TOWN OF GLASTONBURY

BID NUMBER GL-2012-15

ADDENDUM NO. 1

Contract Documents
for
REPLACEMENT OF BRIDGE NO. 04121
ADDISON ROAD OVER SALMON BROOK
GLASTONBURY, CONNECTICUT

Anchor Engineering Services, Inc.
March 12, 2012

TO ALL BIDDERS:

All instructions and clarifications contained in this addendum shall be reflected in the Bid and will be made a part of the Contract Documents if and when the Contract is awarded.

The following questions have been raised by potential bidders on the project:

Question #1: Are there plans available of the existing bridge, and if so, can they be posted on the website or can they be obtained directly from the Town?

Answer #1: **Plans of the existing bridge are not available at the Town. The latest Bridge Inspection Report has been posted on the website.**

Question #2: Will the MDC provide measures to take the existing water main out of service during the construction of the proposed bridge in the same manner as the Gas co. will with the existing gas main? Or will the existing water main remain in service and need to be temporarily supported and then relocated when a sufficient length of bridge is in place?

Answer #2: **The MDC will cut and cap the existing water main as shown on the plans. The portion of water main to be relocated will remain out of service during the construction.**

Question #3: Please provide the volume of flow the Contractor must maintain for Item #1401054A Handling Sanitary Sewer.

Answer #3: **Bypass pumping shall be sized to handle 900 gallons per minute peak wet weather flow. If the pumping equipment is to run during overnight hours, the pumps shall be critically silenced to produce less than 70 dBA at thirty feet to minimize impact to adjacent residences.**

Question #4: Article 20.01 under the Special Conditions states the Town will perform in place compaction testing. Item #205100A Earth Trench Excavation and Backfill under Compaction Testing states "When in the opinion of the Engineer, such tests are necessary, the Contractor shall have compaction tests taken by an improved independent laboratory." Please clarify which party is responsible for compaction testing for the project.

Answer #4: **The Town will provide the necessary compaction testing.**

Question #5: The contract specification contains several critical construction milestone dates. In order to properly establish a construction schedule, could you please furnish an anticipated construction start date.

Answer #5: **Anticipated date of contract award is April 15th, 2012. The anticipated construction start date is dependent on the Contractor's schedule for procuring materials and mobilizing to the site.**

Question #6: Will working behind turbidity curtains constitute confinement for the installation and removal of cofferdams thereby allowing this work to be accomplished outside the June 1st to September 30th window for unconfined in stream work?

Answer #6: **Turbidity curtains do not constitute a suitable confinement to drive sheets. But alternate types of cofferdams to create a confinement are possible as discussed in the CT DEP Inland Fisheries Division Habitat Conservation and Enhancement Program Stream Crossing Guidelines; Excerpt shown is from page 9.**
(see: http://www.nae.usace.army.mil/reg/Stream/CT_StreamCrossingGuidelines.pdf:
"…In inland waters, unconfined[1] instream construction activities associated with either bridge/culvert installation and rehabilitation projects should only be *allowed* from the period *June 1 through September 30*, inclusive (Figure 10). Conversely this means a prohibition of unconfined instream construction activities from October 1 through May 30. Cofferdam installation may be allowed outside this window if construction techniques do not involve streambed excavation or sheetpile installation…")

Question #7: Plan sheet 11 of 32 indicates the utility pole in the immediate vicinity of end wall No. 1 is to be relocated. Where is the new location of this pole?

Answer #7: **It is anticipated that the new pole will move approximately 15 feet to the northwest and a taller pole be installed at this location and the next pole to the south to enable the overhead facilities to be installed higher. This relocation work is anticipated to begin prior to the bridge construction start.**

Question #8: Paragraph 11.04 and Paragraph 21.00 of the special condition appear to be in conflict. Please clarify

Answer #8: **Section 21.00 of the Special Conditions allows for work on weekends or extended work hours if specifically authorized by the Town. The Contractor must successfully demonstrate that extended work hours are necessary to complete the work within the allotted timeframe rather than providing additional resources.**

Question #9: The South Elevation on Sheet 14 shows both bottom of footing and top of bedrock at Elevation 85 with cofferdam and underwater concrete below the top of bedrock for Abutment No.2. The North Elevation on Sheet No. 15 shows top of bedrock at Elevation 85 at the bottom of the underwater concrete for Abutment No.2. The Elevation and Sections on Sheet No. 17 for Abutment No. 2 show the Bottom of Footing, Top of bedrock and Bottom of underwater concrete all at Elevation 85. Please clarify at what Elevations the bottom of footing and the bottom of underwater concrete are to be placed at for Abutment No.2. Is it the intent to remove competent bedrock underwater at Abutment No.2 to place underwater concrete?

Answer #9: **Boring B2, which encountered bedrock at El. 85.3, was drilled approximately 6 feet behind Abutment No. 2. There is indication that the top of bedrock slopes from**

this elevation as it approaches the streambed, and therefore would be below the bottom of footing El. 85.00 by the time it approaches the limits of the abutment and wingwall footings. Within the limits of cofferdam, the difference in elevation between top of bedrock and bottom of footing should be filled with underwater concrete as shown. However, if competent bedrock is found to exist above El. 85.00 within the limits of the footings, it must be removed to El. 85.00 to allow the full thickness of the footing to be poured.

The approved Flood Management Certification has been received by the Town and a copy is attached as part of this addendum.

Attached as part of this addendum are:
1) The Flood Management Certification approval for this project;
2) The latest Bridge Inspection Report for the bidders' information only.

END OF ADDENDUM NO. 1

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone:

February 14, 2012

Mr. Richard J. Johnson
Town Manager
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

Dear Mr. Johnson:

Subject: Flood Management Certification
Local Bridge Project No. 9053-4121
Replacement of Bridge No. 04121 Addison Road over Salmon Brook
Town of Glastonbury

In accordance with the Memorandum of Understanding between the Connecticut Department of Transportation (Department) and the Connecticut Department of Energy and Environmental Protection (DEEP) regarding flood management certifications for municipal projects, the Department has completed the review of the flood management certification prepared and submitted for the Town of Glastonbury for the subject project. The certification states that the proposed activity is consistent with all applicable standards and criteria established in Section 25-68d(b) of the Connecticut General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

The project consists of the replacement of Bridge No. 04121, a 30-foot single span bridge, crossing over Salmon Brook, as shown on the project plans, dated April 2010, and as documented in the "Hydraulic Analysis Report," and "Floodway Analysis Report," both dated September 26, 2011. A portion of the project is located within the 100-year flood zone of the Salmon Brook.

The certification is complete and approved subject to the following standard and special conditions:

Standard Conditions:

1. Time of Year Restriction on In-water Construction

a. Between September 30 and May 31 the municipality shall not place fill, excavate material, or conduct any other construction activity in any watercourse unless such activity is confined by a cofferdam or other device which isolates such activity from the watercourse, unless the DEEP Inland Fisheries Division has given written authorization otherwise.

b. The municipality shall not place fill, excavate material, or conduct any other activity in any watercourse stocked with fish by the commissioner or any other person, or in any tributary to such watercourse, from 12:01 a.m. on the Monday preceding the third Saturday in April through 12:00 midnight on the Sunday preceding the fourth Saturday in April.

c. The municipality shall not place fill, excavate material or conduct any other construction activity in or adjacent to any watercourse, which activity may adversely affect anadromous fish, during the time period when anadromous fish are known or reasonably believed to be migrating in the watercourse.

2. Pollution Prevention/Best Management Practices

The municipality shall not cause or allow the authorized activity, including any Construction associated therewith, to result in pollution or other environmental damage and shall employ best management practices to prevent such damage. The municipality shall, in addition to employing any other best management practices necessary to prevent such damage, do the following:

a. Controlling Erosion

The municipality shall install and maintain, in optimal condition, erosion and sedimentation controls to prevent erosion and discharge of material into any waters of the state, including wetlands, as a result of the authorized activity or any construction associated therewith. Such controls shall be installed and maintained in conformity with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, as revised, published by the Connecticut Council on Soil and Water Conservation pursuant to Section 22a-328 of the Connecticut General Statutes.

b. Proper Disposal of Material

All material and solid waste generated during any construction associated with such activity shall be disposed of in accordance with applicable federal, state and local law.

3. Storage of equipment/material within the flood plain should be avoided but, if absolutely necessary, the municipality will require the contractor to remove equipment and materials from the 100-year flood plain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the contractor's responsibility to be knowledgeable of such warnings when flooding is anticipated.

4. Work shall not be conducted in, or adjacent to, watercourses and reservoirs used as public drinking water supply sources without coordination with the water supply utility and Department of Public Health.

5. All temporary structures, cofferdams, and fill shall not impede the movement of flood flows and shall be removed at the completion of their use. The design of such temporary structures, cofferdams and fill shall be based on the DOT Drainage Manual, where applicable. Sheet piling that is cut one foot below existing grade shall be considered removed.

6. All fill shall be clean material, free of stumps, rubbish, hazardous, and toxic material.

7. Once work is initiated, it shall proceed rapidly and steadily until completed and stabilized in order to minimize use of temporary structures and to minimize soil erosion.

Special Conditions:

1. Due to the possible presence of listed species in the project area, specifically, Eastern Box Turtle, the precautions outlined in the Notice to Contractor and in the letter from DEP Wildlife Division dated May 10, 2011, both of which are included in this application package must be adhered to.

