



September 8, 2018

Mr. Adam Fox, P.E.
Principal Engineer
Environmental Compliance Section
Bureau of Engineering and Construction
State of Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, CT 06131-7546

Attention: Jason Coite, P.E. / Mandy Socolosky

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance
Agreement No. 04.27-01(15)
HazMat Inspection - Bridge No. 00302, I-395 over Moosup River and Rte. 14, Plainfield, CT
ConnDOT Assignment No. 514-5715
ConnDOT Project No. 108-186
TRC Project No. 222165.5715.0710

Dear Mr. Fox:

TRC performed a limited survey for hazardous building materials associated with the rehabilitation of Bridge No. 00302, I-395 over Moosup River and Rte 14 in Plainfield, Connecticut. Results of the survey identified lead paint to be present on the structural steel/metal bridge components of Bridge No. 00302. The railings were identified as galvanized (unpainted). Results obtained from TCLP waste stream sampling and analysis for leachable lead from the paint on the structural steel/metal bridge components characterized the paint waste stream at Bridge No. 00302 as CTDEEP/RCRA hazardous waste. Grey rubbery expansion joint caulking (EJ1) on the topside of the bridge and black expansion joint material (EJ2) were sampled and no detectable levels of asbestos were identified. Eight (8) potential universal waste (UW) and Connecticut Regulated Waste (CRW) luminaire light fixtures were attached to the underside of the bridge. No bird/pigeon guano accumulations or items of bloodborne pathogens (BBP) concern were identified. Associated laboratory data, inspector notes, project descriptions and site maps are attached.

If you have any questions, please call TRC at (860) 298-9692.

Very Truly Yours,

TRC

A handwritten signature in black ink, appearing to read "Stephen R. Arienti".

Stephen R. Arienti, CHMM
Senior Project Scientist – Project Manager

A handwritten signature in black ink, appearing to read "Erik R. Plimpton".

Erik R. Plimpton, P.E., CHMM, CMC
Vice President - Program Manager



Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer
 Site: ConnDOT - Bridge No. 00302, Plainfield, CT
 Project #: 222165.5715.0710
 Date(s): 5/14/2018
 Inspectors: Eric Gitberg

Number	Interior/ Exterior	Location	Bridge No.	Structure	Feature	Material	Color	Condition	Reading (mg/cm ²)	Precision (mg/cm ²)	Depth Index	Duration (sec)	Date/Time
1			Self Calibration						0.0	0.0	1.1	94.6	5/14/2018 10:38
2			0.0 Calibration						3.8	0.3	1.3	1.7	5/14/2018 10:43
3			3.5 Calibration						1.5	0.1	1.1	5.6	5/14/2018 10:44
4			1.6 Calibration						17.1	1.5	1.8	6.5	5/14/2018 10:44
5	Exterior	Plainfield	Bridge No. 00302	Bearing		Metal	Bluegreen	Defective	18.5	1.6	1.8	7.5	5/14/2018 10:47
6	Exterior	Plainfield	Bridge No. 00302	Girder		Metal	Bluegreen	Defective	0.0	0.0	1.0	1.7	5/14/2018 13:12
7			0.0 Calibration						3.5	0.3	1.2	3.9	5/14/2018 13:12
8			3.5 Calibration						1.5	0.3	1.1	3.4	5/14/2018 13:12
9			1.6 Calibration										

Lead paint includes paint found to contain any detectable amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

Side A = Street side; Sides B, C, D follow clockwise

80 Lupes Drive
Stratford, CT 06615



Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. Erik Plimpton
TRC Environmental Consultants
21 Griffin Rd., North
Windsor, CT 06095

Analytical Report

CET# 8050509



Report Date: May 18, 2018
Project: CT DOT, Bridge 00302, I-395 Plainfield
Project Number: 222165.5715.0710

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903



New York NELAP Accreditation: 11982
Rhode Island Certification: 199

CET # : 8050509

Project: CT DOT, Bridge 00302, I-395 Plainfield

Project Number: 222165.5715.0710

SAMPLE SUMMARY

The sample(s) were received at 24.5°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
1	8050509-01	Solid	5/14/2018	05/15/2018

Analyte: TCLP Lead [EPA 6020A]

Analyst: CED

Prep: EPA 3005A-1311

Matrix: Extract

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8050509-01	1	240	0.013	mg/L	1	B8E1734	05/17/2018	05/17/2018 14:55	

CASE NARRATIVE

No collection times provided by client on chain of custody for the following samples: 8050509-01.

