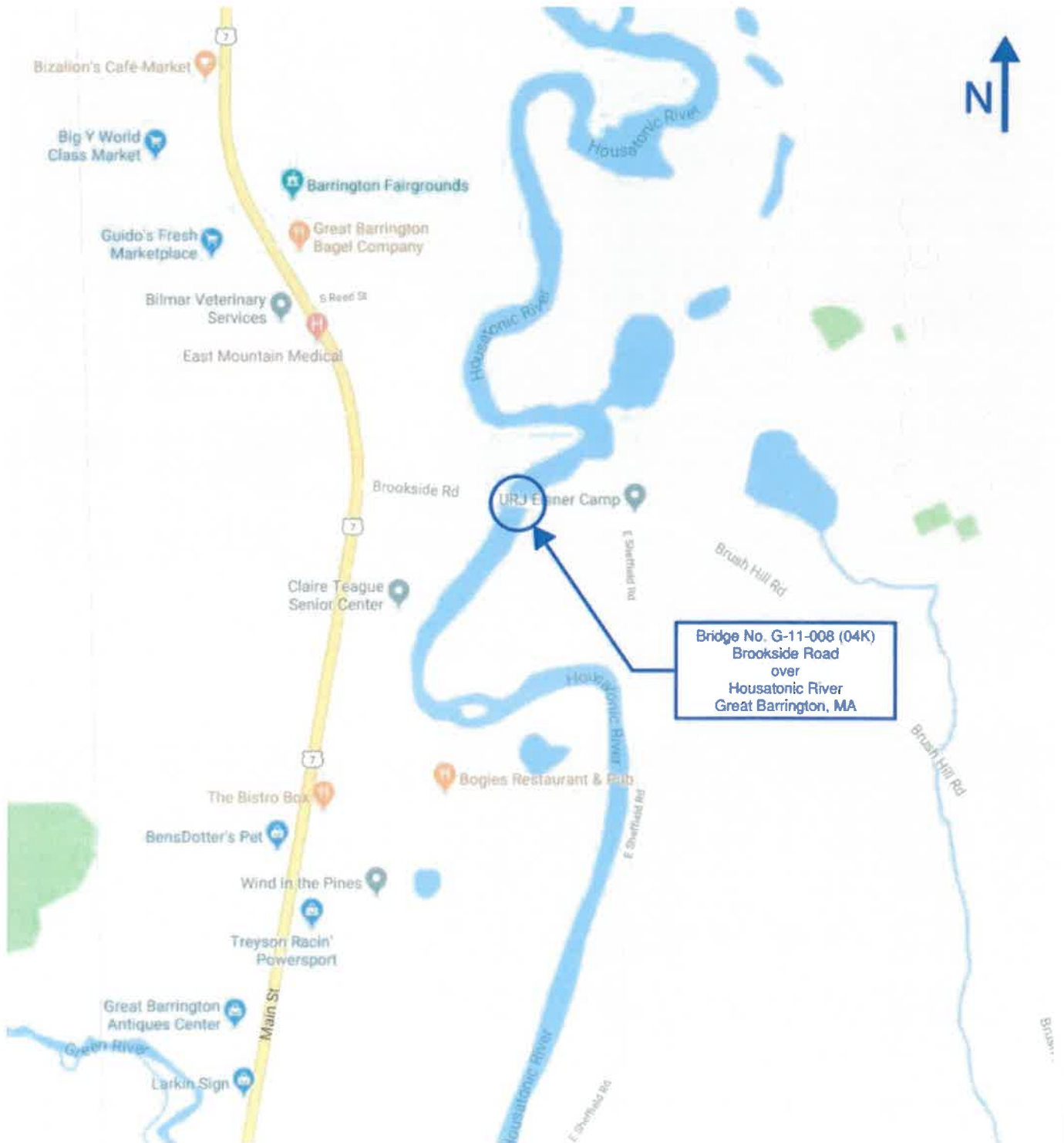
Sketch / Photo Log

- Sketch 1 : Location Map
- Sketch 2 : Key Plan
- Sketch 3 : Framing Plan and Truss Elevation
- Sketch 4 : Top of Deck Deficiencies
- Sketch 5 : Stringer Deficiencies (1 of 5)
- Sketch 6 : Stringer Deficiencies (2 of 5)
- Sketch 7 : Stringer Deficiencies (3 of 5)
- Sketch 8 : Stringer Deficiencies (4 of 5)
- Sketch 9 : Stringer Deficiencies (5 of 5)
- Sketch 10 : Floorbeam Deficiencies (1 of 9)
- Sketch 11 : Floorbeam Deficiencies (2 of 9)
- Sketch 12 : Floorbeam Deficiencies (3 of 9)
- Sketch 13 : Floorbeam Deficiencies (4 of 9)
- Sketch 14 : Floorbeam Deficiencies (5 of 9)
- Sketch 15 : Floorbeam Deficiencies (6 of 9)
- Sketch 16 : Floorbeam Deficiencies (7 of 9)
- Sketch 17 : Floorbeam Deficiencies (8 of 9)
- Sketch 18 : Floorbeam Deficiencies (9 of 9)
- Sketch 19 : East Abutment Deficiencies
- Sketch 20 : West Abutment Deficiencies
- Sketch 21 : Northwest and Southwest Wingwall Deficiencies
- Sketch 22 : Northeast and Southeast Wingwall Deficiencies
- Photo 1 : West Approach At-Bridge Clearance Posting
- Photo 2 : East Approach At-Bridge Clearance Posting
- Photo 3 : West Approach At-Bridge Weight Posting
- Photo 4 : East Approach At-Bridge Weight Posting
- Photo 5 : Eastbound travel lane wearing surface with sealed and unsealed cracks and potholes
- Photo 6 : Eastbound Wearing Surface at the West Abutment deck joint, pothole with impacted sand and debris
- Photo 7 : Eastbound Wearing Surface near the 13th rail post with a pothole
- Photo 8 : Underside of deck at the West Abutment between Stringer S2 and S3, spall with exposed rebar
- Photo 9 : Southwest Approach bridge and approach curb misalignment and missing guardrail transition

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REMARKS				
Photo 10 :	South Curb at East Abutment with gap between bridge and approach curbs			
Photo 11 :	North Railing, 7th post from East Abutment, anchor bolt nuts with up to 100% section loss			
Photo 12 :	North Railing, 11th post from East Abutment with perforation in lower web			
Photo 13 :	South Railing, 1st and 2nd panel from West Abutment upper rail missing			
Photo 14 :	South Railing, 10th and 12th panel from West Abutment upper rail disconnected			
Photo 15 :	Gas main at South side of bridge			
Photo 16 :	East Abutment deck joint with partially patched header and approach pavement cracked with some break-up			
Photo 17 :	East Abutment deck joint spall exposing joint armor edge and approach pavement cracked with some break-up			
Photo 18 :	West Abutment deck joint; note potholes/spalls along the joint.			
Photo 19 :	Stringer S5 at Floorbeam FB0 (west end) with rust perforation at end			
Photo 20 :	Stringer S1 east of Floorbeam FB2 with rust and section loss at midspan			
Photo 21 :	Stringer S5 at Floorbeam FB3, north face with rust and section loss			
Photo 22 :	Stringer S5 between Floorbeams FB5 and FB6 with rust and section loss			
Photo 23 :	Stringer S1 at Floorbeam FB8 with perforation at end			
Photo 24 :	Stringer S5 at Floorbeam FB8 with perforation at end			
Photo 25 :	Floorbeam FB0 at Southwest Bearing, east face with heavy rust, perforations, and section loss			
Photo 26 :	Floorbeam FB1 at south end, west face with heavy rust and section loss			
Photo 27 :	Floorbeam FB2 at south end, west face with heavy rust and section loss			
Photo 28 :	Floorbeam FB3 at south end, west face with heavy rust and section loss			
Photo 29 :	Floorbeam FB4 at north end, east face with heavy rust and section loss			
Photo 30 :	Floorbeam FB5 at north end, east face with heavy rust and section loss			
Photo 31 :	Floorbeam FB5 at south end, east face with rust			
Photo 32 :	Floorbeam FB6 at north end, east face with heavy rust and section loss			
Photo 33 :	Floorbeam FB8 at north end, west face with heavy rust and section loss			
Photo 34 :	Floorbeam FB8 at south end, west face with heavy rust and section loss			
Photo 35 :	Upper Chord with typical rust and peeling paint			
Photo 36 :	North Truss, U1 upper chord gusset plate with depressions/cupping			
Photo 37 :	South Truss, U3 south face with missing rivet at upper chord			
Photo 38 :	Lower Chord with typical rust and paint loss			
Photo 39 :	U2 Sway Bracing with collision damage			
Photo 40 :	U6 Sway Bracing with collision damage			
Photo 41 :	Northwest Bearing with overexpansion and bent anchor rods			
Photo 42 :	Southwest Bearing with debris, rust, and anchor bolt nut section loss as well as overexpansion with bent anchor rods			
Photo 43 :	East Abutment bridge seat with debris accumulation			
Photo 44 :	West Abutment south of Stringer S4 with spall			
Photo 45 :	East Embankment, south end of East Abutment with depression			