2. Fisheries enhancements must be conducted on site and shall be completed at the direction of DEEP Inland Fisheries Division as indicated in the Notice to Contractor.

A copy of the completed certification forms is enclosed for your records. No revisions or alterations to the approved plans are allowed without obtaining written approval from the Department of such alterations.

If you have any questions regarding this matter, please contact Mr. Michael Masayda, Transportation Principal Engineer, of the Hydraulics and Drainage Section, at (860) 594-3238.

Very truly yours,

James H. Norman, P.E.
Engineering Administrator
Bureau of Engineering and Construction

Enclosure

Statewide Flood Management Certification for Federally and State Funded Municipal Projects

Attachment A: DOT

A-1: Engineering Certification

Name of Subject Facility and DOT Project Number:

Addison Road Bridge No. 04121 over Salmon Brook, Glastonbury, Connecticut
CTDOT Project No. 9053-4121

Name of floodplain and watercourse:

Salmon Brook

I hereby certify, in reliance on the Municipal Official Certification, the Town Engineer / Consultant-Professional Certification, the DOT Hydraulics and Drainage Section and the DOT Environmental Planning reviews, that the above referenced project qualifies for the DEP Commissioner's approval pursuant to Section 25-68d of the General Statutes, and that the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

Signature: _____ 2-14-12
Date

Print/Type: JAMES H NORMAN
Transportation Engineering Administrator
Bureau of Engineering and Construction

Statewide Flood Management Certification for Federally and State Funded Municipal Projects

Attachment A: DOT

A-2: Hydraulics and Drainage Section Review

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

Signature: Michael Masayda 2-9-12
Date

Print/Type: Michael Masayda
Transportation Principal Engineer
Hydraulics and Drainage Section

A-3: Environmental Planning Review

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the proposed activity described in this application is consistent with all applicable standards found in the 2004 Connecticut Stormwater Manual, 2002 Erosion and Sedimentation Control Guidelines (as amended) and that there has been proper coordination with the Inland Fisheries Division and the Natural Diversity Database.

Signature: Kimberly Lesay 1/26/12
Date

Print/Type: Kimberly Lescay
Transportation Supervising Planner
Office of Environmental Planning

Statewide Flood Management Certification for
Federally and State Funded Municipal Projects

Attachment B: Municipality

B-1: Municipal Official Certification

Name of Applicant / Municipality: **Town of Glastonbury**

DOT Project No.: **9053-4121**

Description of Proposed Project: **Replacement of Bridge No. 04121 Addison Road over Salmon Brook with a new 32-foot span precast concrete arch.**

1. The recipient of federal and/or state funding will be:

Name: **Richard J. Johnson, Town Manager**

Mailing Address: **2155 Main Street**

City/Town: **Glastonbury** State: **CT** Zip Code: **06033**

Phone: **860-652-7500** ext. Fax: **860-652-7505**

Based on my review and reasonable investigation, including my inquiry of those individuals responsible for preparing the information, the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes.

Signature: _____ 12-9-11
Date

Print/Type: Richard J Johnson

~~Chief Elected Official~~
~~First Selectman~~
Town Manager

Statewide Flood Management Certification for
Federally and State Funded Municipal Projects

Attachment B: Municipality

B-2: Town Engineer / Consultant - Professional Certification

DOT Project No.: 9052-4121

Description of Proposed Project:

Plan Dated and Revised Through: April 2010 and revised through November 2011

Hydrologic and Hydraulic Study Dated: April 16, 2010 and revised through:
Floodway Report-5/2011 Scour Report-5/2011 Hydraulic Report-8/2011

I hereby certify that the prepared information and the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes.

Signature: _____ 11/17/2011
Date

Print/Type: Timothy J. Young
Professional Engineer

P.E. Number: 19425

STATE OF CONNECTICUT
TIMOTHY J. YOUNG
No. 19425
LICENSED
PROFESSIONAL ENGINEER

Affix P.E. Stamp Here

STRUCTURE NO. 04121

ADDISON ROAD

over

SALMON BROOK

GLASTONBURY

Routine Inspection

on

7/12/2011

Inspected by Team 4

for Area 6

TEAM:	Forwarded to TE3 Don Carlson	Date	7/13/2011
TE3:	Reviewed by TE3 DMC	Date	7/19/11
	BMM Required	NO	
	Town Bridge	YES	
	Rating <= 5 (Items 58,59,60 or 62)	YES	
	Rating Change 2 or More Values	~~YES~~ NO	
	Forwarded to Supervisor SAD	Date	7/21/11
	Forwarded to "To Be Copied Drawer" ☐	Date	
	Date BRI-19 Entered 7/19/11		
SUPERVISOR:	Reviewed by Supervisor	Date	
SUPPORT:	Date Copies Made	BMM No	
	Scanned By:	Date Scanned	PDF Box No

NBI: Yes

State of Connecticut
Department of Transportation
Bureau of Engineering and Construction

Inspection Report Transmittal Form
Form BRI-27, Rev. 8/09

Structure No.	041214	**Town**	GLASTONBURY
Inspection Date	7/12/2011	**Inspectors**	TEAM 4

TABLE OF CONTENTS

Loose Forms (not bound in report)

		Number of Sheets Enclosed
Maintenance Memo		
Flagging Memos		
PONTIS Element Data Collection Form		1
Plan Sheets	Already on File ☐	

Bound Report Pages

Title Cover Sheet		1
Table of Contents		1
Executive Summary		
Field Notes		
Calculations:	Load Rating Evaluation	
	Quantities & Cost Estimate	
Photo Sheets		4
Photo Images		8

Forms

BRI-18 Bridge Inspection Report Form	8
BRI-19 Highway Bridge Inventory Form	2
BRI-10 Concrete Deterioration Worksheet	1

Comments:

SKETCHES - 4.

Bridge Number 04121

Inspected By: DWillis & T.Kahak

Sufficiency Rating 48.79

Previous Inspection Date 5/19/2009

BS&E Received ☐ Data Entry By: Dmc

Copies Made ☐ Data Entry Date: 7/19/11

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BRIDGE SAFETY & EVALUATION

STRUCTURE EVALUATION

SHEET 1 OF ____ (INSP. REPORT)

90) Inspection Date	Inspection Team	91) Frequency	Class:
07/12/11	04	24	91

Indepth Insp	Deck Survey	Access	Flagman
5/23/2003	1/1/1900 12	0	0

RED FLAG

CRITICAL FEATURE INSPECTIONS

	Type	Frequency	Team	Date
Fracture:				
Uwater:		0		8/27/2009
Special:		0		

IDENTIFICATION

Bridge Name

Town Name GLASTONBURY Town Code 91240

5) Inventory Route:

A) Record Type 1

B) Signing Prefix 5 City Street

C) Level of Service 0 None of the bel

D) Route Number 00000

E) Directional Suffix 0 NA

6) Feature Intersected SALMON BROOK

7) Facility Carried: ADDISON ROAD

9) Location 1000 (N) INT RTE 94

11) Milepoint 0.00 Miles

16) Latitude 41deg 43 min 48.00 sec

17) Longitude 72deg 34 min 36.00 sec

98) Border Bridge:

A) State Code

B) Percent Responsibility %

C) Border Town Name

99) Border Bridge Structure No

STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:

A) Material 3 Steel

B) Design Type 2 Stringer/Multi-beam or Girder

44) Structure Type, Approach:

A) Material 0 Other

B) Design Type 0 Other

45) Number of Spans, Main Unit 1

46) Number of Approach Spans 0

107) Deck Structure Type 1 Concrete Cast-in-Place

108) Wearing Surface/Protective System:

A) Type of Wearing Surface 6 Bituminous

B) Type of Membrane 0 None

C) Type of Deck Protection 0 None

AGE AND SERVICE

27) Year Built 1932

106) Year Reconstructed

42) Type of Service:

A) On 1 Highway

B) Under 5 WATERWAY

28) Number of Lanes:

A) On 2

B) Under

29) Average Daily Traffic 2800

Half ADT?: No

109) Percent Truck 3%

30) Year of ADT 2006

19) Bypass, Detour Length 1 miles

GEOMETRIC DATA

48) Length of Max Span 30ft

49) Structure Length 35ft

50) Curb or Sidewalk Widths:

A) Left 0.0ft

B) Right 0.0ft

51) Brg Rdwy width,curb-curb 19.6ft

52) Deck Width, Out-Out 22.0ft

32) Approach Roadway Width 22ft

33) Bridge Median 0 No Median

Deck Area 770 sqft

34) Skew Angle 10deg

35) Structure Flared 0

10)Inv. Rte. Min. Vert Clearance 99ft 99in

47) Log Inv. Rte. Total Horiz Clr.: 19.5ft

47) RLog Inv. Rte. Total Horiz. Clr.: ft

53) Min Vert Clearance Over Bridge 99ft 99in

54) Min Vert Under Clearance N Ref 0ft 0in Ref

55) Min Lat Under Clearance on Right N Ref 99.9ft Ref

56) Min Lat Under Clearance on Left 0.0ft

BRIDGE COMMENTS

Bridge replacement is currently in Design phase & construction is scheduled for 2010 start[Local Br.Prog Proj#9053-4121] NTS 8/10/09 \Requested U.W. Special Insp done 8/27/09 to check undermining at NE wingwall NTS 10/16/09 \\

STRUCTURE EVALUATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET 2 OF

		NBIS Length
Bridge Number	04121	
Town Name	GLASTONBURY	Yes 35
Facility Carried	ADDISON ROAD	
Feature Crossed	SALMON BROOK	

