



February 5, 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: Amie Maines, P.E. / Michael Bedson, EIT

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance  
Agreement No. 04.27-01(15)  
HazMat Inspection - Bridge No. 00196 & Traffic Int. Nos. 14-233 & 14-237, Branford, CT  
ConnDOT Assignment No. 514-5692  
ConnDOT Project No. 14-185  
TRC Project No. 222165.5692.0710

Dear Mr. Fox:

TRC performed a limited survey for hazardous building materials associated with the rehabilitation of Bridge No. 00196, I-95 over Route 1, and removal of traffic signals at Int. Nos. 14-233 & 14-237 in Branford, Connecticut. Results of the survey identified lead paint to be present on the structural steel/metal bridge components of Bridge No. 00196. The bridge 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. 00196 as CTDEEP/RCRA hazardous waste. At Intersection Nos. 14-233 & 14-237 detectable amounts of lead were identified on the yellow & green traffic signals themselves and crosswalk push buttons. All traffic span poles were either wood or galvanized (unpainted). All crosswalk pedestals were galvanized (unpainted). No detectable amounts of lead in paint were found on the metal grey controller cabinets of Int. Nos. 14-233 & 14-237. The projected paint waste debris associated with both the yellow & green traffic signals themselves and the yellow & green crosswalk push buttons were characterized as non-hazardous, non-RCRA waste. Also, since no detectable amounts of lead were present on painted metal surfaces of the metal controller cabinets any paint waste generated would be classified as non-hazardous, non-RCRA waste. At Bridge No. 00196, suspect asbestos containing rocker pad caulking and expansion joint caulking were sampled and found to be non-ACM. No hazardous/regulated items, bird/pigeon guano accumulations or items of bloodborne pathogens (BBP) concern were observed in accessible areas of Bridge No. 00196. Potential universal waste (UW) and Connecticut Regulated Waste (CRW) items associated with the traffic lights themselves, crosswalk signal hoods/buttons and control cabinets (i.e. Hg lamps/PCB ballasts and/or printed circuit boards) are also likely present at the Intersection Nos. 14-233 & 14-237. 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 Manager – Program Manager

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

Erik R. Plimpton, P.E., CHMM, CMC  
Vice President – Engineer in Charge



## Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #25555) X Ray Fluorescence (XRF) Spectrum Analyzer  
 Site: ConnDOT - Bridge No. 00196 & Traffic Int. Nos. 14-233 & 14-237, Branford, CT  
 Project #: 222165.5692.0710  
 Date(s): 1/5/2018  
 Inspectors: David Heelon (CTDPH License #002188)