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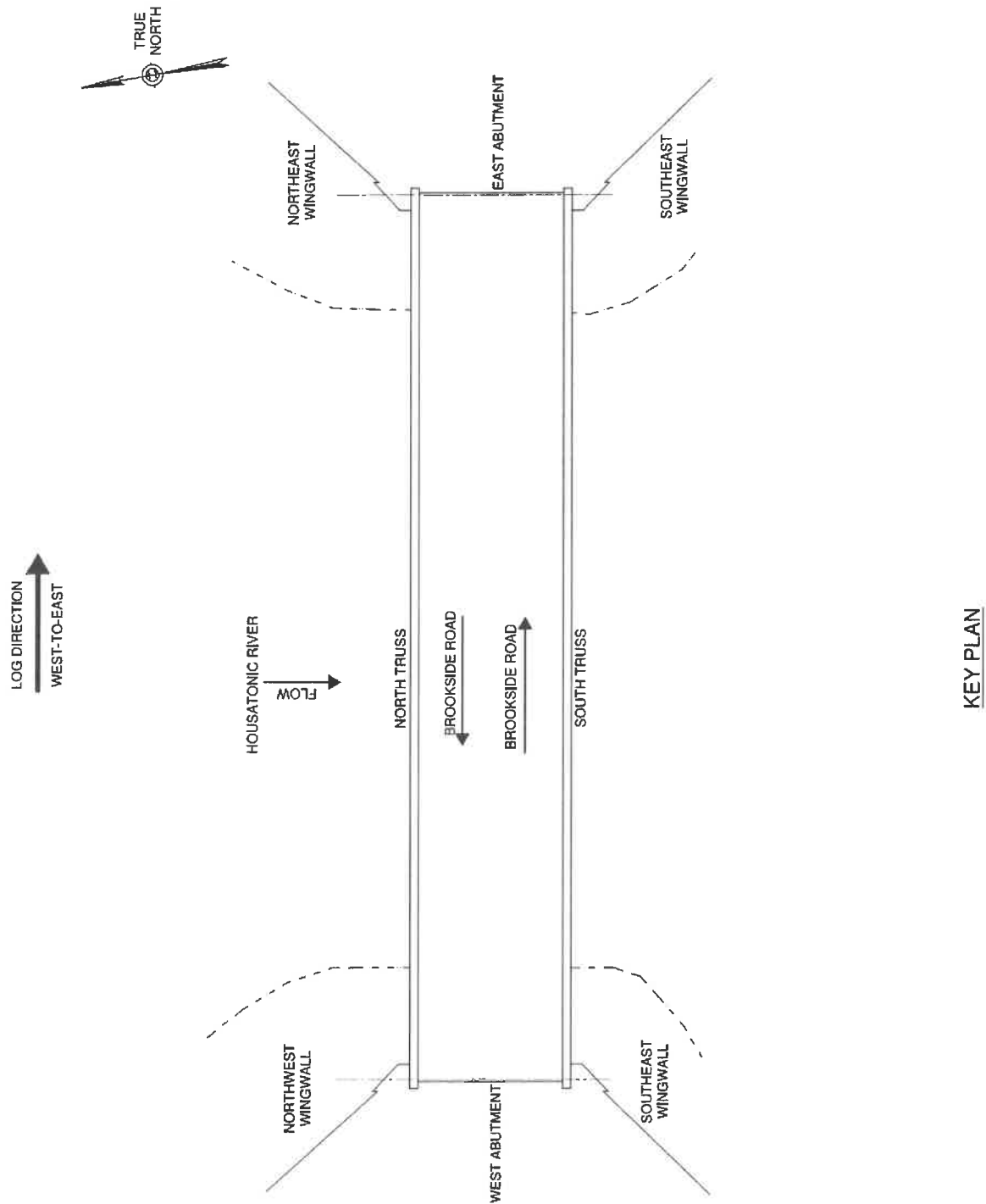
SKETCHES



Sketch 1: Location Map

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SKETCHES



Sketch 2: Key Plan

W E

HOUSATONIC RIVER

FB 0 FB 1 FB 2 FB 3 FB 4 FB 5 FB 6 FB 7 FB 8

S1 S2 S3 S4 S5

NORTH TRUSS

SOUTH TRUSS

LOWER PANELS

1 2 3 4 5 6 7 8

DECK FRAMING PLAN

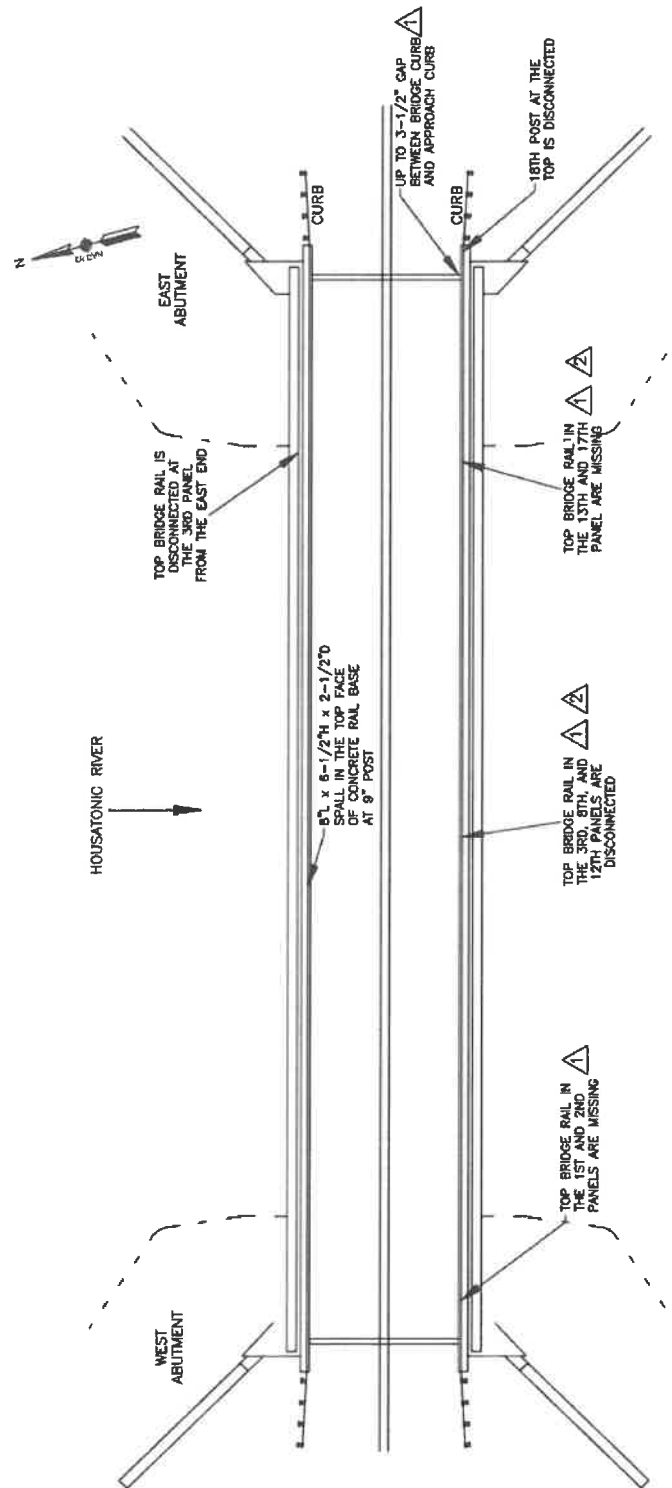
Diagram illustrating the Sway Bracing Plan. The structure shows a series of vertical panels (1 through 6) and trusses (U1 through U7). Key dimensions and labels include:

- VERTICAL CLEARANCE = 14'-2"
- € NORTH TRUSS
- U1, U2, U3, U4, U5, U6, U7 (Truss labels)
- PORTAL (Left and Right)
- € ROADWAY
- UPPER PANELS
- SWAY BRACING PLAN
- € SOUTH TRUSS



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SKETCHES



GENERAL NOTES:

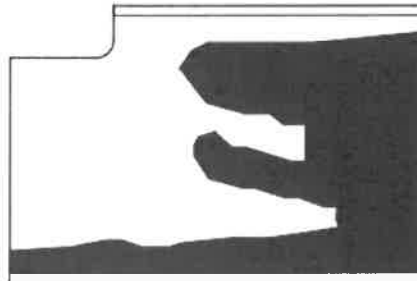
- BITUMINOUS CONCRETE WEARING SURFACE AT THE NORTH AND SOUTH CURBS IS DETERIORATED UP TO 4'W X UP TO 2'D WITH SAND AND DEBRIS ACCUMULATING FOR THE FULL LENGTH OF THE BRIDGE.
- RANDOM POTHOLES UP TO 1'1" X 4'W X 1'D THROUGHOUT THE OVERLAY.
- SEALED AND UNSEALED ALLIGATOR CRACKS THROUGHOUT.
- DECK JOINTS WITH LONGITUDINAL AND TRANSVERSE CRACKS UP TO 3'W (SEALED AND UNSEALED), SPALLS AND BREAKING UP PATCHED MATERIAL

△ INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
△ INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 4: Top of Deck Deficiencies

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SKETCHES



1'-2" LONG X FULL HEIGHT
HOLE IN WEB; BOTTOM
FLANGE DISCONNECTED
FROM STRINGER WEB

NORTH FACE OF STRINGER S1 @
WEST FACE OF FLOORBEAM FB0



4'L x 3"H x 1/8"-3/16"D
SECTION LOSS ON WEB

4'L x FW x 7/16" MIN.
REMAINING THICKNESS

S1 @ 6'-6" EAST FROM
FLOORBEAM FB0

LEGEND:

-  = SECTION LOSS
-  = HOLE
-  = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (16WF45)

d = 16.12 IN
tf = 0.563 IN
tw = 0.346 IN
bf = 7.04 IN

 INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

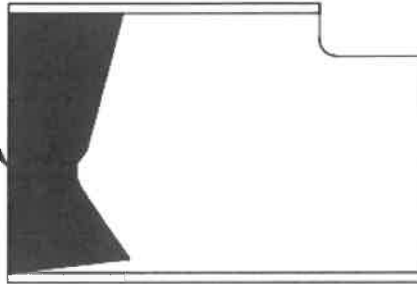
 INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 5: Stringer Deficiencies (1 of 5)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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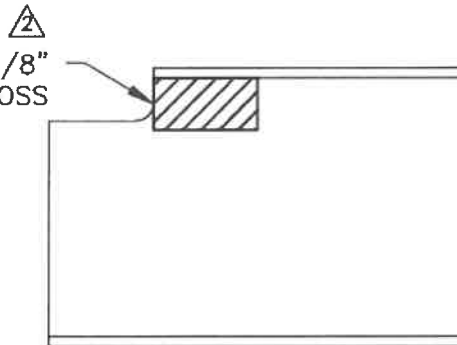
SKETCHES

7" LONG X FULL HEIGHT
HOLE IN WEB



SOUTH FACE OF STRINGER S5 @
WEST FACE OF FLOORBEAM FB0

6" LONG X 3" HIGH X 1/8"
DEEP SECTION LOSS



SOUTH FACE OF STRINGER S5 @
EAST FACE OF FLOORBEAM FB0

LEGEND:

-  = SECTION LOSS
-  = HOLE
-  = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (16WF45)