Inspected By: D. Wills & T. Kahut

CLASSIFICATION

12) NBIS Bridge Length	Yes	
04) Highway System	0	Off System
6) Functional Class	16	Urban Minor Arterial
00) Defense Highway	0	Route is not a STRAHNET Route
01) Parallel Structure	N	No parallel structure exists
02) Direction of Traffic	2	2-way traffic
03) Temporary Structure		
10) Designated National Network	0	Not on national network
0) Toll	3	On Free Road
1) Maintain	3	Town or Township Highway Agency
2) Owner	3	Town or Township Highway Agency
Report Class	L	LOCAL
7) Historical Significance	5	Bridge is not eligible for National Register

WATERWAY

DrainageBasinCode	4006	
8) Navigation Control	0	No navigation control on waterway
9) Navigation Vert Clr.	0	40) Navigation Horiz Clr. 0
16) Vert-Lift Brg Nav Min		
11) Pier Abutment Protection		

PROPOSED IMPROVEMENTS

5A) Type of Work Proposed		
5B) Work Done By		
6) Length of Struct. Improvement	0	ft
4) Bridge Improvement Cost	$ 0	
5) Roadway Improvement Cost	$ 0	
6) Total Project Cost	$ 0	
7) Year of Improvement Cost Est.	0	
14) Future ADT	0	115) Year Future ADT 0
ist No.	Project No.	Advertised

POSTED SIGNS & UTILITIES

Other Posted Signs 1	0	Blank			
Other Posted Signs 2	0	Blank			
Actual P.L. Single Unit Truck		tons	Actual P.L. 4Axle Truck		tons
Rec. P.L. Single Unit Truck		tons	Rec. P.L. 4Axle Truck		tons
Actual P.L. Semi-TrailerTruck		tons	Actual P.L. 3S2 Truck		tons
Rec. P.L. Semi-TrailerTruck		tons	Rec. P.L. 3S2 Truck		tons
Rec. P.L. All Vehicles		tons	Actual P.L. All Vehicles		tons
Posted Vert Clearance On Bridge		ft		in	ft In
Posted Vert UnderClearance		ft		in	ft In
Posted Speed Limit		mph			mph
Utility					
Utility		Water			

LOAD RATING AND POSTING

31) Design Load	0	Evaluation Code	
63) Operating Rating Type	5	Year of Evaluation	2002
64) Operating Rating	58.0	70) Bridge Posting	5
65) Inventory Rating Type	5	41) Structure Status	A
66) Inventory Rating	34.0	Open, no restriction	

CONDITION

	Rating	By
58) Deck	6	DW
59) Superstructure	6	DW
60) Substructure	4	DW
61) Channel & Chan. Protection	6	DW
62) Culverts	N	DW

APPRAISALS

	Rating	By
67) Structure Evaluation	D	DMC
68) Deck Geometry	2	MW
69) Under Clear Vert & Horiz	N	MW
71) Waterway Adequacy	6	DW
72) Approach Rdwy Alignment	5	DW
113) Scour Critical		

Items 58 Thru 72 Checked By:

36) Traffic Safety Features:

A) Bridge Railings	0
B) Transitions	0
C) Approach Guardrail	0
D) Approach Guardrail End	0

OTHER FEATURES

Fence Required	No			Barrel Ladder	No
Fence Present	No			Stand Pipes	No
Fence Height		ft	ft	Cat Walks	No
Fence Type				Movable Inspection System	No
Fence Material				Loose Concrete Checked?	Yes Y
Fence Top Type					

INSPECTION COMMENTS

Proposed Next Indepth Insp Year	2013
Senior	Stephen Keesy
Supervisor	Joseph Kozlowski

REVIEWED BY: D. Carlson Date 7/19/11

Connecticut Department of Transportation

Bridge Inspection Report BRI-18

Bridge #: 04121 **Inspection Date: 7/12/2011**

Inspection Type:	Routine	**Previous Inspection Date:**	-	**Snooper Required:**	No
Inspection Performed By:	Team 4	**Feature Carried:**	ADDISON ROAD	**Snooper Used:**	No
Town:	GLASTONBURY	**Feature Intersected:**	SALMON BROOK	**Year Built:**	1932
Location:	1000 (N) INT RTE 94	**Main Design:**	Stringer/Multi-beam or Girder	**Year Rebuilt:**	-
Main Material:	Steel				

Visits

Visit Date:	Temp:	Start Time:	End Time:
7/12/2011	90	10:35:00 AM	11:20:00 AM

Inspectors:

Inspector:	Task:
D. Willis	Inspector
T. Kahak	Lead Inspector

DECK: Reinforced Concrete / Bituminous Overlay **Overall Rating:** 6

	Rating	
OVERLAY:	7	Bituminous concrete overlay : Several transverse, longitudinal & random slightly open cracks. Bit patches and areas of map cracks. Two gouged areas in the west shoulder.
DECK-STR. CONDITION:	6	Soffit : Several mortar patches. Random hairline cracks with efflorescence in bay # 3 at abutment 2. A small spall with exposed rebar in bays 3 and 4. Two 1 sf. potential spalls in bay 3. Fascias : Horizontal & random hairline cracks with efflorescence. Efflorescence along the cold joint of the rail bases also. The total deterioration of the soffit is less than 1 %. See attached BRI-10.
CURBS:	N	Curb reveal : East - 20" West - 17"
MEDIAN:	N	-
SIDEWALKS:	N	-
PARAPET:	7	Concrete :

		Both parapets exhibit horizontal hairline cracks in the outside fascias, some with light efflorescence. Scrapes & gouges along inside faces. East - Vertical & transverse hairline cracks at the rail posts and efflorescence along the outside face of the cold joint. Southwest & northwest ends have minor chips.
RAILING:	7	Flex beam rail on steel posts : East side : Minor collision damage at north end. West side : moderate collision damage causing a torn section and potential snagging hazard.
PAINT:	N	-
FENCE:	N	-
DRAINS:	N	-
LIGHTING STANDARD:	N	-
UTILITIES TYPE/SIZE:	3	12" Water Main In Bay # 3 - Shows the following : All the wood supports are missing. The vertical metal supports are heavily rusted & unattached. The insulation is ripped, loose and detached, some is missing & hanging (See photo # 6). The 30 ft. L. pipe is supported only at the abutments.
CONSTR JOINTS:	N	-
EXPANSION JOINTS:	N	Paved over.

59. SUPERSTRUCTURE:	4 - Concrete Encased Steel Beams	Overall Rating:	6

	Rating	
BEARING DEVICES:	N	-
STRINGERS:	6	Beam # 1 - Horizontal cracks in the bottom flange , east edge & a spall with exposed rusted bottom flange, 8 ft. long x 4 in. high x 2" deep. Beam # 2 - A longitudinal crack in the underside at midspan, slightly open x 24 in. long. Beam # 4 - A spall with exposed heavily rusted bottom flange, 20 in. long x 8 in. high x 3 in. deep, 6.5 ft. from abutment # 1 The concrete encasement of all beams shows mortar patches.
GIRDERS:	N	-
FLOOR BEAMS:	N	-
TRUSSES-GENERAL:	N	-
TRUSSES-PORTALS:	N	-
TRUSSES-BRACING:	N	-
PAINT:	N	-
RUST:	6	See Stringers.
MACHINERY MOV SPAN:	N	-
RIVETS & BOLTS:	N	-
WELDS - CRACKS:	N	-
TIMBER DECAY:	N	-
CONCRETE CRACKING:	6	See Stringers.
COLLISION DAMAGE:	8	-
MEMBER ALIGNMENT:	8	-
DEFLECT. UNDER LOAD:	N	Normal
VIBRATION UNDER LOAD:	N	Normal
STAND PIPES:	N	-
BARREL LADDERS:	N	-

ARE BARREL LADDERS OSHA COMPLIANT? NA

60. SUBSTRUCTURE:	Abutment 1 - Masonry Abutment 2 - Concrete In Front Of Masonry	Overall Rating:	4

	Rating	
ABUTMENTS-STEM:	7	Abutment # 1 (Masonry) : Minor mortar joint cracks with efflorescence & small stone voids & cracks, mainly along the waterline. Abutment # 2 (Concrete) : Large areas of light scale on the stem. A hollow area, 80" x 30", in bay # 3. West face - A 4 sf. hollow area, hairline cracks with efflorescence and severe scale totaling 1 sf.
ABUTMENTS-BACKWALL:	7	Concrete.
ABUTMENTS-FOOTINGS:	6	Abutment # 2 - Footing exposed full length x up to 36 in. deep. The upstream end appears to have a pocket undermined. See the attached Channel sheet. See Erosion / Scour also. The exposed portion of the footing shows severe scale with exposed rebar, up to 4" deep for full length along beveled top.
ABUTMENTS-SETTLEMENT:	6	Old evidence of movement on the northwest wing. No new evidence found this inspection.
ABUTMENTS-WINGWALLS:	6	Concrete and Masonry type wings : Concrete : Exhibits areas of light scale. Northwest (dry rubble) : Signs of previous movement.
PIERS/BENTS-CAPS:	N	-
PIERS/BENTS-PILE BENT:	N	-
PIERS/BENTS-COLUMNS:	N	-
PIERS/BENTS-FOOTING:	N	-
PIERS/BENTS-SETTLMT:	N	-
EROSION-SCOUR:	4	Scour hole at the east corner of abutment # 2 & northeast wingwall, the footing is exposed up to 36 in. deep & is undermined slightly at the upstream end. The stream bed at the scour area is sand with 6" +/- penetration. The stream bed throughout the channel is stones, gravel and sand. See the attched Channel sheet also.
CONCRETE CRACK-SPALL:	6	See above items.
STEEL CORROSION:	N	-
PAINT:	N	-

TIMBER DECAY:	N	-
COLLISION DAMAGE:	8	-
DEBRIS:	7	Pigeons nesting on seats.

