



July 23, 2016

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

Attention: Judith Nemecek, P.E. / Felix Mathieu

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance  
Agreement No. 04.27-01(15)  
HazMat Inspection – Bridge Nos. 00281, 00401, 00402, 00407, 00408, 00934, 01802 & 01803,  
District 2 Bridges, CT  
ConnDOT Assignment No. 514-5310  
ConnDOT Project No. 172-446  
TRC Project No. 222165.5310.00710

Dear Mr. Bonsignore:

TRC performed a limited survey for hazardous building materials associated with/ Bridge Nos. 00281, 00401, 00402, 00407, 00408, 00934, 01802 & 01803 in District 2 of Connecticut. Results of the survey identified lead based paint (LBP) associated with the structural steel/metal bridge components at Bridge Nos. 00281, 00401, 00402, 00407, 00408, 00934, 01802 & 01803 and the concrete bridge beams of Bridge No. 00934. No detectable amounts of lead in paint were found on the concrete abutments of Bridge No. 00281. 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 Nos. 00281, 00401, 00402, 00407, 00408, 01802 & 01803 as EPA RCRA/CTDEEP hazardous waste. Results obtained from TCLP waste stream sampling and analysis for leachable lead from the paint on the railing components at Bridge Nos. 00407 and the rocker bearings/concrete beams at Bridge No. 00934 characterized the paint waste stream as non-RCRA, non-hazardous waste. Since no detectable amounts of lead in paint were found on the concrete abutments of Bridge No. 00281, any paint waste debris generated would be non-RCRA, non-hazardous waste. Metal railing caulk at the base of supports on the parapet walls at Bridge No. 00401 was found to contain asbestos. For Bridge Nos. 00281, 01802 & 01803 any asphalt membrane which may exist below the bituminous roadway surface was not accessible and should be presumed to be ACM until exposed for sampling confirmation. Also, black expansion joint tar material between the abutment sections beneath Bridge Nos. 00407 & 00408 was found to contain asbestos but is not projected to be impacted by the bridge repairs. Various expansion joint materials, caulking, vapor barriers, asphaltic plugs, bearing pads, roadway expansion tars and textured coatings on concrete not mentioned above were found to be non-ACM. Potential universal waste (UW) and Connecticut Regulated Waste (CRW) halogen mercury light fixtures were also identified on street lights and the underside above the roadway of Bridge No. 00281 and the underside of Bridge Nos. 00407 & 00408 but are not projected to be impacted. Pigeon/bird guano accumulations and nests were identified at Bridge Nos. 00281, 00401, 00402, 00407 & 00408.

Laboratory data, project description and inspector notes 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 "Erik R. Plimpton".

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

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

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



### Lead Based Paint Measurement Summary Table

**Device(s):** Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer  
**Site:** 8 Bridges, District 2, Bozrah, Norwich 7 Stonington  
**Project # :** 222165.5310.0710  
**Date(s):** 3/21/16-3/23/16  
**Inspector:** Hilton Hernandez (Lead Inspector/RA #002231) & David Heelon (Lead Inspector/RA #002188)