$d = 16.12$ IN
 $t_f = 0.563$ IN
 $t_w = 0.346$ IN
 $b_f = 7.04$ IN

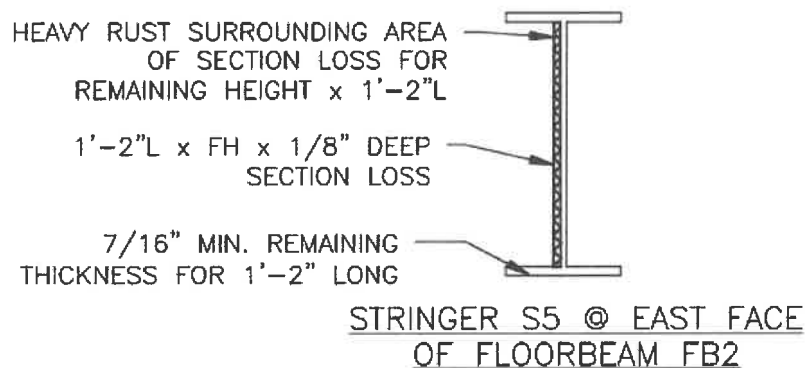
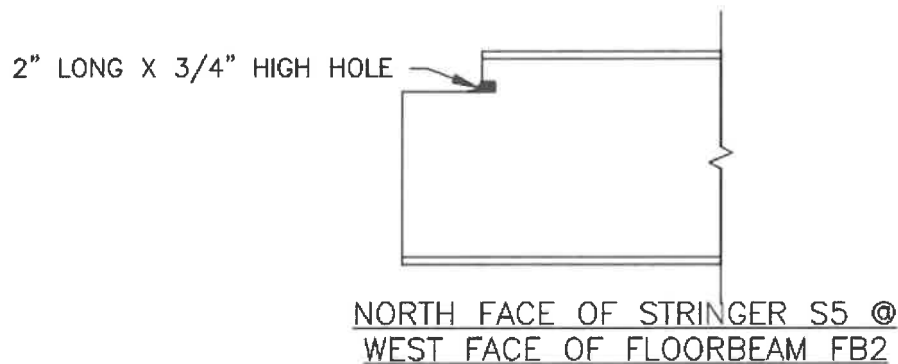
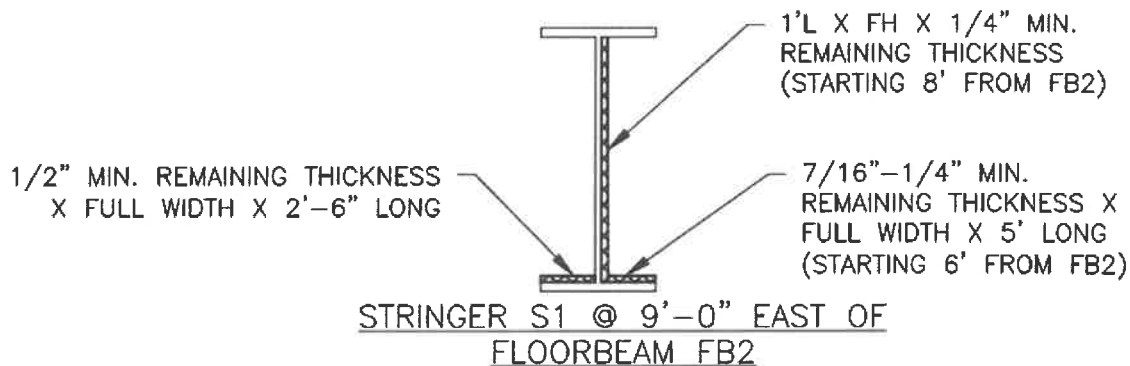
 INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

 INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 6: Stringer Deficiencies (2 of 5)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (16WF45)

d = 16.12 IN
 tf = 0.563 IN
 tw = 0.346 IN
 bf = 7.04 IN

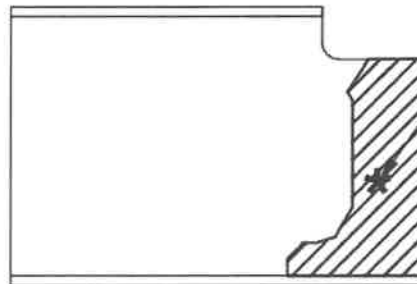
INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 7: Stringer Deficiencies (3 of 5)

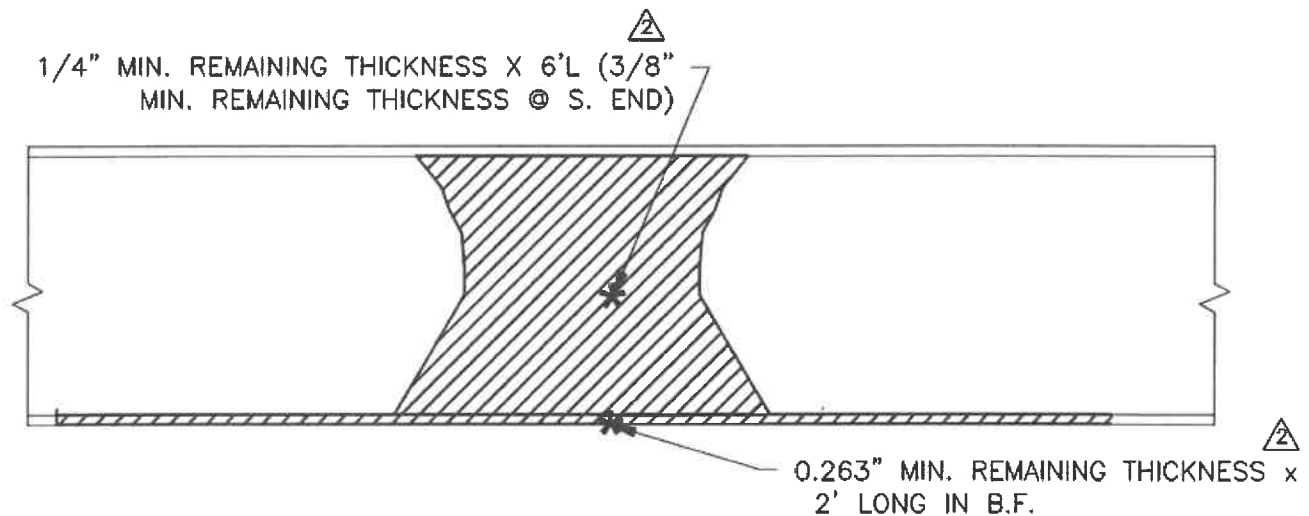
CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



②
1/4" MIN. REMAINING
THICKNESS X FH X 8"L

NORTH FACE OF STRINGER S5 @
EAST FACE OF FLOORBEAM FB3



STRINGER S5 @ FLOORBEAMS FB5
& FB6, NORTH FACE AT MIDSPAN

LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (16WF45)

$d = 16.12$ IN
 $t_f = 0.563$ IN
 $t_w = 0.346$ IN
 $b_f = 7.04$ IN

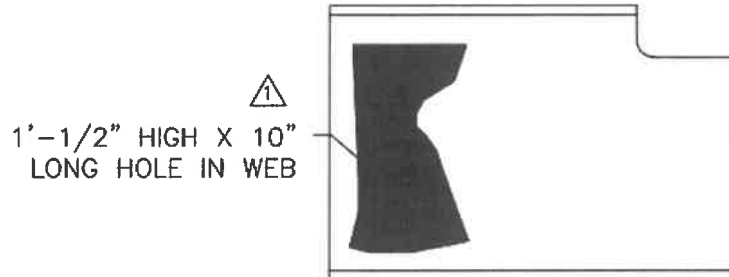
① INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

② INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

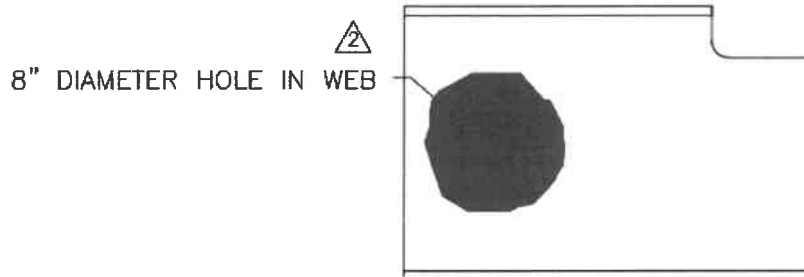
Sketch 8: Stringer Deficiencies (4 of 5)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



NORTH FACE OF STRINGER S1 @
EAST FACE OF FLOORBEAM FB8



NORTH FACE OF STRINGER S5 @
EAST FACE OF FLOORBEAM FB8

LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (16WF45)

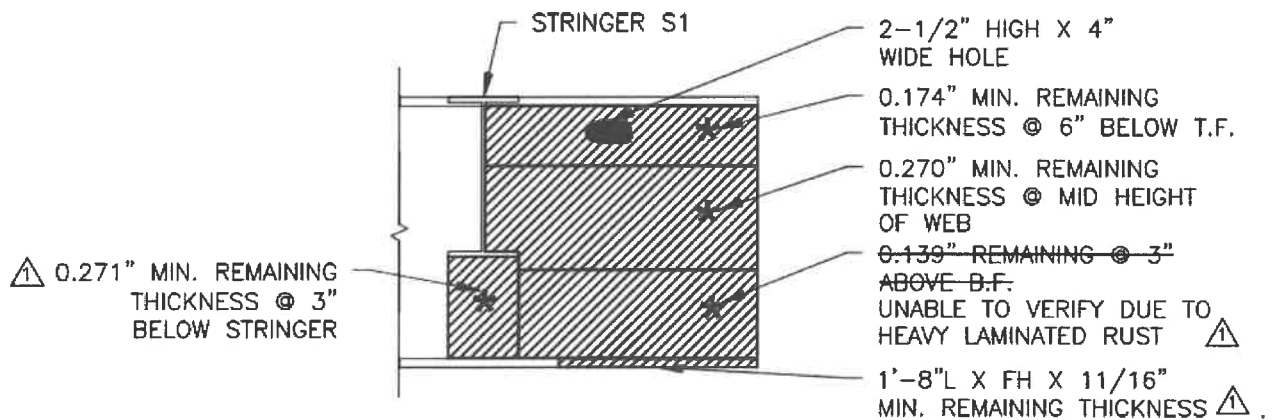
d = 16.12 IN
tf = 0.563 IN
tw = 0.346 IN
bf = 7.04 IN

- INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
- INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

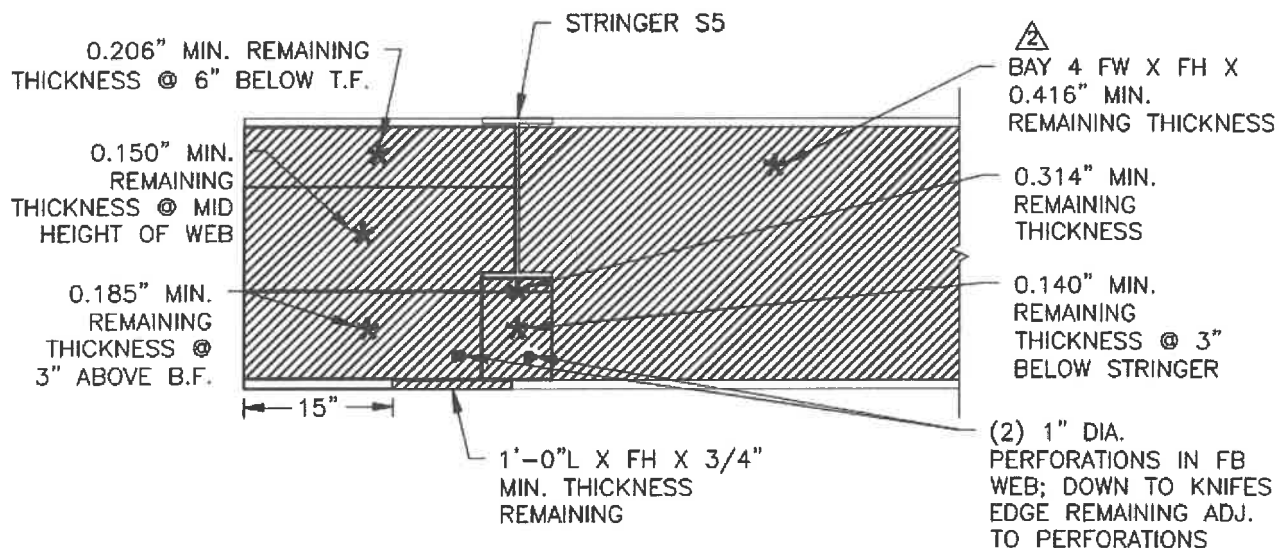
Sketch 9: Stringer Deficiencies (5 of 5)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