61. CHANNEL & CHANNEL PROTECTION:

Stream Bed - Sand and Small Stones

The channel flows under a building 22 ft. upstream from the bridge (see photo 8).

Overall Rating: 6

Rating

CHANNEL SCOUR:	6	Scour hole at the upstream end of abutment # 2. See the Channel sheets. Generally shallow water downstream. Channel is made up of rubble & fine gravel & stone.
EMBANKMENT EROSION:	7	Moderate erosion downstream.
DEBRIS:	6	Various debris & rubble in the channel under the structure.
VEGETATION:	6	Minimal embankment protection downstream.
CHANNEL CHANGE:	6	Freeboard - 8' 06"
FENDER SYSTEM:	N	-
SPUR, DIKES & JETTIES:	N	-
RIP RAP:	N	-

62. CULVERTS & RETAINING WALL:

-

Overall Rating: N

65. APPROACH CONDITION

Bituminous Pavement

Overall Rating: 5

Rating

APPROACH SLAB:	N	-
RELIEF JOINTS:	N	-
APPROACH GUIDE RAIL:	2	Flex beam rail with steel posts at southeast & northwest. No rail at the northeast. The northwest shows collision damage. Two pipe rail with pipe posts at southwest , top pipe disconnected at north

		end (See photo # 5). The base of pipe post # 2 is rusted through. Some pipes are also bent. This rail offers no protection to the travelling public.
APPROACH PAVEMENT:	7	Numerous transverse & longitudinal cracks, open to 1". Small bituminous patches in both approaches.
APPROACH EMBANKMENT:	7	Minor erosion of southwest bank.

TRAFFIC SAFETY FEATURES

	Rating	
BRIDGE RAILINGS:	Last Inspection: 0 Current: -	-
TRANSITIONS:	Last Inspection: 0 Current: -	-
APPROACH GUARDRAILS:	Last Inspection: 0 Current: -	-
APPR. GUARDRAIL ENDS:	Last Inspection: 0 Current: -	-

66. LOAD POSTING

	- Posted Loading -	
SINGLE UNIT (TONS):	Last Inspection: - Current: -	-
SEMI TRAILER (TONS):	Last Inspection: - Current: -	-
4 AXLE (TONS):	Last Inspection: - Current: -	-
3S2 (TONS):	Last Inspection: - Current: -	-
ADVANCE WARNING (Y/N):	N	-
LEGIBILITY:	N	-
VISIBILITY/LOCATION:	N	-

67. MISCELLANEOUS

	Rating	
MIN. VERT. UNDERCLEARANCE:	Last Inspection: 0' 0" Current: -' -"	-
POSTED CLR. UNDER BRIDGE:	Last Inspection: -' -" Current: -' -"	-
POSTED CLR. ON BRIDGE:	Last Inspection: -' -" Current: -' -"	-
ADVANCED WARNING (YES/NO):	No	-
SPEED LIMIT (IF ANY):	Last Inspection: - Current: -	-
CHARACTER OF TRAFIC:		Light volume/mixed weights.

ADDITIONAL NOTES:	The log direction is south to north. East is inlet.
ADDITIONAL COMMENTS:	MAINTENANCE RECOMMENDATIONS : 1) Consider installing scour countermeasures along abutment 2 and northeast wing.

Inspectors' Signatures:

1)  Date: 7/13/11

2) Tom Kabak Date: 7/13/11

3) Date: ----/----/-----

4) Date: ----/----/-----

P.E. Signature: Date: ----/----/-----

P.E. #: Date: ----/----/-----

Reviewed by: D. Carlson conndot Date: 7/19/11

Bridge No.: 4121 Date: 6/23/03 Prepared By: M. Silveira Checked By: _____

NO.	DATE	DESCRIPTION
1	7/25/03	NO CHANGE
2	11/24/03	Title Change

REVISIONS

CONCRETE DETERIORATION WORKSHEET

Form BRI-10, Rev. 9/01

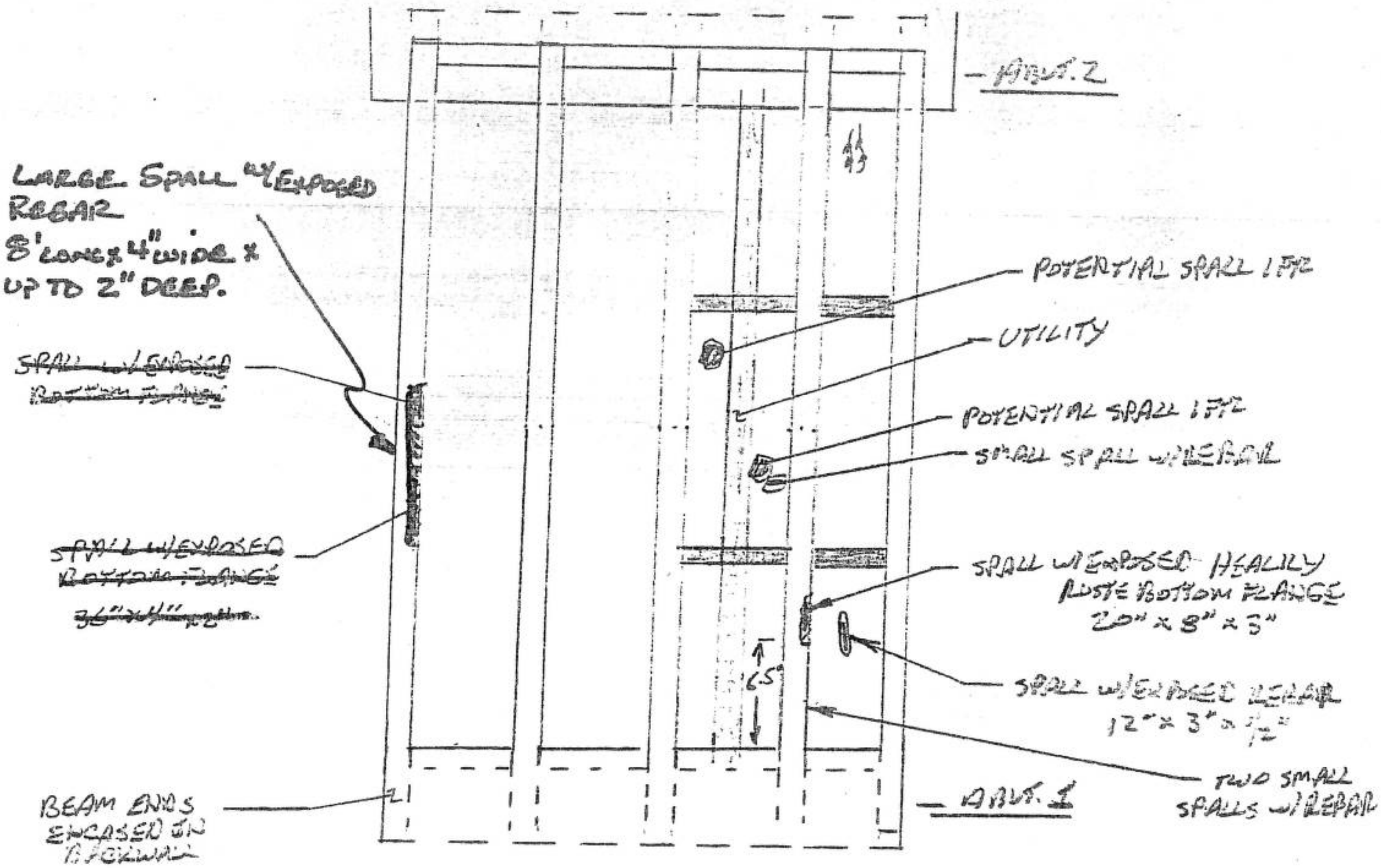
Deterioration By Span - In Square Feet

Deterioration Type	Span Number 1	2	3	4	5	6	7	8	9	10	Total
Spalled and Delaminated Areas	Top: Bot: ~~3~~ ~~2.5~~	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot: 2.5
Scale (Moderate to Severe Only)	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:	Top: Bot:
Cracks: w/Efflorescence (use 6 in. width x length)	Bot: 3	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot: 3
w/o Efflo. (use 3 in. width x length)	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:
Map Cracking: w/Efflorescence (use full area)	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:
w/o Efflo. (use 50% of area)	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:
Honeycombed Areas (only areas more than 1 1/2 in. deep)	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:	Bot:
TOTAL	6 ~~5.5~~										6 ~~5.5~~
Total Span Area (Square Feet)	772										770
% Spalled and Delaminated on Top											
% Deterioration on Bottom	< 1%										< 1%

BRI-10.DOC

DATE PREPARED 6/23/03	PREPARED BY M. [illegible]	State of Connecticut Department of Transportation Bureau of Engineering & Highway Operations DES-003 REV 1-93 (302-06-0225) COMPUTATION SHEET	ORGANIZATION UNIT NO. 1303	WORK ORDER NO.
DATE CHECKED	CHECKED BY			SHEET NO. 2