The sample(s) were not received in the appropriate containers.

CET #: 8050509

Project: CT DOT, Bridge 00302, I-395 Plainfield

Project Number: 222165.5715.0710

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

This technical report was reviewed by Robert Blake



David Ditta
Laboratory Director

Project Manager

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- *C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- *C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- *F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- *F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

RL is the Reporting Limit.

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CET # : 8050509

Project: CT DOT, Bridge 00302, I-395 Plainfield

Project Number: 222165.5715.0710

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 6020A in Water</i>	
Lead	NY,CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2018
NY	New York Certification (NELAC)	11982	04/01/2019



21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

TCLP CHAIN OF CUSTODY



8050509

Edition: November 2013
Supersede Previous Edition

LAB ID #.

PROJECT NUMBER

PROJECT NAME

PARAMETERS

TURNAROUND TIME	LAB ID #.				
	24hr	48hr	3day	5day	
TCLP			<input checked="" type="checkbox"/>		
	24hr	48hr	3day	5day	

022165.5715.0710
INSPECTOR: (SIGNATURE)

Bridge 00302, I-395,
Plainfield, CT
(PRINTED)

C. Lemire

FIELD SAMPLE NUMBER

DATE

TIME

TYPE
COMP GRAB

SAMPLE LOCATION

RCRA Pb
RCRA Pb, AS, CR, CD
8 RCRA Metals
TCLP Pb
SPLP Pb

MATERIAL

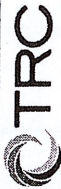
I-395 Bridge 302

X

Blue-green paint on beam

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP GRAB	SAMPLE LOCATION	RCRA Pb	RCRA Pb, AS, CR, CD	8 RCRA Metals	TCLP Pb	SPLP Pb	MATERIAL
1				I-395 Bridge 302				X		Blue-green paint on beam

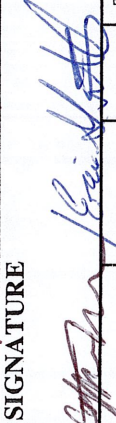
Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
<i>[Signature]</i>	5/14/18	<i>[Signature]</i>	<i>[Signature]</i>	5/15/18	<i>[Signature]</i>
(Printed)	Time:	(Printed)	(Printed)	Time:	(Printed)
C. Lemire	1400	Robert Perranour	Robert Perranour	1525	
<p>9297 N 24-52</p>					
Page 1 of 1					

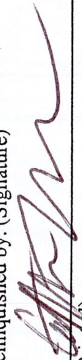
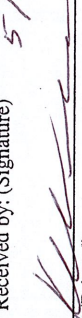


21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009
Supersede Previous Edition

PROJECT NUMBER 0001105.5715.0710		PROJECT NAME CTDOT Bridge 00302 I395 Plainfield, CT		LAB ID #. 52268			
SIGNATURE 		INSPECTOR C. Lemire / E. Gitberg		TURNAROUND TIME			
FIELD SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION		
1	5/14/18	1107			X	PLM EPA 600/R93/116 (POSITIVE STOP)	
2		1107			X	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	
3						ANALYZE BY LAYER	
4						POINT COUNT (IF >1% & <10%)	
						PLM NY NOB 198.4 (IF PLM SERIES NEG)	
							MATERIAL
							EJ1 - expansion joint Grey
							EJ1 -
							EJ2 - Black expansion joint
							EJ3 - Black expansion joint

Relinquished by: (Signature) 	Date: 5/14/18	Received by: (Signature) 	Date: 5/14/18
(Printed) Cathryn Lemire	Time: 1400	(Printed) 1605	Time: 1605
Remarks:		Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Comments:	

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #: 0052268
 Project #: 222165.5715.0710
 Date Received: 05/14/2018
 Date Analyzed: 05/15/2018

Site: Bridge 00302, I395, Plainfield, CT

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
1	Grey (expansion joint)	Yes	No	--	---	ND	None
2	Grey (expansion joint)	Yes	No	--	---	ND	None
3	Black (expansion joint)	Yes	No	--	80% cellulose	ND	None
4	Black (expansion joint)	Yes	No	--	80% cellulose	ND	None

Reporting limit- asbestos present at 1%
 ND - asbestos was not detected
 Trace - asbestos was observed at level of less than 1%
 NA/PS - Not Analyzed / Positive Stop
 SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2018. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

Analyzed by: K. Williamson Reviewed by: Cathryn Lemire Date Issued: 05/15/2018
 Kathleen Williamson, Laboratory Manager Cathryn Lemire, Approved Signatory

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
 RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
 CO# AL-15020 PHIL# 461 PA#68-03387

NT Mail

Proscience Analytical Services, Inc.