EAST FACE OF FLOORBEAM FB0 @ NORTHWEST BEARING



EAST FACE OF FLOORBEAM FB0 @ SOUTHWEST BEARING

LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

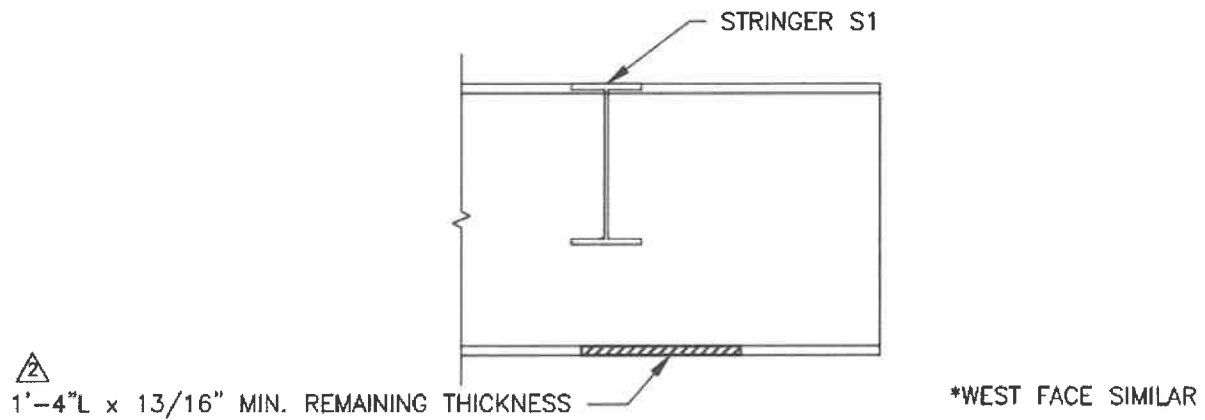
AS-BUILT DIMENSIONS (27WF114)

d = 27.28 IN
tf = 0.932 IN
tw = 0.570 IN
bf = 10.07 IN

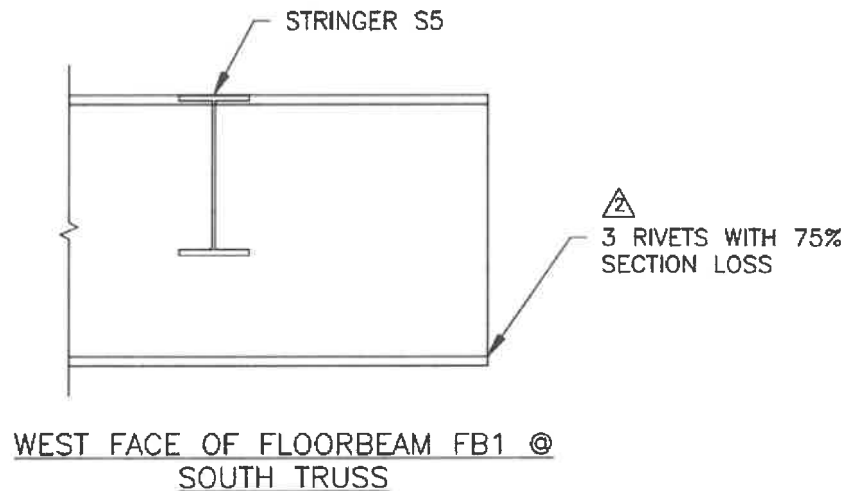
Sketch 10: Floorbeam Deficiencies (1 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



EAST FACE OF FLOORBEAM FB1 @
NORTH TRUSS



WEST FACE OF FLOORBEAM FB1 @
SOUTH TRUSS

LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (27WF114)

d = 27.28 IN
tf = 0.932 IN
tw = 0.570 IN
bf = 10.07 IN

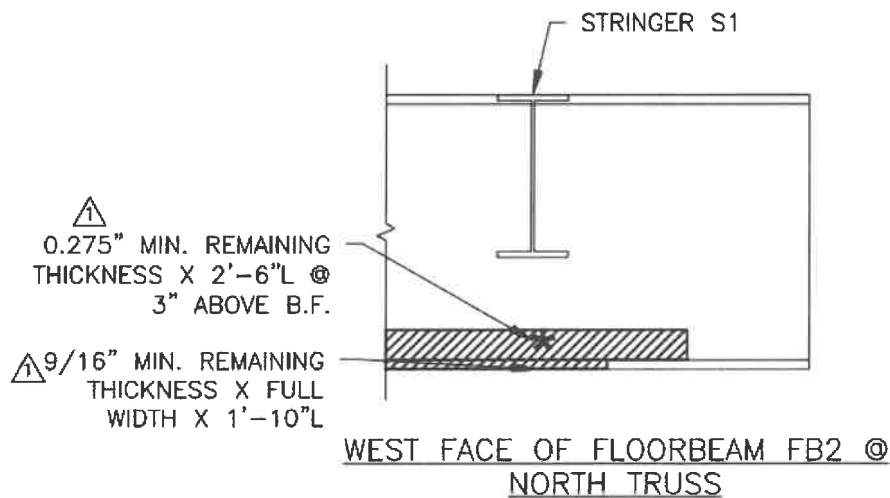
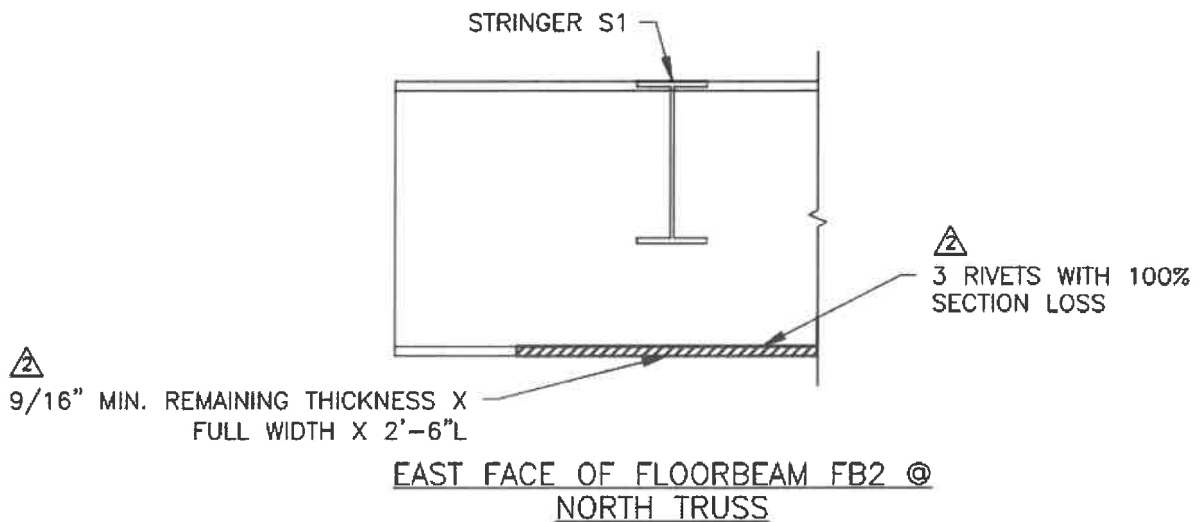
△ INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

△ INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 11: Floorbeam Deficiencies (2 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (27WF114)

$d = 27.28$ IN
 $t_f = 0.932$ IN
 $t_w = 0.570$ IN
 $b_f = 10.07$ IN

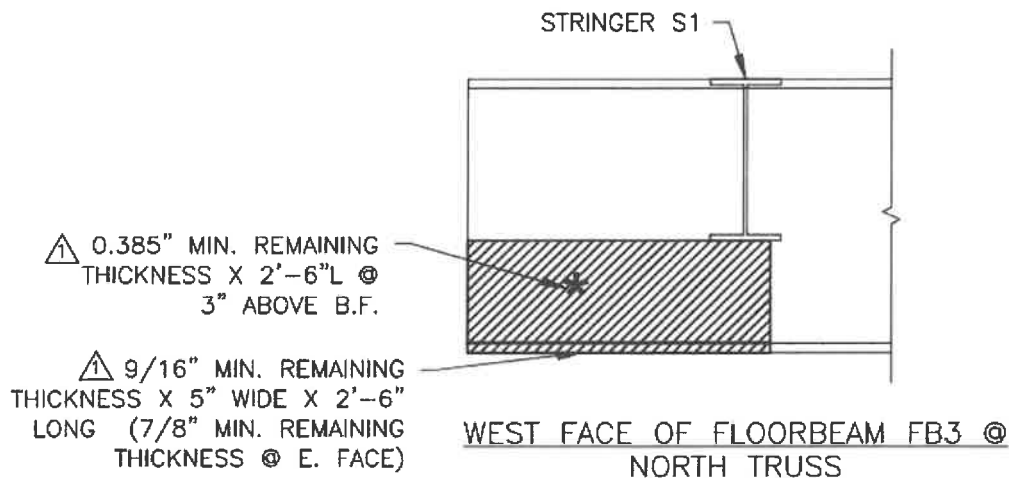
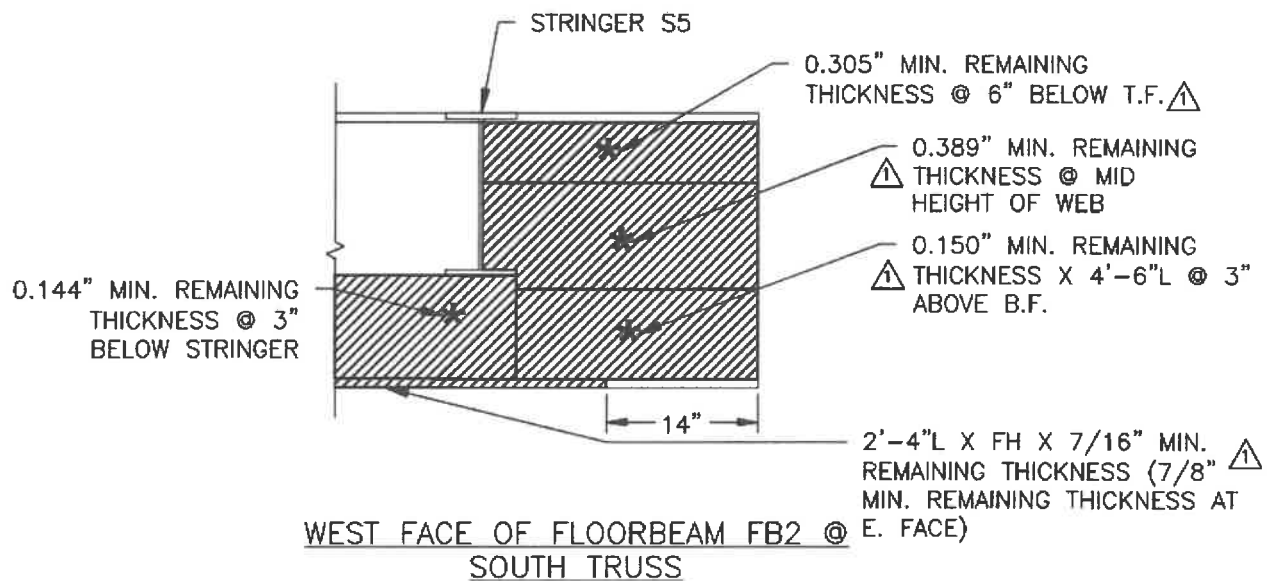
INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 12: Floorbeam Deficiencies (3 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (27WF114)