SUBJECT: Bridge #4121, Addison Rd. over Salmon Brook, Glastonbury



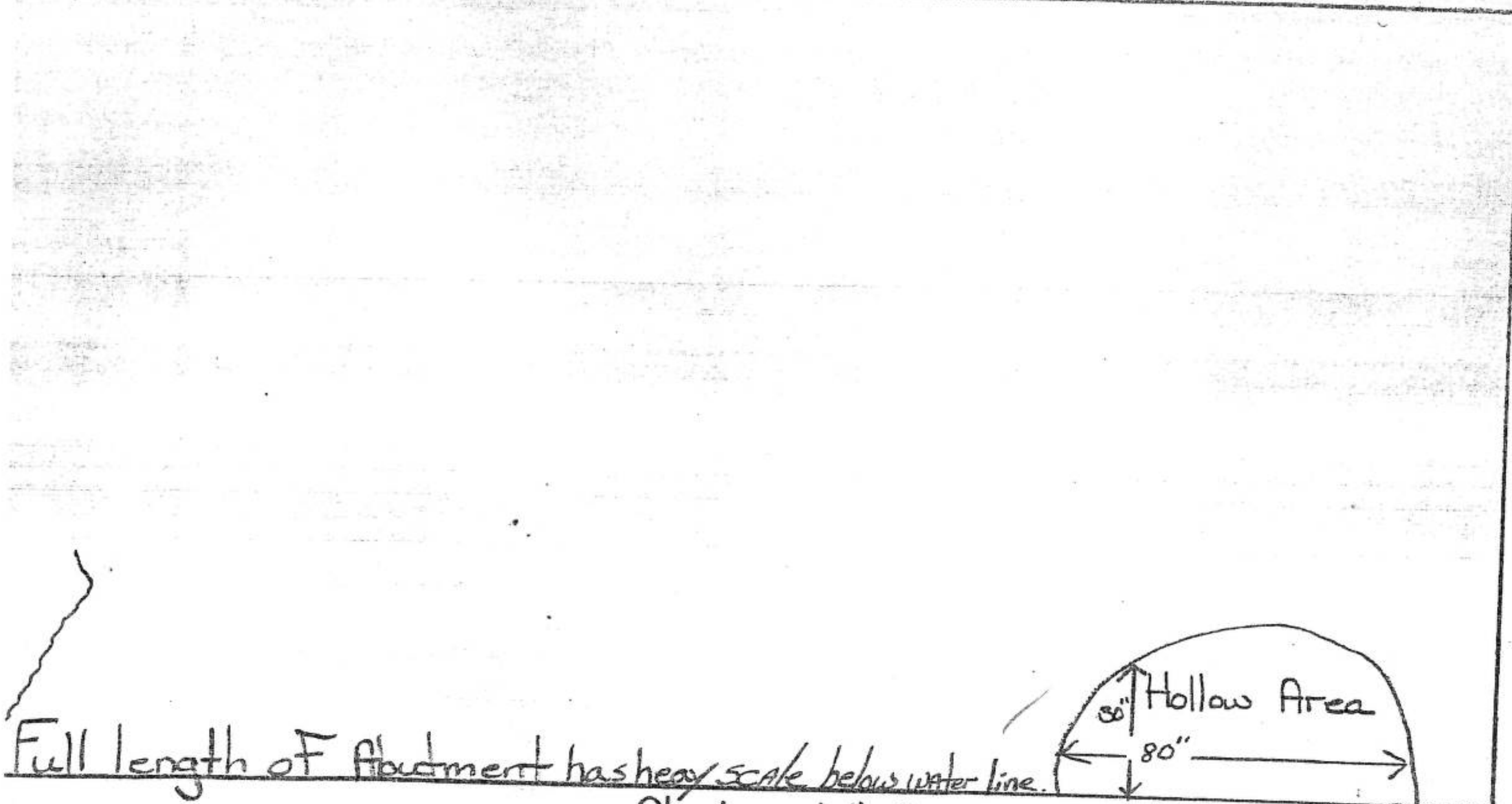
FRAMING PLAN VIEW

NO.	DATE	DESCRIPTION
1	7/12/05	Note Change
2	4/24/07	

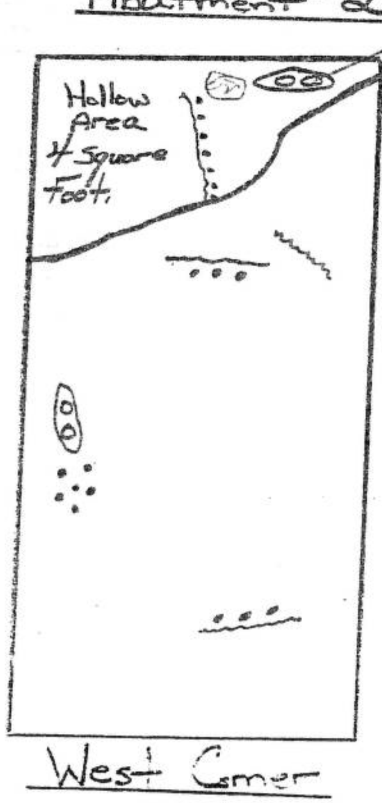
REVISIONS

DATE PREPARED	PREPARED BY	State of Connecticut Department of Transportation Bureau of Engineering & Highway Operations DES-003 REV 1-93 (302-06-0225) COMPUTATION SHEET	ORGANIZATION UNIT NO.	WORK ORDER NO.
6-23-2003	Team 9		1307	
DATE CHECKED	CHECKED BY			SHEET NO. 3/5