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857
 TEM Bulk Chain of Custody Record

Date: 05/15/18

PO#: C222165
 Client: TRC

Client Job#: 222165.5715.0710

Client Job Ref./Loc.: CT DOT- Bridge 00302, I395, Plainfield, CT

Relinquished by: C.Lemire- CLemire@trcsolutions.com

Received by: *Debbie Hewitt-Lowe 5/16/18 9:30*

Report to: E. Plimpton- EPlimpton@trcsolutions.com & SArienti@trcsolutions.com

Samplers Name: C.Lemire /E.Gitberg

Analysis Type: Chatfield EPA N.O.B Qualitative

Turnaround Time: <12 Hour <24 Hour <48 Hour <3 Day 5 Day Other:

Client ID #	Lab ID#	Description	Location	For Lab Use Only		
				Acceptable on Receipt	Comments	
2	52268	Expansion Joint	See COC			
4	52268	Expansion Joint				
For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
 781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail: general@proscience.net

Laboratory Report

Batch: NT 17216
Method: NOB
Date Received: 5/16/2018
Date Analyzed: 5/18/2018
Date of Report: 5/18/2018

Client Project #: 222165.5715.0710
Client Reference: CT DOT - Bridge 00302, I395, Plainfield, CT
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types				% Other Non-asp.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO						
NT129657	2	Expansion Joint Grey		.4553	.00	.00	.00	.00	.00	.00	28.44	Yes	No	
NT129658	4	Black Expansion Joint		.0466	.00	.00	.00	.00	.00	.00	4.72	Yes	No	