d = 27.28 IN
 tf = 0.932 IN
 tw = 0.570 IN
 bf = 10.07 IN

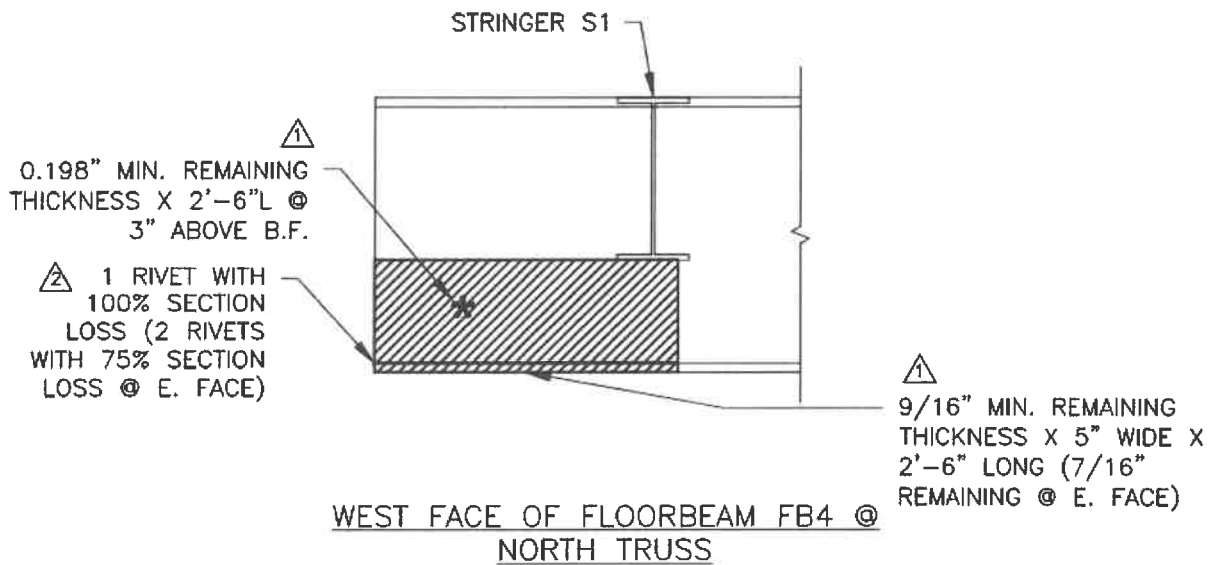
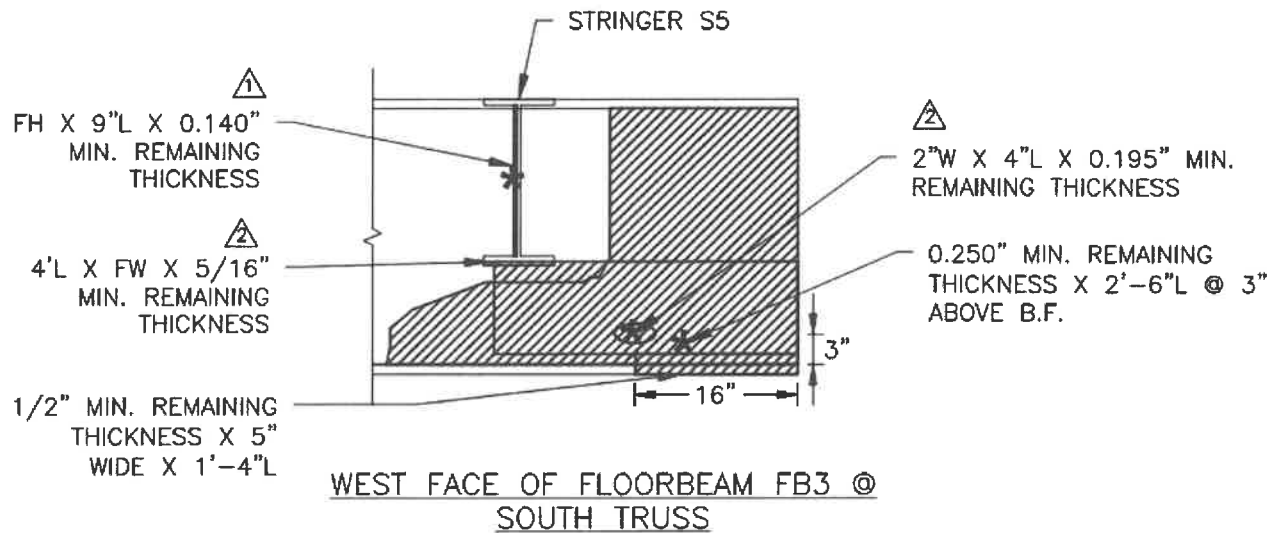
$\triangle$ INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

$\triangle$ INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 13: Floorbeam Deficiencies (4 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

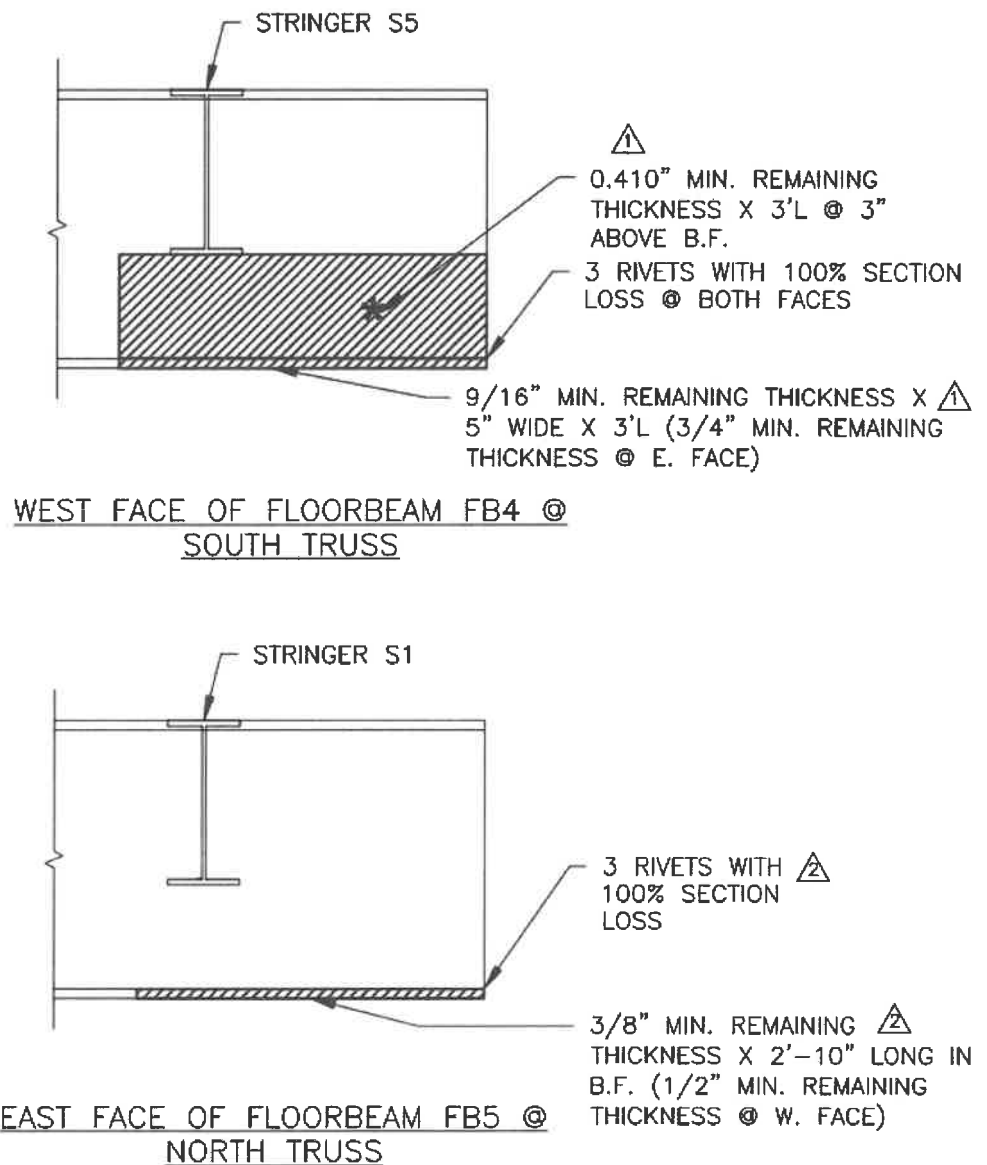
AS-BUILT DIMENSIONS (27WF114)

$d = 27.28$ IN
 $t_f = 0.932$ IN
 $t_w = 0.570$ IN
 $b_f = 10.07$ IN

Sketch 14: Floorbeam Deficiencies (5 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
 = HOLE
 = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (27WF114)