Number	Interior/ Exterior	Location	Bridge No.	Side	Structure	Feature	Material	Color	Condition	Reading (mg/cm <sup>2</sup> )	Precision (mg/cm <sup>2</sup> )	Depth Index	Duration (sec)	Date/Time
1			Self Calibration											
2			0.0 Calibration	--						0.0	0.0	1.0	45.8	1/5/2018 10:10
3			0.3 Calibration	--						0.3	0.1	1.1	6.1	1/5/2018 10:16
4			3.6 Calibration	--						3.2	0.2	1.3	14.7	1/5/2018 10:17
5	Exterior	Branford	Int. No. 14-237	A	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.0	8.6	1/5/2018 10:22
6	Exterior	Branford	Int. No. 14-237	C	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.5	8.6	1/5/2018 10:22
7	Exterior	Branford	Int. No. 14-237	D	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.0	7.4	1/5/2018 10:23
8	Exterior	Branford	Int. No. 14-237	--	Traffic Signal		Metal	Green	Defective	0.1	0.0	3.2	21.5	1/5/2018 10:50
9	Exterior	Branford	Int. No. 14-237	--	Traffic Signal		Metal	Green	Defective	0.1	0.0	3.5	21.5	1/5/2018 10:51
10						VOID								
11	Exterior	Branford	Int. No. 14-233	B	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.0	8.6	1/5/2018 11:37
12	Exterior	Branford	Int. No. 14-233	C	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.0	8.6	1/5/2018 11:37
13	Exterior	Branford	Int. No. 14-233	D	Control Cabinet		Metal	Grey	Intact	0.0	0.0	1.0	8.6	1/5/2018 11:37
14						VOID								
15	Exterior	Branford	Int. No. 14-233	--	Traffic Signal		Metal	Yellow	Defective	0.0	0.0	2.8	22.0	1/5/2018 11:53
16	Exterior	Branford	Int. No. 14-233	--	Traffic Signal		Metal	Yellow	Defective	0.1	0.1	6.4	7.4	1/5/2018 11:53
17	Exterior	Branford	Bridge No. 00196	--	Girder	Horizontal	Metal	Grey	Defective	5.4	1.5	2.1	5.5	1/5/2018 12:55
18	Exterior	Branford	Bridge No. 00196	--	Girder	Horizontal	Metal	Grey	Defective	9.9	1.8	2.0	5.5	1/5/2018 12:56
19	Exterior	Branford	Bridge No. 00196	--	Girder	Horizontal	Metal	Grey	Defective	6.6	1.6	1.9	5.5	1/5/2018 12:56
20	Exterior	Branford	Bridge No. 00196	--	Girder	Crossbeam	Metal	Grey	Defective	13.2	2.0	2.3	5.5	1/5/2018 12:57
21	Exterior	Branford	Bridge No. 00196	--	Girder	Crossbeam	Metal	Grey	Defective	6.4	1.6	2.2	5.5	1/5/2018 12:57
22	Exterior	Branford	Bridge No. 00196	--	Girder	Crossbeam	Metal	Grey	Defective	9.2	1.7	2.2	5.5	1/5/2018 12:58
23			0.0 Calibration							0.0	0.0	1.0	6.1	1/5/2018 13:15
24			0.7 Calibration							0.7	0.1	1.1	7.4	1/5/2018 13:16
25			3.6 Calibration							3.6	0.2	1.3	9.8	1/5/2018 13:16

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# 8010145**



Report Date: January 12, 2018

Project: CTDOT, Bridge

Project Number: 222165.5692.0710, Bridge 0196/ 2 Traffic Intersectns

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



New York NELAP Accreditation: 11982  
Rhode Island Certification: 199

CET # : 8010145

Project: CTDOT, Bridge

Project Number: 222165.5692.0710,Bridge 01964 2 Traffic Intersectns

### SAMPLE SUMMARY

The sample(s) were received at 19.8°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
02	8010145-01	Solid	1/05/2018 11:22	01/09/2018
03	8010145-02	Solid	1/05/2018 11:40	01/09/2018
05	8010145-03	Solid	1/05/2018 12:10	01/09/2018
07	8010145-04	Solid	1/05/2018 12:15	01/09/2018
08	8010145-05	Solid	1/05/2018 12:38	01/09/2018

**Analyte: Total Lead [EPA 6010C]**

**Analyst: SS**

**Matrix: Solid**

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8010145-01	02	ND	0.10	%	1	B8A1203	01/12/2018	01/12/2018 15:07	
8010145-03	05	9.1	0.10	%	1	B8A1203	01/12/2018	01/12/2018 15:11	
8010145-04	07	ND	0.10	%	1	B8A1203	01/12/2018	01/12/2018 15:15	

**Analyte: TCLP Lead [EPA 6020A]**

**Analyst: CED**

**Prep: EPA 3005A-1311**

**Matrix: Extract**

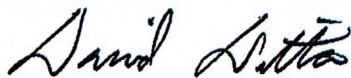
Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8010145-02	03	0.25	0.013	mg/L	1	B8A1025	01/10/2018	01/10/2018 17:25	
8010145-05	08	230	0.013	mg/L	1	B8A1025	01/10/2018	01/10/2018 17:30	



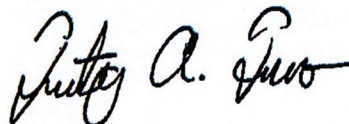
All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

This technical report was reviewed by Timothy Fusco



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 # : 8010145

Project: CTDOT, Bridge

Project Number: 222165.5692.0710,Bridge 01964 2 Traffic Intersctns

#### CERTIFICATIONS

##### Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 6010C in Solid</i>	
Lead	CT
<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	04/01/2018

Complete Environmental Testing, Inc.