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected


 Mark Derosier, Analyst



SUBJECT

Bridge 302 Plainfield

SHEET NO. _____ OF _____

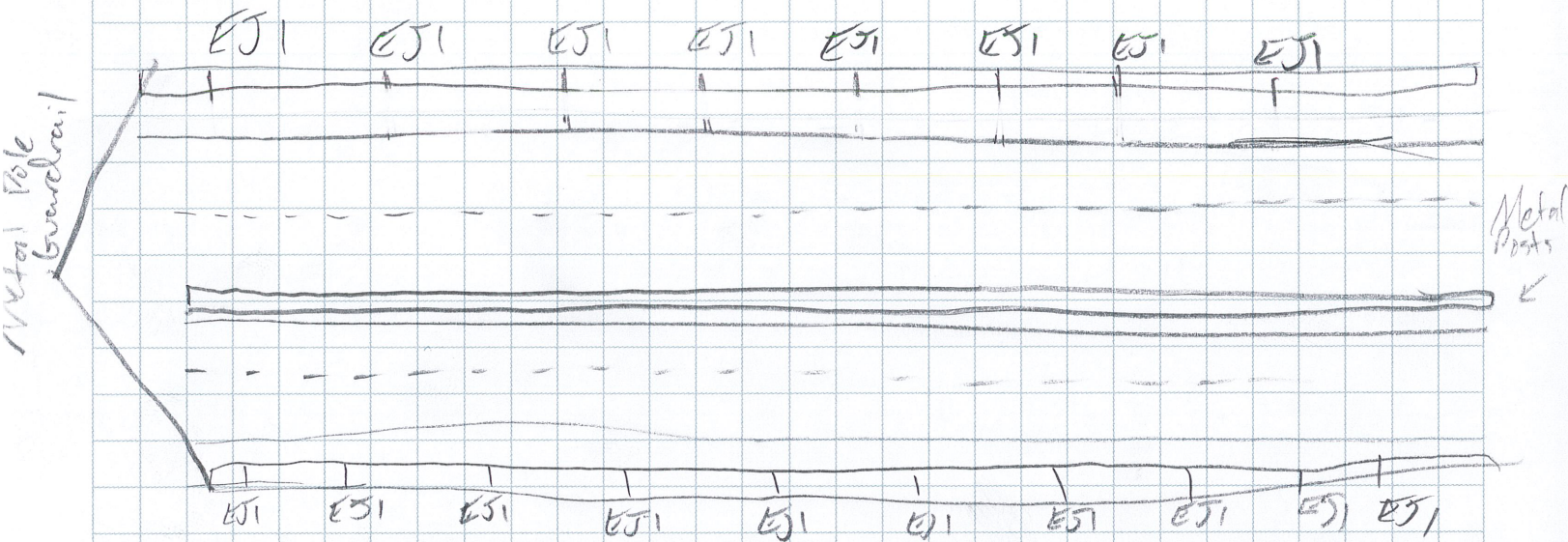
PROJECT NO. _____

DATE _____

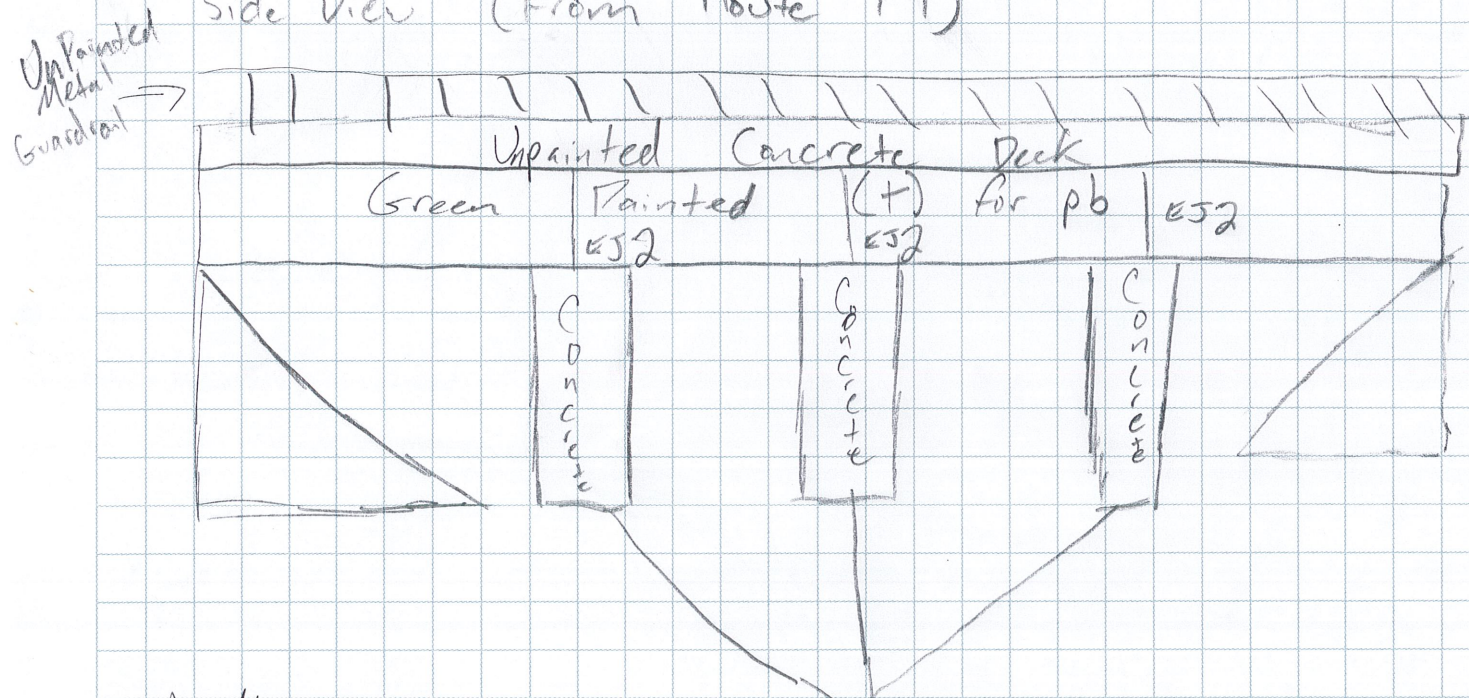
BY _____

CHK'D _____

Overhead view



Side View (From Route 141)



- ★ No BBP
- ★ Bridge is on unpainted concrete Deck
- ★ Pb paint present on I-Beams
- ★ No Gvano Present
- ★ 8 hg mercury bulbs present

SHEET NO. _____ OF _____

PROJECT NO. _____

DATE _____

BY _____

CHK'D _____



SUBJECT Bridge 00301 Plainfield

ACM

Metal guardrail is on canvas rakerpad

EJ1 - Soft/stretchy gray caulk ~ 120 LF

EJ2 - Black Tar in expansion joints on bridge
where concrete support beams are ~ 75 ft

Project Description

Applicant: State of Connecticut, Department of Transportation
Project No. 108-186 (Constr.), 170-3250 (P.E.)
Replacement/Rehabilitation of Bridge No. 00302 in Plainfield
Interstate 395 over Moosup River and Route 14

The existing structure, built in 1958, consists of a four span bridge. Bridge No. 00302 carries 2 lanes of Interstate 395 traffic and a shoulder in each direction over Route 14 and the Moosup River in the town of Plainfield. The northbound roadway bridge deck was reconstructed in 1988. The structure is located just south of exit 89 on I-395; a northbound exit and southbound entrance are located immediately north of the bridge. The 2014 Average Daily Traffic (ADT) on the bridge is 28,100 vehicles, with 14% truck traffic. The 2014 ADT for Route 14 under the bridge is 10,800 vehicles.