SUBJECT: Bridge # 04121 Addison Rd. in Glastonbury -O- Salmon Brook



Abutment # 2



West Corner

LEGEND

- ~~~~~ Hairline crack
- (oo) Scale area
- • • • • • Efflorescence

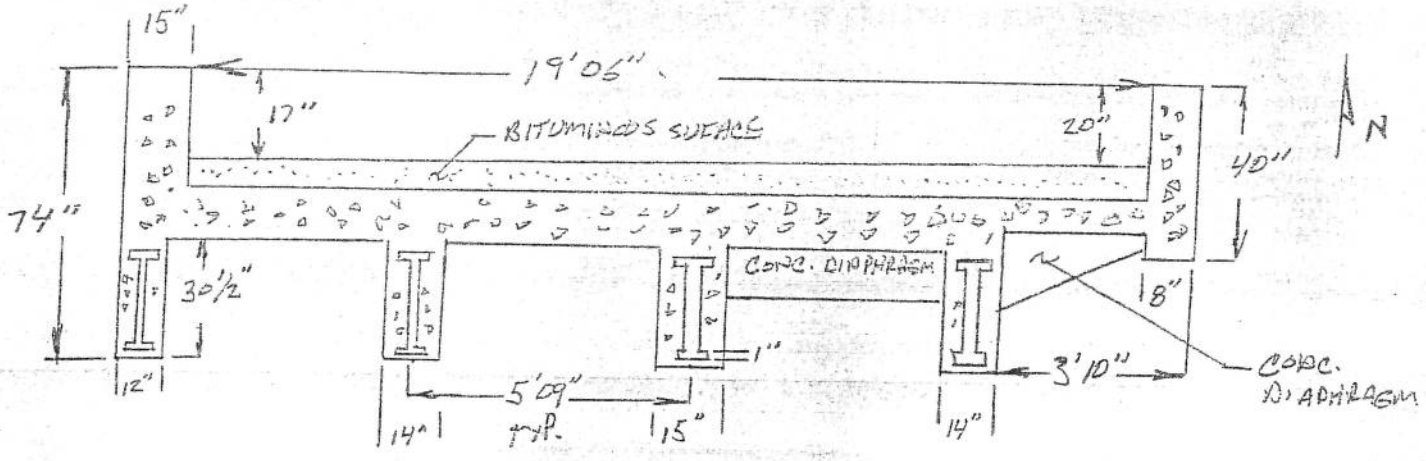
NO.	DATE	DESCRIPTION
—	7/30/…	No CHANGE
2	4/24/0…	See Change

REVISIONS

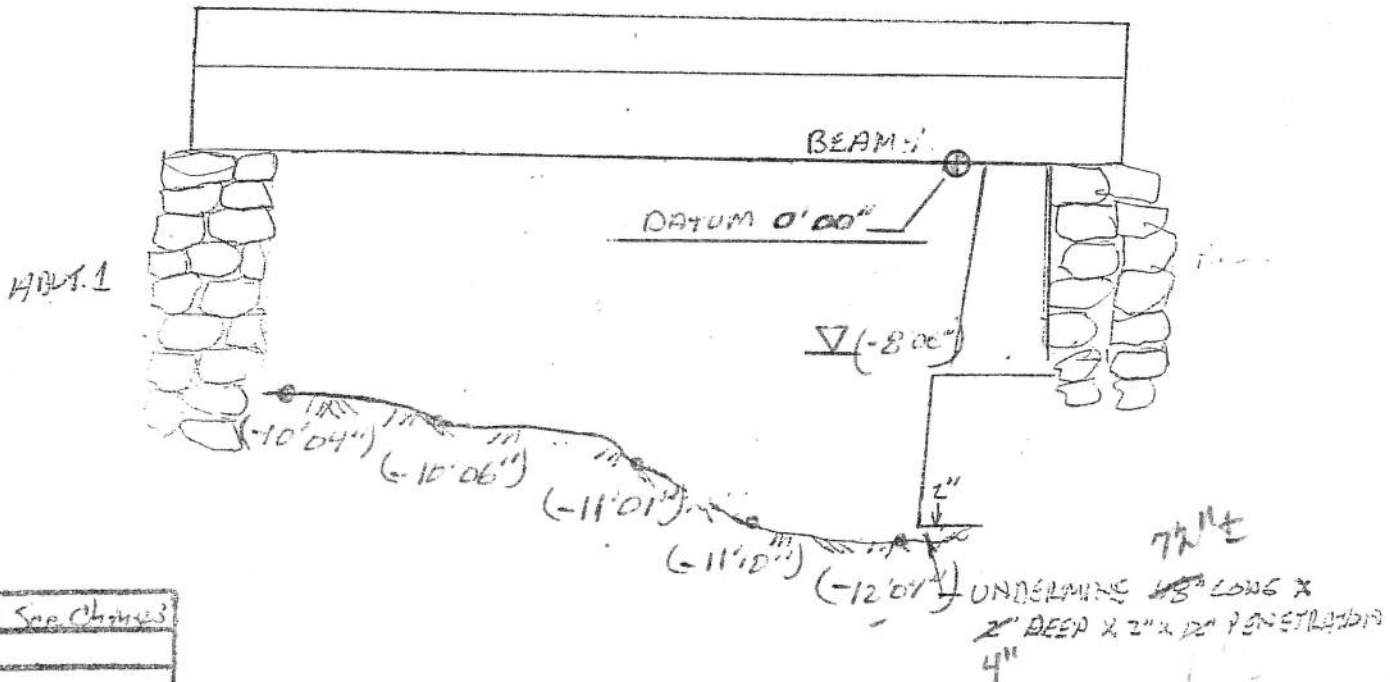
DATE PREPARED	PREPARED BY	State of Connecticut Department of Transportation Bureau of Engineering & Highway Operations DES-003 REV 1-93 (302-06-0225) COMPUTATION SHEET	ORGANIZATION UNIT NO.	WORK ORDER NO.
6/23/03	M. Silvestro		1307	
DATE CHECKED	CHECKED BY			SHEET NO. 4

SUBJECT:

Bridge #412: Addison Rd. over Salmon Brook, Glastonbury.



CROSS SECTION VIEW



CHANNEL PROFILE AT INLET (BEAM 4)

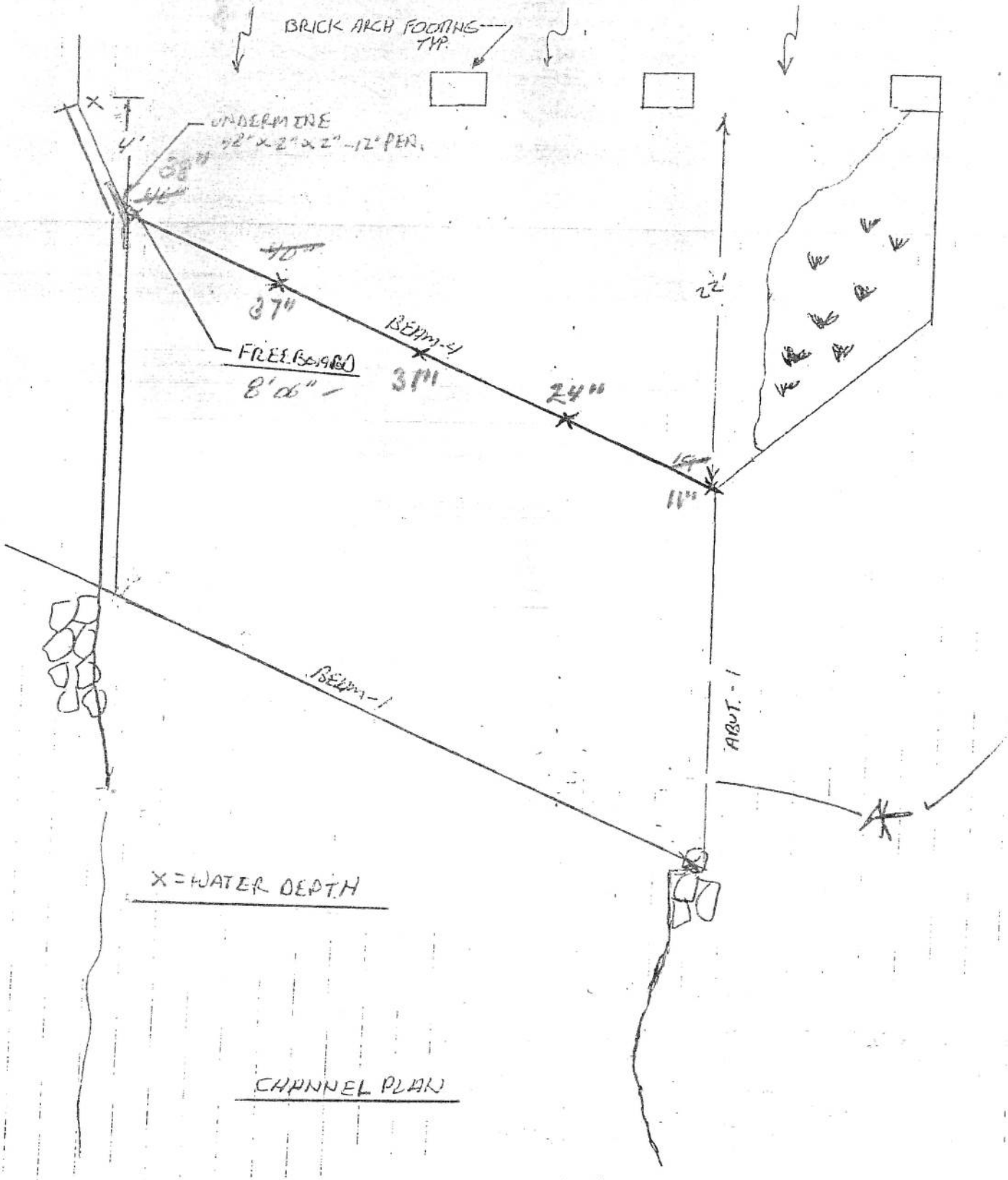
NO.	DATE	DESCRIPTION
1	4/24/03	See Changes

REVISIONS

DATE PREPARED	PREPARED BY	State of Connecticut Department of Transportation Bureau of Engineering & Highway Operations DES-003 REV 1-93 (302-06-0225) COMPUTATION SHEET	ORGANIZATION UNIT NO.	WORK ORDER NO.
4/24/20	M.S. VERZ		1307	
DATE CHECKED	CHECKED BY			SHEET NO. 5/5

SUBJECT: BRIDGE #04121 - ADDISON RD. OVER SALMON BROOK, GLASTONBURY

CHANNEL FLOWS UNDER BUILDING HERE



CHANNEL PLAN

Bridge No.	04121	**Inspected by:**	D. WILLIS
Town:	GLASTONBURY	**Inspected by:**	T. KAHAK
Feature Carried:	ADDISON ROAD	**Date Inspected:**	7/12/11
Feature Crossed:	SALMON BROOK	**Project No.:**	

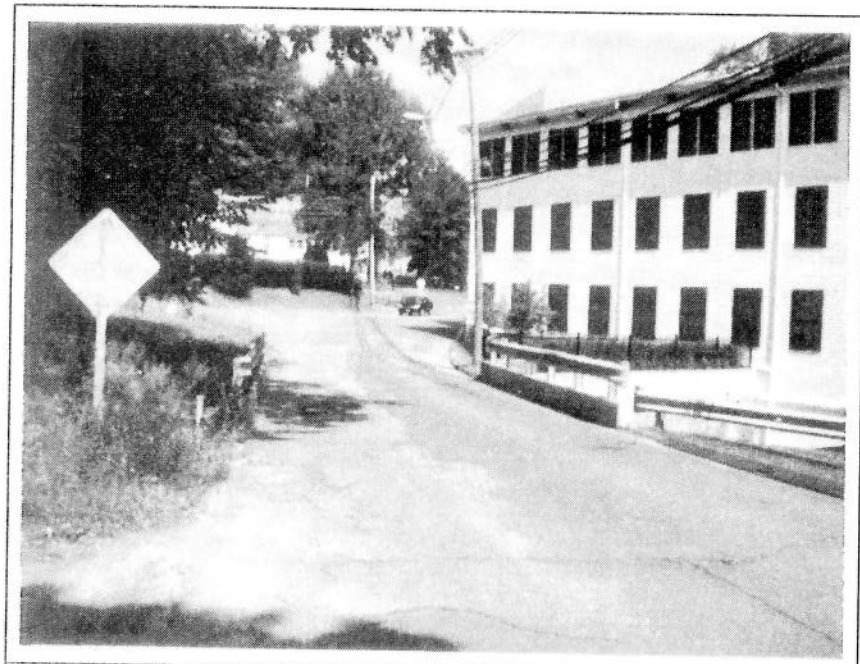


Photo # 1: **SOUTH APPROACH.**

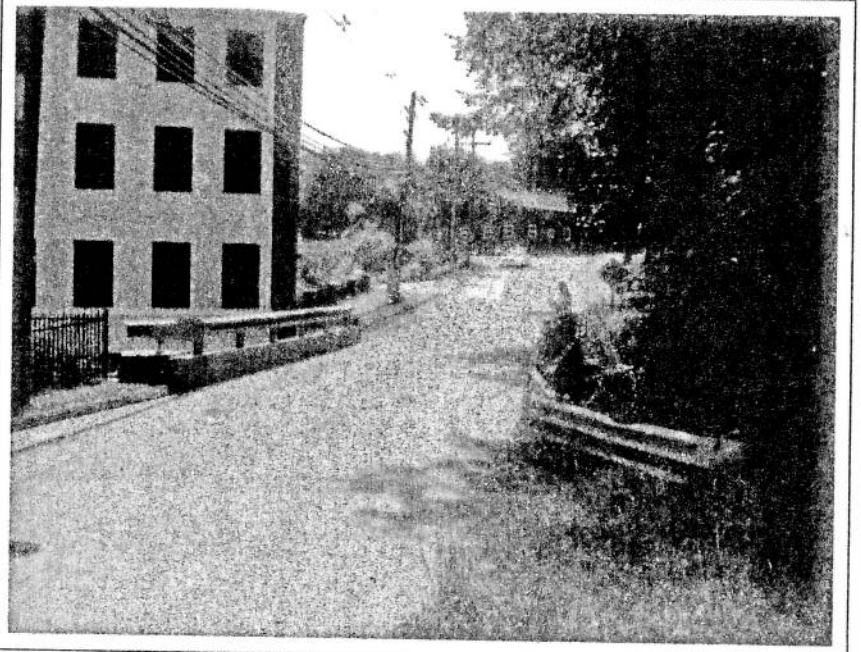


Photo # 2: **NORTH APPROACH.**

Bridge No.	04121	**Inspected by:**	D. WILLIS
Town:	GLASTONBURY	**Inspected by:**	T. KAHAK
Feature Carried:	ADDISON ROAD	**Date Inspected:**	7/12/11
Feature Crossed:	SALMON BROOK	**Project No.:**	

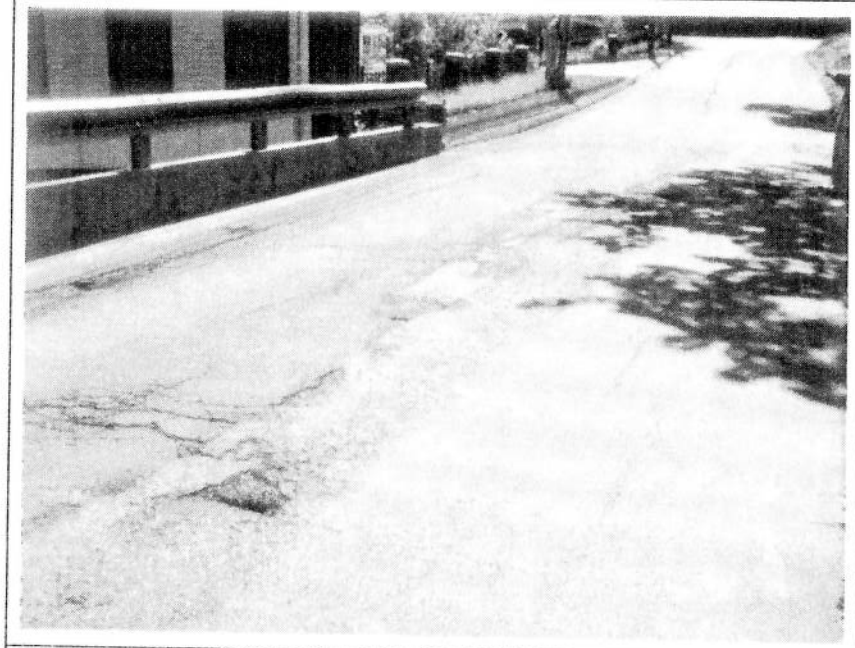


Photo # 3: **WEARING SURFACE.**

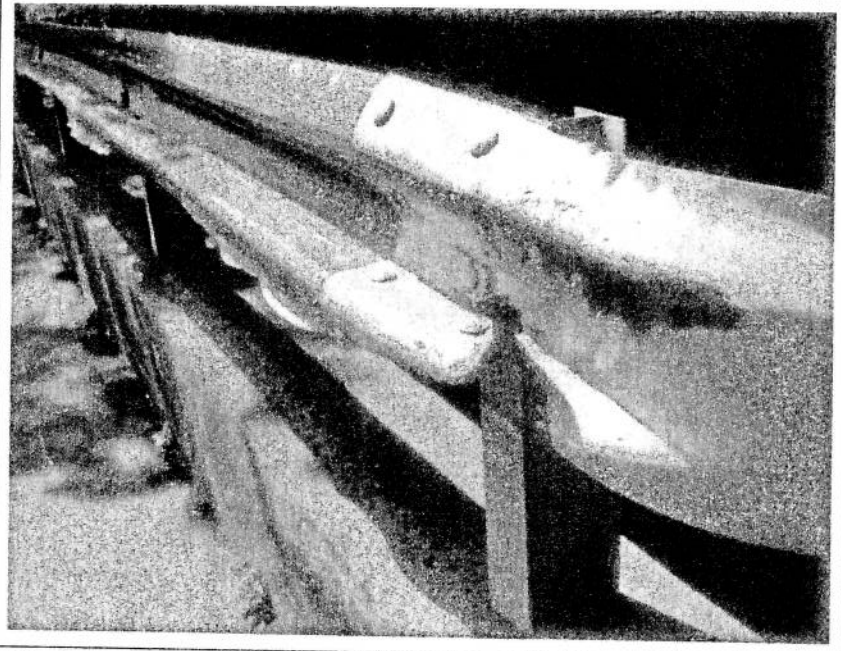


Photo # 4: **NORTHWEST BRIDGE RAIL WITH A TORN END SECTION CREATING A POTENTIAL SNAGGING HAZARD.**

Bridge No.	04121	**Inspected by:**	D. WILLIS
Town:	GLASTONBURY	**Inspected by:**	T. KAHAK
Feature Carried:	ADDISON ROAD	**Date Inspected:**	7/12/11
Feature Crossed:	SALMON BROOK	**Project No.:**	

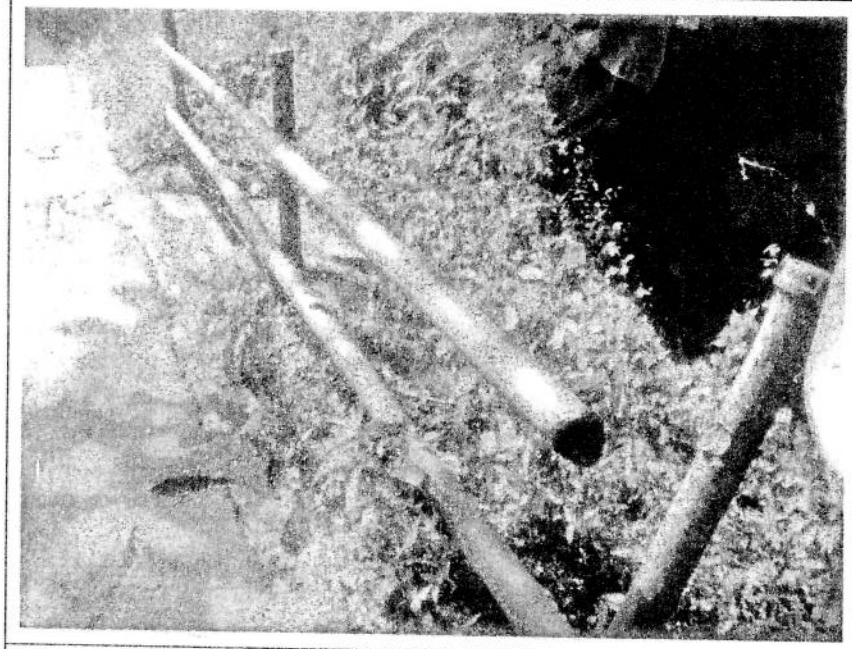


Photo # 5: LOOSE, RUSTED AND BROKEN PIPE RAIL AND POSTS AT THE SOUTH WEST APPROACH OFFERS NO PROTECTION.

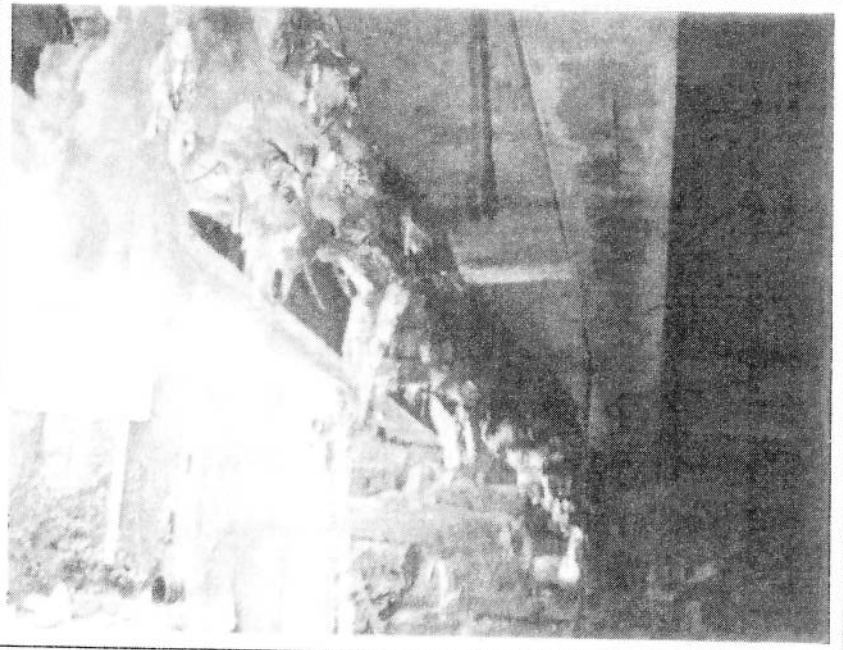