| Number | Interior/<br>Exterior | Location | Bridge No.                          | Structure  | Feature | Material | Color  | Condition | Reading<br>(mg/cm <sup>2</sup> ) | Precision<br>(mg/cm <sup>2</sup> ) | Depth<br>Index | Duration<br>(sec) | Date/Time       |
|--------|-----------------------|----------|-------------------------------------|------------|---------|----------|--------|-----------|----------------------------------|------------------------------------|----------------|-------------------|-----------------|
| 1      |                       |          |                                     |            |         |          |        |           | 0.7                              | 0.1                                | 1.0            | 229.1             | 3/21/2016 10:45 |
| 2      |                       |          |                                     |            |         |          |        |           |                                  |                                    |                |                   | 3/21/2016 10:51 |
| 3      |                       |          |                                     |            |         |          |        |           | 3.6                              | 0.3                                | 1.3            | 6.3               | 3/21/2016 10:52 |
| 4      |                       |          |                                     |            |         |          |        |           | 1.6                              | 0.2                                | 1.2            | 6.9               | 3/21/2016 10:52 |
| 5      | Exterior              | Nonwich  | Self-Calibration<br>0.7 calibration | Girder     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 10:54 |
| 6      | Exterior              | Nonwich  | 3.6 calibration<br>1.6 calibration  | Girder     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 10:55 |
| 7      | Exterior              | Nonwich  | Bridge 00408                        | Girder     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 10:57 |
| 8      | Exterior              | Nonwich  | Bridge 00408                        | Bearing    |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 10:59 |
| 9      | Exterior              | Nonwich  | Bridge 00408                        | Bearing    |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 11:00 |
| 10     | Exterior              | Nonwich  | Bridge 00408                        | Bearing    |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 3.2            | 14.6              | 3/21/2016 11:05 |
| 11     | Exterior              | Nonwich  | Bridge 00408                        | Railing    |         | Metal    | Grey   | Defective | 0.0                              | 0.0                                | 2.1            | 5.3               | 3/21/2016 11:06 |
| 12     | Exterior              | Nonwich  | Bridge 00408                        | Railing    |         | Metal    | Grey   | Defective | 0.0                              | 0.0                                | 2.1            | 5.3               | 3/21/2016 11:06 |
| 13     | Exterior              | Nonwich  | Bridge 00408                        | Railing    |         | Metal    | Grey   | Defective | 0.0                              | 0.0                                | 2.1            | 5.3               | 3/21/2016 11:06 |
| 14     | Exterior              | Nonwich  | Bridge 00408                        | Railing    |         | Metal    | Grey   | Defective | 0.0                              | 0.0                                | 2.1            | 5.3               | 3/21/2016 11:06 |
| 15     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Orange | Defective | 5.4                              | 2.7                                | 1.6            | 0.9               | 3/21/2016 11:35 |
| 16     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Green  | Defective | 0.1                              | 0.1                                | 2.2            | 4.6               | 3/21/2016 12:08 |
| 17     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.2            | 3.1               | 3/21/2016 12:09 |
| 18     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.6            | 4.8               | 3/21/2016 12:09 |
| 19     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Green  | Defective | 19.5                             | 7.2                                | 3.8            | 2.2               | 3/21/2016 12:10 |
| 20     | Exterior              | Nonwich  | Bridge 00407                        | Girder     |         | Metal    | Green  | Defective | 0.1                              | 0.1                                | 4.3            | 5.1               | 3/21/2016 12:11 |
| 21     | Exterior              | Nonwich  | Bridge 00407                        | Bearing    |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 1.7               | 3/21/2016 12:12 |
| 22     | Exterior              | Nonwich  | Bridge 00407                        | Bearing    |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 1.4               | 3/21/2016 12:12 |
| 23     |                       |          |                                     |            |         |          |        |           | 0.1                              | 0.1                                | 2.0            | 3.8               | 3/21/2016 12:13 |
| VOID   |                       |          |                                     |            |         |          |        |           |                                  |                                    |                |                   |                 |