The existing structure consists of a steel, multi-girder superstructure with a reinforced concrete deck supported by concrete piers and abutments founded on piles. Three piers carry the structure over the Moosup River and Route 14. The south pier is located within the river, the center pier is located in the embankment, north of the river, and the northern pier is located in a grass median which separates Route 14 traffic. The bridge deck consists of a preformed fabric membrane with a bituminous concrete overlay. The curb-to-curb deck width is 98 feet, which is consistent with the approach widths, and the out-to-out deck width is 103.6 feet. A 24-foot raised concrete median separates interstate traffic. There are no sidewalks on or under the bridge or approaches. The structure has a skew angle of 40 degrees, an overall length of 372 feet, and a maximum span of 90 feet. The minimum vertical underclearance is 14 feet 6 inches at the east face of the bridge.

Based upon field investigation and engineering analysis of this structure, the existing structure is found to be structurally deficient. Its structural deficiency is primarily due to the deteriorated condition of the deck. The northbound deck which was replaced in the late 1980s has transverse hairline and map cracking with some efflorescence. The southbound deck has advanced deterioration with large sections of exposed corroded rebar and adjacent sections of hollow and sagging concrete. Ground Penetrating Radar and coring has confirmed both the advanced deterioration of the southbound deck as well as the good condition of the northbound deck. The concrete median has spalling as well as light to moderate scaling throughout, and the concrete parapets have random cracks, with some rust stains and scrapes.