80 Lupes Drive, Stratford, CT 06615 • Tel: 203-377-9984 • Fax: 203-377-9952 • [www.cetlabs.com](http://www.cetlabs.com)





21 GRIFFIN ROAD NORTH

WINDSOR, CONNECTICUT 06095

TELEPHONE (860) 298-9692

FAX (860) 298-6380



8010145

Edition: November 2013  
Supersede Previous Edition

## TCLP CHAIN OF CUSTODY

PROJECT NUMBER

222165.5692.0710

PROJECT NAME

Bridge 01964 Traffic Intersection

INSPECTOR: (SIGNATURE)

*David Heelon*

(PRINTED)

David Heelon

FIELD  
SAMPLE  
NUMBER

DATE

TIME

TYPE

COMP

GRAB

SAMPLE LOCATION

PARAMETERS

RCRA Pb

RCRA Pb, AS, CR, CD

8 RCRA Metals

TCLP Pb

SPLP Pb

Total Lead

TURNAROUND TIME

24hr

48hr

3day

5day

24hr

48hr

3day

5day

MATERIAL

Paint chips - Gray

Paint chips - Gray

Paint chips - Green

Paint chips - Yellow

Paint chips - Yellow

Paint chips - Gray

Paint chips - Gray

Paint chips - Gray

19.8 (N)

Analyze for Total lead first, if Positive, then analyze for TCLP. If Negative, then do not analyze for TCLP.

Relinquished by: (Signature)

*David Heelon*

Date:

1/5/18

Received by: (Signature)

*McCauley*

Date:

01/19/18

Relinquished by: (Signature)

Date:

Received by: (Signature)

(PRINTED)

David Heelon

Time:

1530

(PRINTED)

Time:

(PRINTED)

Email results to EPlimpton@trcsolutions.com and SArienti@trcsolutions.com

Page 1 of 1

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

## Analytical Report

### CET# 8020045



Report Date: February 05, 2018  
Project: CTDOT, Bridge  
Project Number: 222165.5692.0710, Bridge 01964 2 Traffic Intersectns

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



New York NELAP Accreditation: 11982  
Rhode Island Certification: 199



CET # : 8020045

Project: CTDOT, Bridge

Project Number: 222165.5692.0710,Bridge 01964 2 Traffic Intersctns

**SAMPLE SUMMARY**

The sample(s) were received at 19.8°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
04 Traffic Signal Southeast of Bridge	8020045-01	Solid	1/05/2018 12:10	01/09/2018

**Analyte: TCLP Lead [EPA 6020A]**

**Analyst: CED**

**Prep: EPA 3005A-1311**

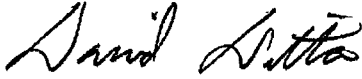
**Matrix: Extract**

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8020045-01	04 Traffic Signal Southeast of Bridge	<b>0.61</b>	0.013	mg/L	1	B8B0503	02/05/2018	02/05/2018 13:46	

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.
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- \*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.
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- \*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 #: 8020045

Project: CTDOT, Bridge

Project Number: 222165.5692.0710, Bridge 01964 2 Traffic Intersctns

#### CERTIFICATIONS

##### Certified Analyses included in this Report

Analyte	Certifications
<hr/>	
<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	04/01/2018