$d = 27.28$ IN
 $t_f = 0.932$ IN
 $t_w = 0.570$ IN
 $b_f = 10.07$ IN

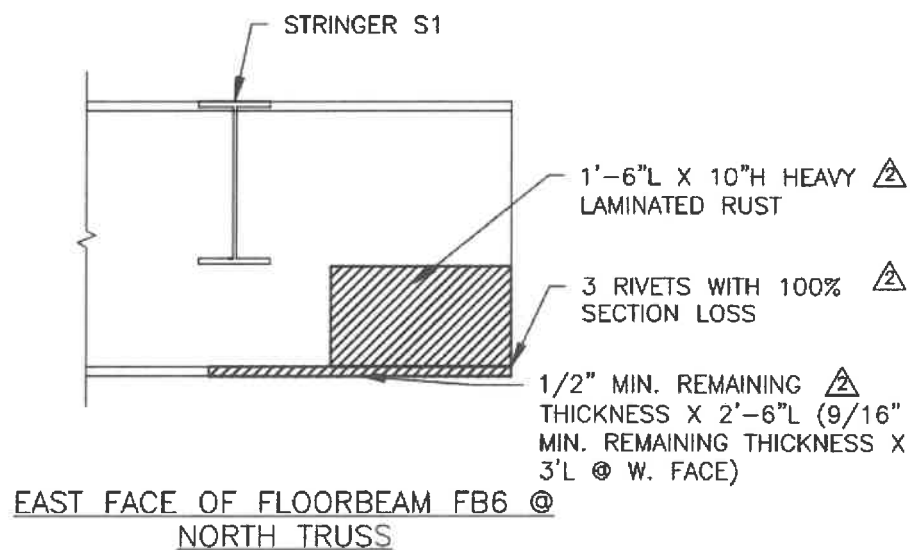
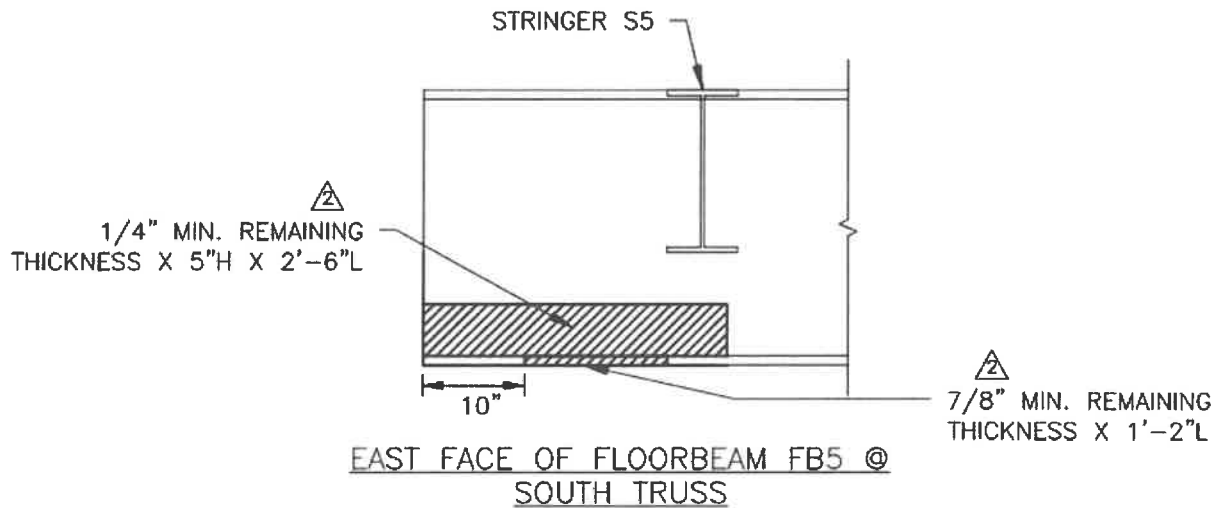
INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 15: Floorbeam Deficiencies (6 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

AS-BUILT DIMENSIONS (27WF114)

$d = 27.28$ IN
 $t_f = 0.932$ IN
 $t_w = 0.570$ IN
 $b_f = 10.07$ IN

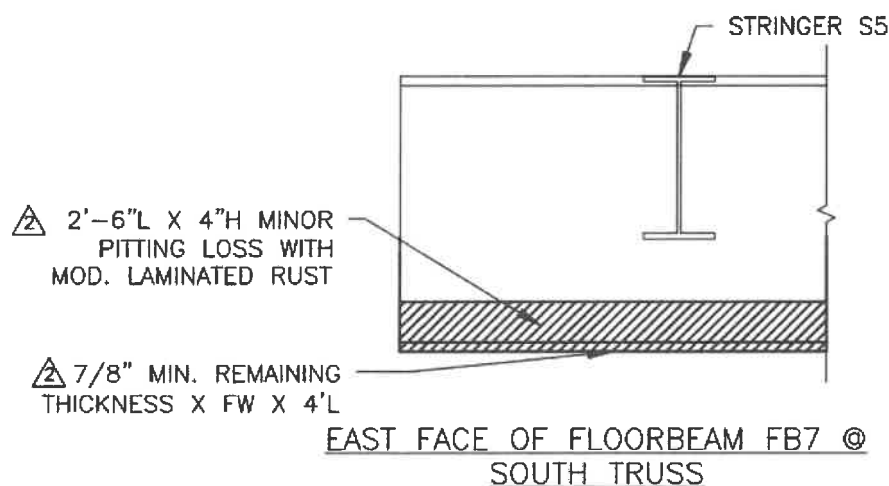
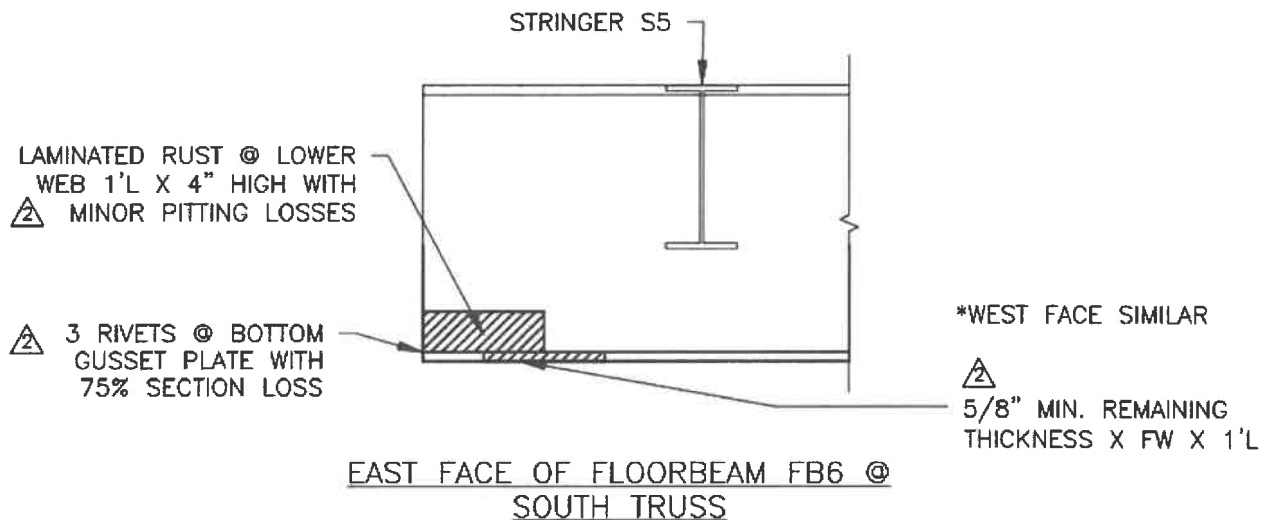
$\triangle$ INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

$\triangle$ INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 16: Floorbeam Deficiencies (7 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

- △ INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
- △ INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

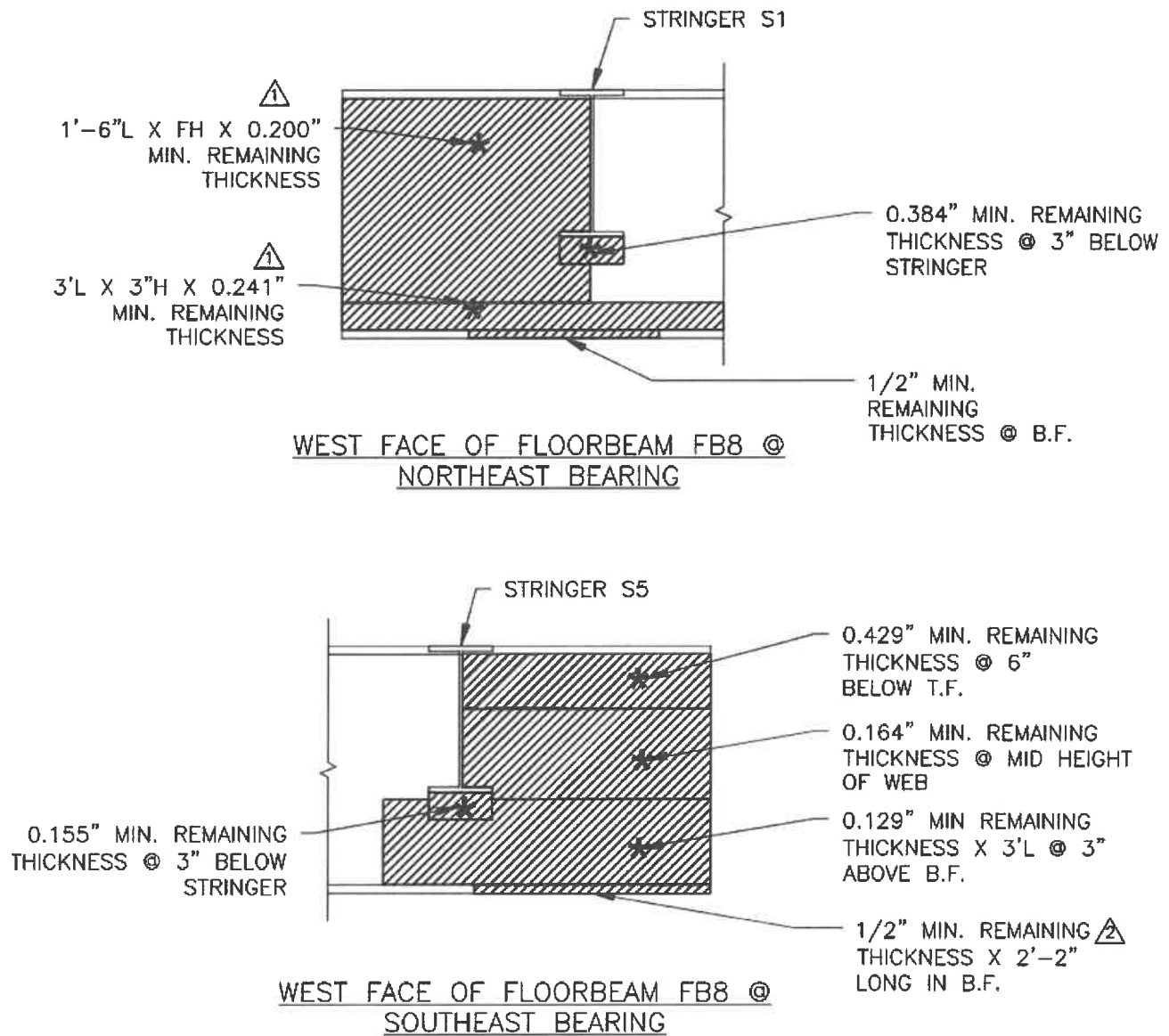
AS-BUILT DIMENSIONS (27WF114)

$d = 27.28$ IN
 $t_f = 0.932$ IN
 $t_w = 0.570$ IN
 $b_f = 10.07$ IN

Sketch 17: Floorbeam Deficiencies (8 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



LEGEND:

- = SECTION LOSS
- = HOLE
- = D-METER MEASUREMENT

① INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)

② INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

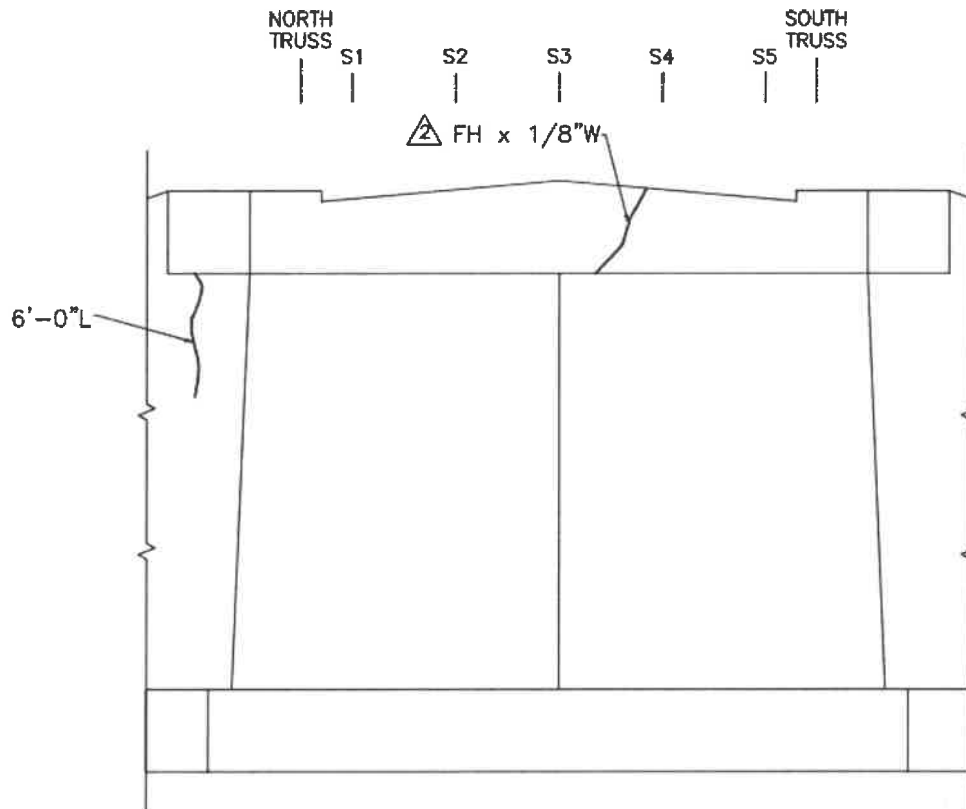
AS-BUILT DIMENSIONS (27WF114)

d = 27.28 IN
t_f = 0.932 IN
t_w = 0.570 IN
b_f = 10.07 IN

Sketch 18: Floorbeam Deficiencies (9 of 9)

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



GENERAL NOTES:

- EAST AND WEST ABUTMENT BRIDGE SEATS HAVE MODERATE ACCUMULATION OF SAND AND DEBRIS UP TO 8" HIGH.
- EAST AND WEST ABUTMENT BREASTWALLS HAVE SCATTERED AREAS OF MINOR HONEYCOMBING, SCALING, AND GRAFFITI THROUGHOUT.
- EAST AND WEST ABUTMENT BACKWALLS HAVE SCATTERED VERTICAL AND HORIZONTAL HAIRLINE CRACKS THROUGHOUT.

EAST ABUTMENT

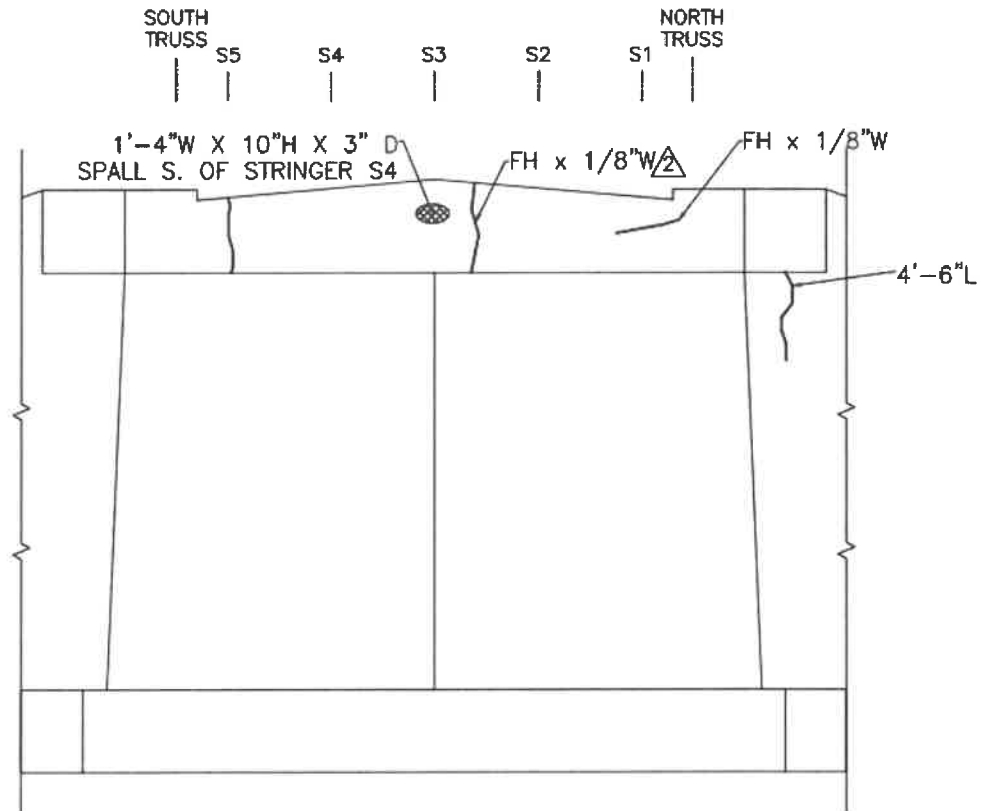
LEGEND

- HAIRLINE CRACKS (HL)
- HAIRLINE CRACKS W/ EFFLO
- MAP CRACKS
- HOLLOW AREA
- SHALLOW REBAR
- SPALL
- SPALL W/ EXP. REBAR
- INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
- INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 19: East Abutment Deficiencies

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



GENERAL NOTES:

- SEE "EAST ABUTMENT" GENERAL NOTES.

WEST ABUTMENT

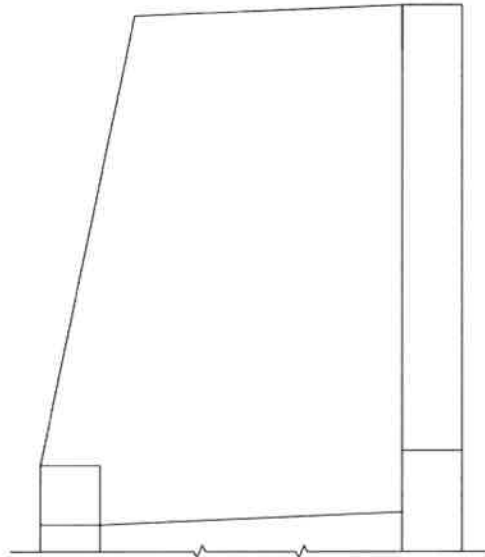
LEGEND

-  HAIRLINE CRACKS (HL)
-  HAIRLINE CRACKS W/ EFFLO
-  MAP CRACKS
-  HOLLOW AREA
-  SHALLOW REBAR
-  SPALL
-  SPALL W/ EXP. REBAR
-  INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
-  INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

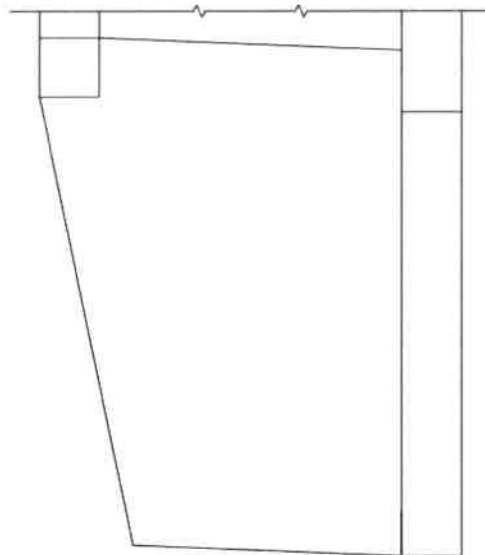
Sketch 20: West Abutment Deficiencies

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



NORTHWEST WINGWALL



NOTE: SOUTHWEST WINGWALL WAS INACCESSIBLE DUE TO HEAVY VEGETATION

SOUTHWEST WINGWALL

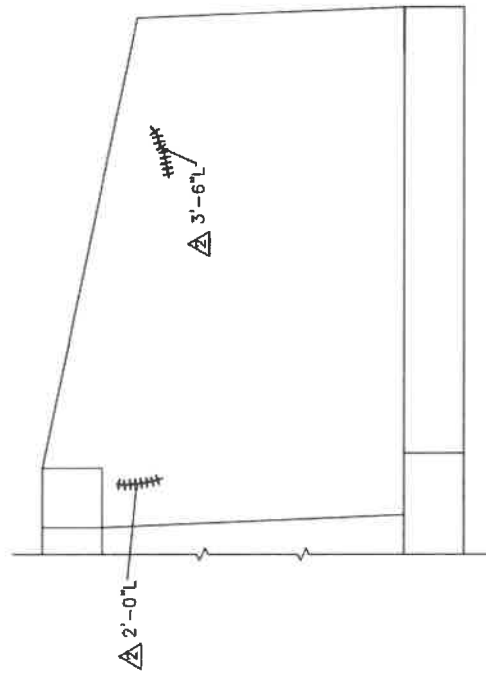
GENERAL NOTES:
 - WINGWALLS GAVE RANDOM VERTICAL AND HORIZONTAL CRACKS WITH AND WITHOUT EFFLORESCENCE THROUGHOUT.
 - MOSS GROWTH ON NORTHEAST AND NORTHWEST WINGWALLS.
 - LIGHT TO MODERATE SCALING THROUGHOUT WINGWALLS.

- LEGEND
- ~ HAIRLINE CRACKS (HL)
 - HAIRLINE CRACKS W/ EFFLO
 - MAP CRACKS
 - HOLLOW AREA
 - SHALLOW REBAR
 - SPALL
 - SPALL W/ EXP. REBAR
 - INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
 - INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

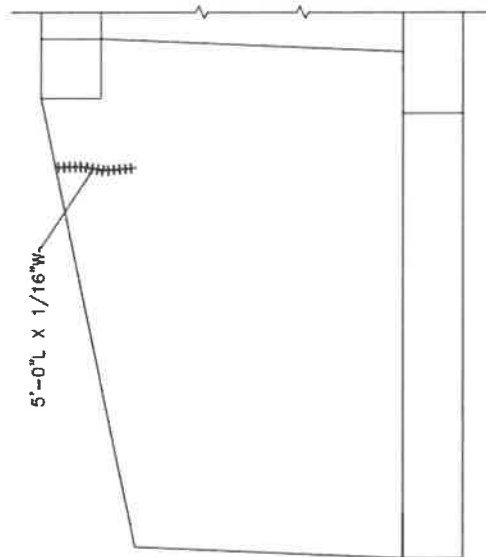
Sketch 21: Northwest and Southwest Wingwall Deficiencies

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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SKETCHES



SOUTHEAST WINGWALL



NORTHEAST WINGWALL

GENERAL NOTES:
- WINGWALLS GAVE RANDOM VERTICAL AND HORIZONTAL CRACKS WITH AND WITHOUT EFFLORESCENCE THROUGHOUT.
- MOSS GROWTH ON NORTHEAST AND NORTHWEST WINGWALLS.
- LIGHT TO MODERATE SCALING THROUGHOUT WINGWALLS.