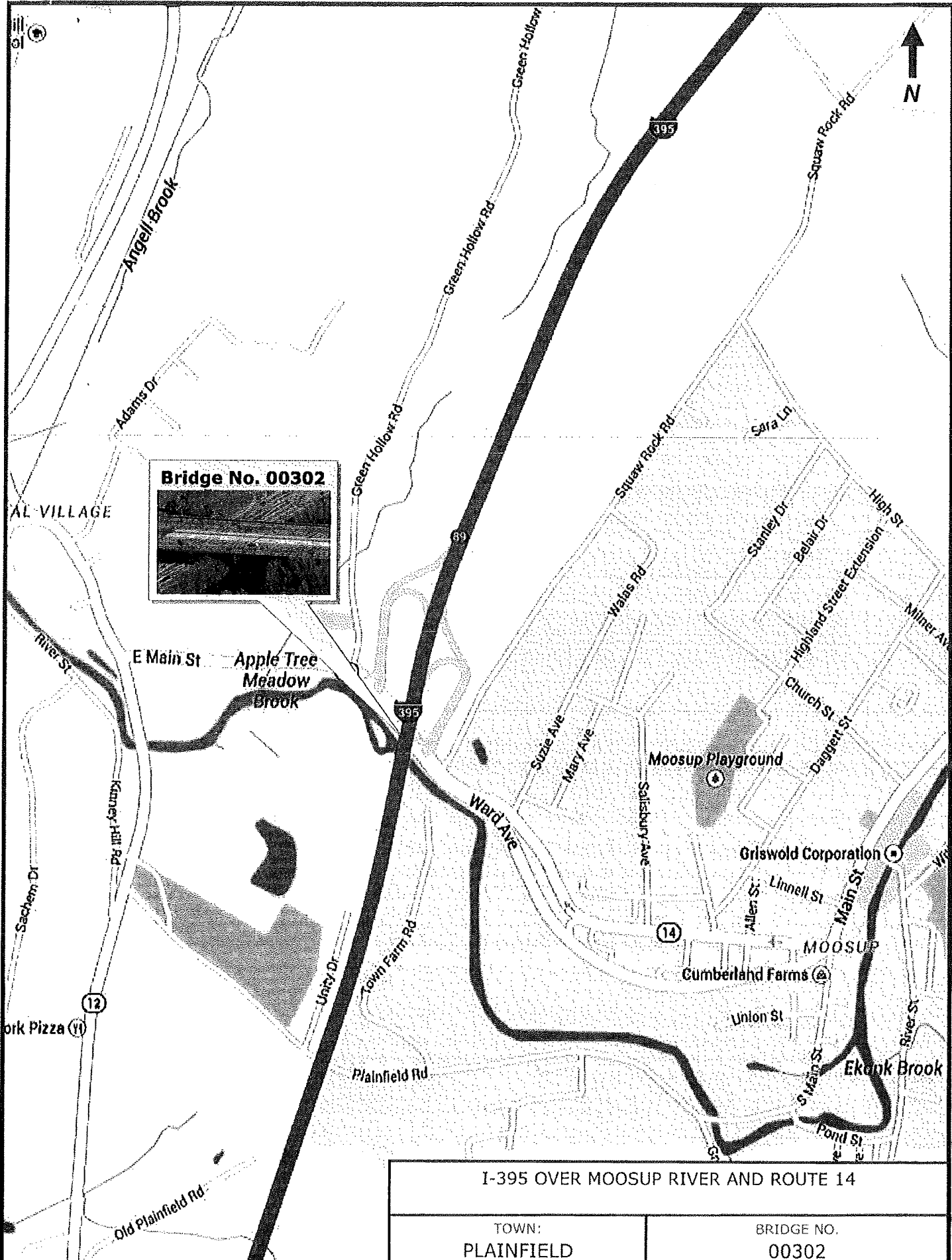
The proposed rehabilitation consists of deck, superstructure and substructure repairs, which will address the advanced deterioration concerns to the concrete deck and improve on the condition of the existing steel girders. The southbound deck and northbound median deck will be removed and replaced with a deck, membrane waterproofing and overlay of a standard thickness. The northbound deck will have its bituminous overlay and existing membrane waterproofing removed, its deck patched and a new membrane waterproofing and bituminous overlay applied. Additional scuppers will be installed on the northbound median to improve drainage. The newly constructed median will serve as a temporary roadway to facilitate repairs to the exterior sections of the decks in both directions. The southbound deck will have a new standard parapet. Joints over Piers 1 and 3 will be eliminated by installing link slabs. Joints will be sealed with a silicone expansion joint system. Key points of the superstructure will be blast cleaned, retrofitted with additional plates in areas of advance section loss, and painted over. Pack rust will be removed from fixed bearings and anchor bolts repaired where necessary. Expansion sliding bearings will be replaced with elastomeric bearings pads. Concrete substructure elements will be patched including pedestals which are undermining bearing plates. The broken planks and safety cable for the catwalk will be repaired. In the final stage, a concrete median barrier will be installed. Cleaning and painting the superstructure and repairs to the piers will be implemented from suspended platforms from above the water where applicable.

Construction will be performed while maintaining a minimum 1-foot shoulder, two 12-foot travel lanes, and 1-foot shoulder in each direction during each stage of construction. This will require construction of a temporary roadway along the I-395 median across the bridge and across both approaches. Each direction of traffic will be shifted onto the temporary roadway in stages to facilitate repairs to the deck in that direction of traffic. The on-ramp to I-395 SB just north of the bridge will have to be closed and a detour established during these stages due to substandard acceleration distance available while traffic is shifted. The proposed detour length is 3.3 miles and contains all state roads. Repairs to the north and center pier may require temporary lane closures of Route 14 but one lane of traffic in each direction shall be maintained at all times.

The wetland resources at the site consist of State Regulated Wetlands and Watercourse and Federally Regulated Waters of the U.S. The Moosup River flows in a westerly direction and is a gently flowing freshwater channel. The contributing drainage area at the bridge is approximately 83.6 square miles.

According to the June 17, 1991, Panel 0901160005B, Windham County Flood Insurance Rate Map, the project is located within a FEMA Flood Zone AE. The project construction will adhere to any time of year restrictions set forth by DEEP. Coordination has taken place with CT DEEP Fisheries Division and all of their comments have been adequately addressed.

Impacts to the stream will be minimized through adherence to the Form 816 Section 1.10 Best Management Practices (BMP's) and the 2004 Stormwater Quality Manual. During construction, proper water handling measures will be implemented to allow work to occur in the areas confined within those water handling devices; additionally work will be performed during typical low flow periods. Sedimentation and Erosion Control Systems will be installed as necessary to limit disturbances to protect the wetlands and watercourses through adherence to the 2002 Erosion and Sedimentation Guideline Manual.



I-95 OVER MOOSUP RIVER AND ROUTE 14	
TOWN: PLAINFIELD	BRIDGE NO. 00302