21 GRIFFIN ROAD NOR

WINDSOR, CONNECTICUT 06095

TELEPHONE (860) 298-9692

FAX (860) 298-6380



8020045

Edition: November 2013  
Supersede Previous Edition

# TCLP CHAIN OF CUSTODY

PROJECT NUMBER		PROJECT NAME		PARAMETERS		TURNAROUND TIME		LAB ID #	
222165.5692.0710		Bridge 01964 Traffic Impairment		RCRA Pb, AS, CR, CD, 8 RCRA Metals, TCLP Pb, SPLP Pb		24hr, 48hr, 3day, 5day		24hr, 48hr, 3day, 5day	
INSPECTOR: (SIGNATURE)		INSPECTOR: (PRINTED)		SAMPLE LOCATION		MATERIAL			
David Heelon		David Heelon							
FIELD SAMPLE NUMBER		DATE		TIME		TYPE		COM	
01	11/5/18	11:22	✓	Control Cabinet 14-237	✓	✓	✓	Paint chips - Gray	
02	11/5/18	11:22	✓	Control Cabinet 14-237	✓	✓	✓	Paint chips - Gray	
03	11/5/18	11:40	✓	Traffic Signal: Northeast of bridge	✓	✓	✓	Paint chips - Green	
04	11/5/18	12:10	✓	Traffic Signal: Southeast of bridge	✓	✓	✓	Paint chips - Yellow	
05	11/5/18	12:10	✓	Traffic Signal: Southeast of bridge	✓	✓	✓	Paint chips - Gray	
06	11/5/18	12:15	✓	Control cabinet 14-233	✓	✓	✓	Paint chips - Gray	
07	11/5/18	12:15	✓	Control cabinet 14-233	✓	✓	✓	Paint chips - Gray	
08	11/5/18	12:38	✓	Under Bridge Steel beams	✓	✓	✓	Paint chips - Gray	
								19.8 (N)	

Analyze for Total Lead first, if Positive, then analyze for TCLP. If Negative, then do not analyze for TCLP.

Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)		Received by: (Signature)	
Date:		Date:		Date:		Date:	
Time:		Time:		Time:		Time:	
David Heelon		Mearney					
11/5/18		01/9/18					
1530		3:45 PM					
David Heelon							
Email results to EPlimpton@trcsolutions.com and SArienti@trcsolutions.com							







**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0051773  
Project #: 222165.5692.0710  
Date Received: 01/08/2018  
Date Analyzed: 01/08/2018

Site: Bridge 0196 And 2 Intersections, Branford, CT

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
01	Grey (rocker pad caulk)	Yes	No	--	---	ND	None
02	Grey (rocker pad caulk)	Yes	No	--	---	ND	None
03	Grey (expansion joint caulk)	Yes	No	--	---	ND	None
04	Grey (expansion joint caulk)	Yes	No	--	---	ND	None
05	Black (expansion joint caulk)	Yes	No	--	---	ND	None
06	Black (expansion joint caulk)	Yes	No	--	---	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:

Cathryn Lemire, Laboratory Analyst

Reviewed by:

Kathleen Williamson, Laboratory Manager

Date Issued

01/08/2018

**TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS**

NVLAP Lab Code 101424-0  
RI #AAL-007 TX #300354  
CO# AL-15020

AIHA-LAP, LLC #100122  
VT #AL014538 LA#05011  
PHIL# 461

CT #PH-0426  
VA #3333 000283  
PA#68-03387

ME LA-0075, LB-0071  
AZ #A20944

MA #AA000052  
HI #L-09-004

NY #10980 WV# LT000411  
NJ #CT004 CA #2907



VT 16983

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

## TEM Bulk Chain of Custody Record

Date: 01/08/17

**PO#:** C222165

**Client:** TRC

Client Job#: 222165.5692.0710

Client Job Ref./Loc.: CT DOT- Bridge 0196 and 2 Intersections, Branford, CT

Relinquished by: **Q Lemire-CLemire@trcsolutions.com**

Received by: Paula Hewitt-Cole 11/9/18 10:40

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

**Samplers Name:** D. Heelon

Analysis Type:	Chatfield	EPA N.O.B	Qualitative

Turn Around Time:	<12 Hour	<24 Hour	<48 Hour	<3 Day	5 Day	Other:

[illegible]