Photo # 6: 12 IN. WATER MAIN IN BAY 3 WITH WOODEN SUPPORT BRACKETS MISSING AND PIPE INSULATION DETACHED. THE ONLY SUPPORT FOR THE 30 FT. L. PIPE IS AT THE ABUTMENTS.

Bridge No.	04121	**Inspected by:**	D. WILLIS
Town:	GLASTONBURY	**Inspected by:**	T. KAHAK
Feature Carried:	ADDISON ROAD	**Date Inspected:**	7/12/11
Feature Crossed:	SALMON BROOK	**Project No.:**	

Photo # 7: UNDERSIDE AND ABUTMENT 1.

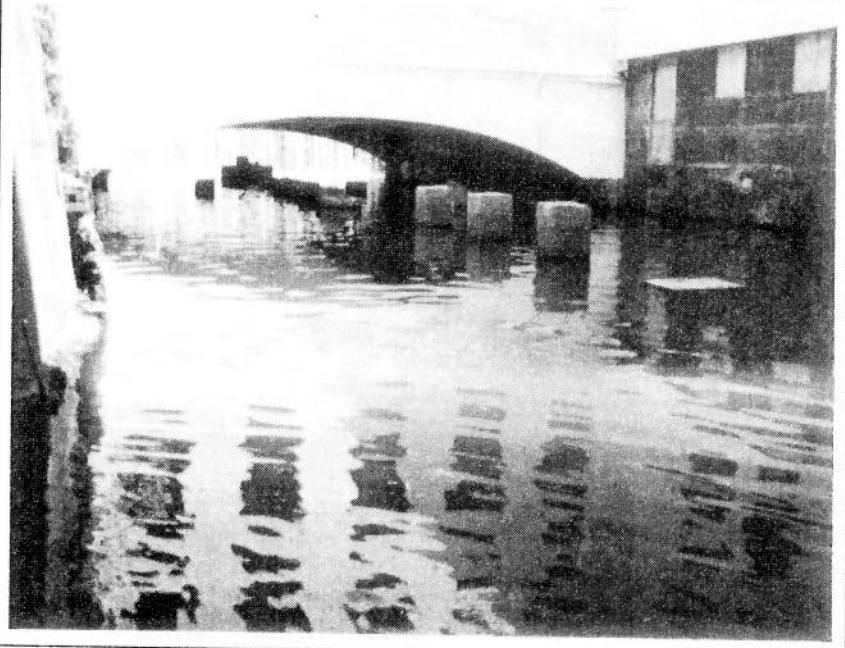


Photo # 8: UPSTREAM VIEW.

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 04121 **Agency ID:** 04121 **Sufficiency Rating:** 60.1

IDENTIFICATION

State 1:	09 Connecticut	Struc Num 8:	04121
Facility Carried 7:	ADDISON ROAD	Location 9:	1000@ (N) INT RTE 94
Rte.(On/Under)5A:	Route On Structure	Rte. Signing Prefix 5B:	5 City Street
Level of Service 5C:	0 None of the below	Rte. Number 5D:	00000
Directional Suffix 5E:	0 N/A (NBI)	% Responsibility :	0
SHD District 2:	01	County Code 3:	Hartford
Place Code 4:	GLASTONBURY	Mile Post 11:	0.000 mi
Feature Intersected 6:	SALMON BROOK		
Latitude 16:	Missing	Longitude 17:	Missing
Border Bridge Code 98:	Unknown (P)		
Border Bridge Number 99:	NA		

INSPECTION

Frequency 91:	24 months	Inspection Date 90:	7/12/2011	Next inspection:	07/12/2013
FC Frequency 92A:	NA	FC Inspection Date 93A:	NA	Next FC Inspection:	NA
UW Frequency 92B:	NA	UW Inspection Date 93B:	NA	Next UW Inspection:	NA
SI Frequency 92C:	NA	SI Date 93C:	NA	Next SI:	NA
Element Frequency:	24 months	Element Inspection Date:	07/12/2011	Next Elem. Insp. Due:	07/12/2013

CLASSIFICATION

Defense Highway 100:	0 Not a STRAHNET hwy	Parallel Structure 101:	No || bridge exists
Direction of Traffic 102:	2 2-way traffic	Temporary Structure 103:	Unknown (NBI)
Highway System 104:	0 Not on NHS	NBIS Length 112:	Long Enough
Toll Facility 20:	3 On free road	Functional Class 26:	16 Urban Minor Arterial
Historical Significance 37:	5 Not eligible for NRHP		
Owner 22:	3 Town/Township Hwy Agency		
Custodian 21:	3 Town/Township Hwy Agency		

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 1

Main Span Material/Design 43A/B:

1 Concrete 04 Tee Beam

Deck Type 107:	1 Concrete-Cast-in-Place
Wearing Surface 108A:	6 Bituminous
Membrane 108B:	0 None
Deck Protection 108C:	None

CONDITION

Deck 58:	6 Satisfactory	Super 59:	6 Satisfactory	Sub 60:	4 Poor
Culvert 62:	N N/A (NBI)	Channel/Channel Protection 61:		6 Bank Slumping	

AGE AND SERVICE

Year Built 27:	1932	Year Reconstructed 106:	Unknown		
Type of Service on 42A:	1 Highway				
Type of Service under 42B:	5 Waterway				