- LEGEND
- HAIRLINE CRACKS (HL)
 - HAIRLINE CRACKS W/ EFFLO
 - MAP CRACKS
 - HOLLOW AREA
 - SHALLOW REBAR
 - SPALL
 - SPALL W/ EXP. REBAR
 - INDICATES A CHANGE IN CONDITION SINCE PREVIOUS INSPECTION (06/2019)
 - INDICATES A NEW CONDITION NOT PREVIOUSLY REPORTED (06/2021)

Sketch 22: Northeast and Southeast Wingwall Deficiencies

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 1: West Approach At-Bridge Clearance Posting



Photo 2: East Approach At-Bridge Clearance Posting

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS



Photo 3: West Approach At-Bridge Weight Posting



Photo 4: East Approach At-Bridge Weight Posting

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 5: Eastbound travel lane wearing surface with sealed and unsealed cracks and potholes



Photo 6: Eastbound Wearing Surface at the West Abutment deck joint, pothole with impacted sand and debris

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
GREAT BARRINGTON	04K	G-11-008	G11008-04K-MUN-NBI	JUN 8, 2021

PHOTOS

Photo 7: Eastbound Wearing Surface near the 13th rail post with a pothole



Photo 8: Underside of deck at the West Abutment between Stringer S2 and S3, spall with exposed rebar

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 9: Southwest Approach bridge and approach curb misalignment and missing guardrail transition



Photo 10: South Curb at East Abutment with gap between bridge and approach curbs

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS



Photo 11: North Railing, 7th post from East Abutment, anchor bolt nuts with up to 100% section loss



Photo 12: North Railing, 11th post from East Abutment with perforation in lower web

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 13: South Railing, 1st and 2nd panel from West Abutment upper rail missing



Photo 14: South Railing, 10th and 12th panel from West Abutment upper rail disconnected

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 15: Gas main at South side of bridge



Photo 16: East Abutment deck joint with partially patched header and approach pavement cracked with some break-up

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8-STRUCTURE NO.	INSPECTION DATE
GREAT BARRINGTON	04K	G-11-008	G11008-04K-MUN-NBI	JUN 8, 2021

PHOTOS

Photo 17: East Abutment deck joint spall exposing joint armor edge and approach pavement cracked with some break-up



Photo 18: West Abutment deck joint; note potholes/spalls along the joint.

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 19: Stringer S5 at Floorbeam FB0 (west end) with rust perforation at end



Photo 20: Stringer S1 east of Floorbeam FB2 with rust and section loss at midspan

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PHOTOS

Photo 21: Stringer S5 at Floorbeam FB3, north face with rust and section loss



Photo 22: Stringer S5 between Floorbeams FB5 and FB6 with rust and section loss

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 23: Stringer S1 at Floorbeam FB8 with perforation at end



Photo 24: Stringer S5 at Floorbeam FB8 with perforation at end

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PHOTOS

Photo 25: Floorbeam FB0 at Southwest Bearing, east face with heavy rust, perforations, and section loss



Photo 26: Floorbeam FB1 at south end, west face with heavy rust and section loss

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 27: Floorbeam FB2 at south end, west face with heavy rust and section loss



Photo 28: Floorbeam FB3 at south end, west face with heavy rust and section loss

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PHOTOS

Photo 29: Floorbeam FB4 at north end, east face with heavy rust and section loss



Photo 30: Floorbeam FB5 at north end, east face with heavy rust and section loss

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 31: Floorbeam FB5 at south end, east face with rust



Photo 32: Floorbeam FB6 at north end, east face with heavy rust and section loss

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 33: Floorbeam FB8 at north end, west face with heavy rust and section loss



Photo 34: Floorbeam FB8 at south end, west face with heavy rust and section loss

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PHOTOS

Photo 35: Upper Chord with typical rust and peeling paint



Photo 36: North Truss, U1 upper chord gusset plate with depressions/cupping

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 37: South Truss, U3 south face with missing rivet at upper chord



Photo 38: Lower Chord with typical rust and paint loss

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PHOTOS

Photo 39: U2 Sway Bracing with collision damage



Photo 40: U6 Sway Bracing with collision damage

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PHOTOS

Photo 41: Northwest Bearing with overexpansion and bent anchor rods



Photo 42: Southwest Bearing with debris, rust, and anchor bolt nut section loss as well as overexpansion with bent anchor rods

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 43: East Abutment bridge seat with debris accumulation



Photo 44: West Abutment south of Stringer S4 with spall

CITY/TOWN GREAT BARRINGTON	B.I.N. 04K	BR. DEPT. NO. G-11-008	8.-STRUCTURE NO. G11008-04K-MUN-NBI	INSPECTION DATE JUN 8, 2021
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PHOTOS

Photo 45: East Embankment, south end of East Abutment with depression

Report Date: March 22, 2023

State Information				Classification				Code			
BDEPT# G11008				Agency Br.No.				(112) NBIS Bridge Length Y			
Town= Great Barrington				L.O.				(104) Highway System N			
B.I.N= 04K				AASHTO= 050.9				(26) Functional Class - Urban Local 19			
RANK= 1892 H.I.= 80.2 %				FHWA Select List= Y (6/21/2017)				(100) Defense Highway 0			
Identification				G1100804KMUNNBI				(101) Parallel Structure N			
(8) Structure Number				151000000				(102) Direction of Traffic - 2-way traffic 2			
(5) Inventory Route				01				(103) Temporary Structure N			
(2) State Highway Department District				26815				(105) Federal Lands Highways 0			
(3) County Code 003 (4) Place code				WATER HOUSATONIC RIVER				(110) Designated National Network N			
(6) Features Intersected				HWY BROOKSIDE RD				(20) Toll - On free road 3			
(7) Facility Carried				E OF RT7 1.3M N OF SHFLD				(21) Maintain - Town Agency 03			
(9) Location				0000.241				(22) Owner - Town Agency 03			
(11) Kilometerpoint				N				(37) Historical Significance not eligible N			
(12) Base Highway Network				000000000000				Condition Code			
(13) LRS Inventory Route & Subroute				42 DEG 10 MIN 34.01 SEC				(58) Deck 6			
(16) Latitude				73 DEG 21 MIN 32.75 SEC				(59) Superstructure 5			
(17) Longitude				Share %				(60) Substructure 6			
(98) Border Bridge State Code								(61) Channel & Channel Protection 7			
(99) Border Bridge Structure No. #								(62) Culverts N			
Structure Type and Material								Load Rating and Posting Code			
(43) Structure Type Main: Steel Code 310								(31) Design Load - H 15=M 13.5 2			
Truss - Thru Jointless bridge type: Not applicable								(63) Operating Rating Method - Load Factor (LF) 1			
(44) Structure Type Appr: Other Code 000								(64) Operating Rating 36.9			
(45) Number of spans in main unit 001								(65) Inventory Rating Method - Load Factor (LF) 1			
(46) Number of approach spans 0000								(66) Inventory Rating 22.4			
(107) Deck Structure Type - Concrete Cast-in-Place Code 1								(70) Bridge Posting 5			
(108) Wearing Surface / Protective System:								(41) Structure - Posted for load P			
A) Type of wearing surface - Bituminous Code 6								Appraisal Code			
B) Type of membrane - Built-up Code 1								(67) Structural Evaluation 5			
C) Type of deck protection - None Code 0								(68) Deck Geometry 2			
Age and Service								(69) Underclearances, vert. and horiz. N			
(27) Year Built 1949								(71) Waterway adequacy 7			
(106) Year Reconstructed 0000								(72) Approach Roadway Alignment 6			
(42) Type of Service: On - Highway								(36) Traffic Safety Features 0 0 0 0			
Under - Waterway Code 15								(113) Scour Critical Bridges 4			
(28) Lanes: On Structure 02 Under structure 00								Inspections			
(29) Average Daily Traffic 001449								(90) Inspection Date 06/08/21 (91) Frequency 24 MO			
(30) Year of ADT 2017 (109) Truck ADT 06 %								(92) Critical Feature Inspection: (93) CFI DATE			
(19) Bypass, detour length 006 KM								(A) Fracture Critical Detail Y 24 MO A) 06/08/21			
Geometric Data								(B) Underwater Inspection N 00 MO B) 10/01/92			
(48) Length of maximum span 0043.5 M								(C) Other Special Inspection N 00 MO C) 00/00/00			
(49) Structure Length 00045.2 M								(*) Other Inspection (Flood) N 00 MO *) 10/17/11			
(50) Curb or sidewalk: Left 00.2 M Right 00.2 M								(*) Closed Bridge N 00 MO *) 00/00/00			
(51) Bridge Roadway Width Curb to Curb 006.1 M								(*) UW Special Inspection N 00 MO *) 00/00/00			
(52) Deck Width Out to Out 006.9 M								(*) Damage Inspection MO *) 00/00/00			
(32) Approach Roadway Width (w/shoulders) 005.5 M								Rating Loads			
(33) Bridge Median - No median Code 0								Report Date 08/05/09 H20 Type 3 Type 3S2 Type HS			
(34) Skew 00 DEG (35) Structure Flared N								Operating 24.0 34.0 40.0 35.0			
(10) Inventory Route MIN Vert Clear 04.31 M								Inventory 17.0 19.0 22.0 19.0			
(47) Inventory Route Total Horiz Clear 06.1 M								Field Posting			
(53) Min Vert Clear Over Bridge Rdwy 04.32 M								Status POSTED Posting Date 08/09/10			
(54) Min Vert Underclear ref N 00.00 M								2 Axle 3 Axle 5 Axle Single			
(55) Min Lat Underclear RT ref N 00.0 M								Actual 15 19 24			
(56) Min Lat Underclear LT 00.0 M								Recommended 15 19 24			
Navigation Data								Missing Signs N			
(38) Navigation Control - No navigation control on waterway Code 0								Misc.			
(111) Pier Protection Code								Bridge Name			
(39) Navigation Vertical Clearance 000.0 M								N Anti-missile fence N Acrow Panel N Jointless Bridge			
(116) Vert-lift Bridge Nav Min Vert Clear M								Freeze/Thaw N : Not Applicable			
(40) Navigation Horizontal Clearance 0000.0 M								# Stairs On/Adjacent 0 Stair Owner(s)			
								Accessibility (Needed/Used)			
								Y / Y Liftbucket Y / Y Rigging _ / _ Other			
								P / Y Ladder N / N Staging			
								N / N Boat Y / Y Traffic Control			
								N / N Wader N / N RR Flagperson Inspection			
								N / N Inspector 50 Y / Y Police Hours: 117			