# ProScience Analytical Services, Inc.

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

## Laboratory Report

Client Project #: 222165.5692.0710  
Client Reference: CT DOT - Bridge 0196 and 2 Intersections, Branford, CT  
PO #: C222165  
Client #: 297  
Client Name: TRC Environmental Corp. (CT)

Batch: NT 16983  
Method: NOB  
Date Received: 1/9/2018  
Date Analyzed: 1/11/2018  
Date of Report: 1/11/2018

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types					% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO	ANT						
NT128356	2	Rocker Pad Caulk		.1649	.00	.00	.00	.00	.00	52.76	8.61	38.63	ND	Yes	No
NT128357	4	Expansion Joint Caulk		.5339	.02	.00	.00	.00	.00	4.46	80.33	15.21	TR	Yes	No
NT128358	6	Expansion Joint Caulk		.7268	.00	.00	.00	.00	.00	1.33	93.18	5.49	ND	Yes	No

### Comments:

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

  
Mark Derostier, Analyst





SUBJECT

Bridge 0196, Branford

SHEET NO. 1 OF 1  
PROJECT NO. 272/65,5692.0710  
DATE 1/5/18  
BY DH + DR  
CHK'D \_\_\_\_\_

Traffic poles - North side of Bridge -

8 traffic signals; 4 galvanized poles (no paint)  
1 pedestal; 2 push buttons (painted green); 1 control cabinet (painted gray)  
No suspect ACM found.  
#14-237

Traffic poles - South side of Bridge -

9 traffic signals (6 yellow + 3 green); 2 galvanized poles (no paint)  
2 push buttons (yellow paint); 1 control cabinet (GRAY paint); 2 wood poles (no paint)  
#14-233

Note - Silicone caulk on control cabinet. Not sampled because is silicone.

Bridge # 0196 -

underside of bridge - steel beams - horizontal + vertical  
Gray paint (defective). Some areas of newer Gray paint. Old paint is darker gray + newer paint is lighter gray.

Rocker pads have caulk (sampled)

Expansion Joint Caulk between concrete Abutments (sampled) (EJ1)

~~Expansion~~ black Expansion Joint caulk - (Not sampled)

Underneath Rocker Pad is rubber pad. (Not sampled)

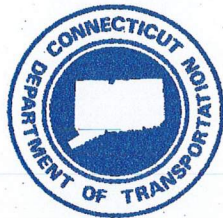
Expansion Joint Caulk on Northwest side of Bridge (EJ2) (sampled)

Top of Bridge - Guardrails on both sides. Galvanized. No paint.



**Design Report**  
for the  
**Rehabilitation of Bridge No. 00196**  
**Interstate 95 over U.S. Route 1**  
(Semi-Final Design Review Submission)  
November 2017

State Project No. 0014-0185  
Federal Aid Project No. 0952(118)



*Prepared For:*

State of Connecticut  
Department of Transportation  
Newington, Connecticut



## **General**

**Description of Project:** Ammann & Whitney is providing preliminary and final engineering services to the State of Connecticut Department of Transportation for the rehabilitation of Bridge No. 00196, carrying Interstate 95 over Route 1 in Branford. The existing bridge is a three-span, simply supported, steel beam bridge, built in 1958. It carries two lanes each of I-95 northbound and southbound traffic over three lanes of U.S. Route 1 (East Main Street). At this project's location, I-95 is oriented west-east, and U.S. route 1 is oriented generally south-north.

The existing structure has a total length of 135.58'. The bridge has a skew angle of 25.6° and the out-to-out deck width is approximately 103.67'. The existing 7¼" (and 7¾" at the median) reinforced concrete deck, with bituminous wearing surface, is supported by fourteen rolled steel beams, with seven beams under each bound. The beams are approximately 30" deep and spaced at 7'-10", with approximately 4'-0" between the beams at the median.

The substructure consists of reinforced stub abutments and wingwalls, and two reinforced concrete multi-column piers with reinforced concrete caps. The footings for the abutments and wingwalls are supported by steel H piles. The pier columns rest on spread footings.