Lanes on 28A:	2	Lanes Under 28B:	0	Detour Length 19:	0.0 mi
ADT 29:	2,200	Truck ADT 109:	3 %	Year of ADT 30:	1993

LOAD RATING AND POSTING

Inventory Rating Method 65:	2 AS Allowable Stres	Operating Rating Method 63:	2 AS Allowable Stress
Inventory Rating 66:	HS16.1	Operating Rating 64:	HS28.4
Design Load 31:	0 Other or Unknown	Posting 70:	5 At/Above Legal Loads
Posting status 41:	A Open, no restriction		

GEOMETRIC DATA

Length Max Span 48:	30.0 ft	Structure Length 49:	35.0 ft
Curb/Sdwlk Wdth L 50A:	0.0 ft	Curb/Sidewalk Width R 50B:	0.0 ft
Width Curb to Curb 51:	19.5 ft	Width Out to Out 52:	22.0 ft
Approach Roadway Width 32: (w/ shoulders)	22.0 ft	Median 33:	0 No median
Deck Area:	775. sq. ft		
Skew 34:	10.00 °	Structure Flared 35:	0 No flare
Minimum Vertical Clearance Over Bridge 53:		328.1 ft	
Minimum Vertical Underclearance Reference 54A:		N Feature not hwy or RR	
Minimum Vertical Underclearance 54B:		0.0 ft	
Minimum Lateral Underclearance Reference R 55A:		N Feature not hwy or RR	
Minimum Lateral Undrclearance R 55:		99.9 ft	
Minimum Lateral Undrclearance L 56:		0.0 ft	

APPRAISAL

Bridge Rail 36A:	0 Substandard	Approach Rail 36C:	0 Substandard
Transition 36B:	0 Substandard	Approach Rail Ends 36D:	0 Substandard
Str. Evaluation 67:	5	Deck Geometry 68:	2 Intolerable - Replace
Underclearance, Vertical and Horizontal 69:	N Not applicable (NBI)		
Waterway Adequacy 71:	6 Equal Minimum	Approach Alignment 72:	5 Above Tolerable
Scour Critical 113:	6 Calcs not made		

PROPOSED IMPROVEMENTS

Bridge Cost 94:	$ 1,000	Type of Work 75:	38 Other Structural
Roadway Cost 95:	$ 1,000	Length of Improvment 76:	20.0 ft
Total Cost 96:	$ 2,000	Future ADT 114:	2,640
Year of Cost Estimate 97:	1999	Year of Future ADT 115:	2020

NAVIGATION DATA

Navigation Control 38:	0 Permit Not Required		
Vertical Clearance 39:	0.0 ft	Horizontal Clearance 40:	0.0 ft
Pier Protection 111:	Unknown (NBI)	Lift Bridge Vertical Clearance 116:	

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	13/3	Unp Conc Deck/AC Ovl	(SF)	775	0 %	0	0 %	0	0 %	0	0 %	0	100 %	775
UNIT0	110/3	R/Conc Open Girder	(LF)	141	100 %	141	0 %	0	0 %	0	0 %	0	0 %	0
UNIT0	112/3	Unpnt Stl Stringer	(LF)	141	96 %	135	4 %	7	0 %	0	0 %	0	0 %	0
UNIT0	215/3	R/Conc Abutment	(LF)	23	70 %	16	0 %	0	30 %	7	0 %	0	0 %	0
UNIT0	217/3	Other Mtl Abutment	(LF)	23	100 %	23	0 %	0	0 %	0	0 %	0	0 %	0
UNIT0	330/3	Metal Rail Uncoated	(LF)	69	100 %	69	0 %	0	0 %	0	0 %	0	0 %	0