Based on past field inspections and engineering analysis, this bridge was found to be structurally deficient, primarily due to its deteriorated concrete deck. It was also found to be functionally obsolete because of horizontal clearance issues on U.S. Route 1. In addition, the minimum vertical underclearance is 14'-5", which is substandard.

Based on the recommendations contained in the Rehabilitation Study Report, prepared by CME Associates, Inc. and dated August 2015 the major scope items of this project include:

- Full superstructure replacement with two Prefabricated Bridge Unit (PBU) spans supported by a new reinforced concrete pier and the existing abutments.
- Construction of pier footings beyond limits of new center pier to accommodate future widening of I-95.
- Removal of the two existing piers.
- Lowering of Route 1 to improve minimum vertical underclearance to 16'-3", and accommodate the future widening of I-95. Existing utilities will be relocated as necessary.
- An improved curb-to-curb width on Route 1, resulting in an improved horizontal underclearance rating of "6", allowing for two 10' outside shoulders, two 4' inside shoulders.
- Construction of 5' wide sidewalks along the west and east sides of Route 1 beneath the bridge that will connect to existing sidewalks along Route 1 at the north and south project limits.
- New traffic signals on Route 1 at the I-95 NB and SB Exit 55 off-ramps.

## **Proposed Structure Description:**

The proposed structure shall consist of the following:

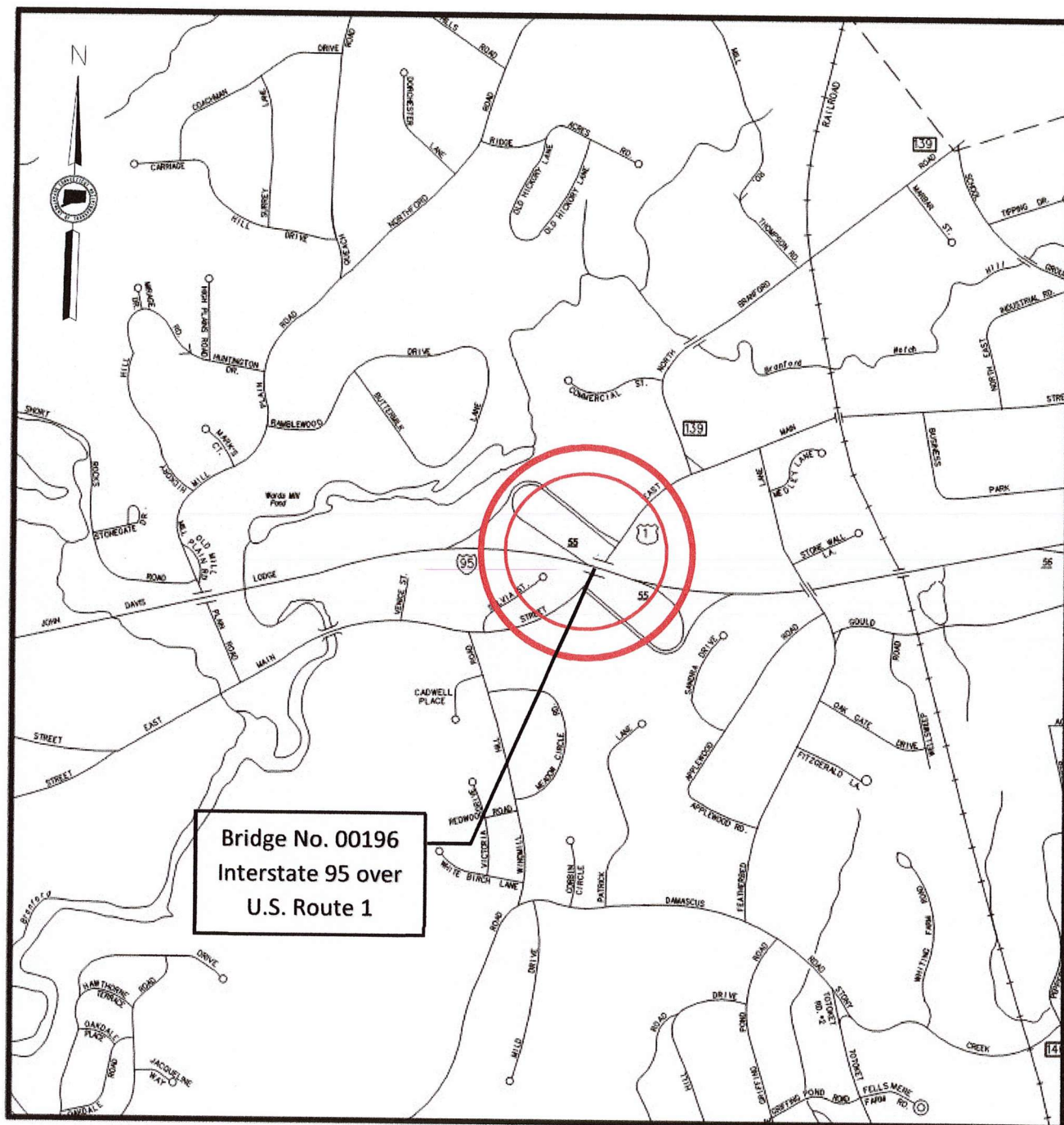


- 8½" reinforced concrete deck with 3" bituminous concrete overlay (2" PMA S0.5 Traffic Level 3 on 1" HMA S0.25 Traffic Level 2).
- 16 steel W30x211 girders at 6'-8" spacing. W24x68 diaphragms will be used along the outside and center spans, with C15x33.9 intermediate diaphragms used in the inside.
- The structure shall be constructed utilizing 32 Prefabricated Bridge Units (PBUs); 16 in each bound. They shall be joined in the longitudinal direction by 1'-0" closure pours and along the center of the span (above the pier) by a 6'-10" closure pour.
- Expansion bearings shall be utilized at the two abutments, with two fixed bearings at the center pier.
- New abutment pedestals shall be constructed on the existing, modified abutments.
- The new center wall pier shall sit on a spread footing, widened by 20'-0" to accommodate future I-95 widening.
- Cast-in-place bridge parapets and center medians are specified.
- New 16'-0" wide approach slabs on either side of the bridge.

**Project Limits:** The limits along Interstate 95 are confined to the immediate structure and its adjacent approach slabs. The total length of this work is approximately 373'; stations 225+21 to 228+94, as shown in the construction plans. This includes 100' of milling and overlay on each side of the bridge.

The limits along U.S. Route 1 were determined based on work necessary to lower the profile of the roadway and tie back into the existing. The length of the work is approximately 1100'; stations 10+25 to 21+19 as shown in the construction plans.

### Project Location Map







Signal Located here

Signal Located here

Google earth

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## Plimpton, Erik

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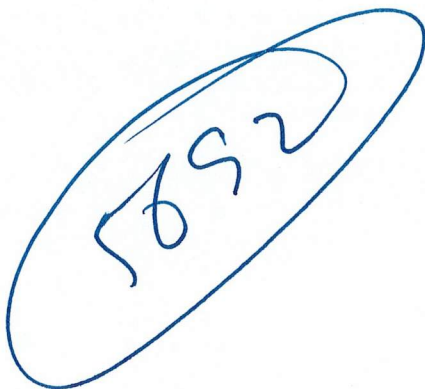
**From:** Bedson, Michael F. <Michael.Bedson@ct.gov>  
**Sent:** Friday, December 29, 2017 8:40 AM  
**To:** Plimpton, Erik  
**Subject:** Satellite Image of Project Area.pdf  
**Attachments:** Satellite Image of Project Area.pdf

Erik,

Attached is a satellite image of the I-95 bridge crossing over Route 1 that is set to be removed. Not sure exactly if both of the signals at the off-ramps are set to be replaced or just one. I tried to contact the designer to get clarification, but they weren't there. If you don't hear from me before you guys head out to do your sampling, assume that we will sample both of them because it won't really cost us much more to do so and will give us the information we need in case they both are planned to be removed.

Thanks.

Mike



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