| 24     | Exterior              | Nonwich  | Bridge 00407                        | Railing    |         | Metal    | Grey   | Defective | 10.4                             | 5.1                                | 2.1            | 2.4               | 3/21/2016 12:32 |
| 25     | Exterior              | Nonwich  | Bridge 00407                        | Railing    |         | Metal    | Grey   | Defective | 0.0                              | 0.0                                | 1.0            | 1.6               | 3/21/2016 12:32 |
| 26     | Exterior              | Nonwich  | Bridge 00407                        | Railing    |         | Metal    | Grey   | Defective | 0.1                              | 0.1                                | 4.2            | 5.5               | 3/21/2016 12:33 |
| 27     | Exterior              | Nonwich  | Bridge 00407                        | Railing    |         | Metal    | Grey   | Defective | 0.2                              | 0.1                                | 6.1            | 8.1               | 3/21/2016 12:33 |
| 28     | Exterior              | Nonwich  | Bridge 00407                        | Railing    |         | Metal    | Grey   | Defective | 0.7                              | 0.3                                | 1.0            | 1.2               | 3/21/2016 13:57 |
| 29     |                       |          | 0.7 calibration                     |            |         |          |        |           | 0.7                              | 0.1                                | 1.1            | 3.3               | 3/21/2016 13:59 |
| 30     |                       |          | 3.6 calibration                     |            |         |          |        |           | 3.6                              | 0.4                                | 1.3            | 3.3               | 3/21/2016 13:59 |
| 31     |                       |          | 1.6 calibration                     |            |         |          |        |           | 1.6                              | 0.2                                | 1.2            | 5.5               | 3/21/2016 13:59 |
| 32     | Exterior              | Bozrah   | Bridge 00401                        | Railing    |         | Metal    | Blue   | Defective | 15.4                             | 8.5                                | 2.1            | 1.4               | 3/21/2016 14:07 |
| 33     | Exterior              | Bozrah   | Bridge 00401                        | Railing    |         | Metal    | Blue   | Defective | 4.1                              | 1.0                                | 1.7            | 2.4               | 3/21/2016 14:08 |
| 34     | Exterior              | Bozrah   | Bridge 00401                        | Railing    |         | Metal    | Blue   | Defective | 20.0                             | 6.3                                | 2.0            | 2.7               | 3/21/2016 14:10 |
| 35     | Exterior              | Bozrah   | Bridge 00401                        | Girder     |         | Metal    | Blue   | Defective | 17.9                             | 7.3                                | 2.1            | 2.1               | 3/21/2016 14:24 |
| 36     | Exterior              | Bozrah   | Bridge 00401                        | Girder     |         | Metal    | Blue   | Defective | 22.5                             | 9.7                                | 2.3            | 1.5               | 3/21/2016 14:24 |
| 37     | Exterior              | Bozrah   | Bridge 00401                        | Girder     |         | Metal    | Blue   | Defective | 22.7                             | 10.8                               | 2.0            | 1.4               | 3/21/2016 14:25 |
| 38     | Exterior              | Bozrah   | Bridge 00401                        | Bearing    |         | Metal    | Blue   | Defective | 16.1                             | 8.9                                | 2.1            | 1.4               | 3/21/2016 14:26 |
| 39     | Exterior              | Bozrah   | Bridge 00401                        | Bearing    |         | Metal    | Blue   | Defective | 21.2                             | 8.3                                | 2.0            | 1.9               | 3/21/2016 14:28 |
| 40     | Exterior              | Bozrah   | Bridge 00401                        | Cross beam |         | Metal    | Grey   | Defective | 25.2                             | 12.5                               | 2.4            | 1.2               | 3/21/2016 14:28 |
| 41     | Exterior              | Bozrah   | Bridge 00402                        | Railing    |         | Metal    | Blue   | Defective | 18.7                             | 8.0                                | 2.2            | 1.9               | 3/21/2016 14:49 |
| 42     | Exterior              | Bozrah   | Bridge 00402                        | Railing    |         | Metal    | Blue   | Defective | 23.5                             | 9.0                                | 2.1            | 1.9               | 3/21/2016 14:50 |

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



**Lead Based Paint Measurement Summary Table**

Device(s): Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer  
 Site: 8 Bridges, District 2, Bozrah, Norwich 7 Stonington  
 Project #: 222165.5310.0710  
 Date(s): 3/21/16-3/23/16  
 Inspector: Hilton Hernandez (Lead Inspector/RA #002231) & David Heelon (Lead Inspector/RA #002188)

| Number | Interior/<br>Exterior | Location   | Bridge No.       | Structure      | Feature | Material | Color  | Condition | Reading<br>(mg/cm <sup>2</sup> ) | Precision<br>(mg/cm <sup>2</sup> ) | Depth<br>Index | Duration<br>(sec) | Date/Time       |
|--------|-----------------------|------------|------------------|----------------|---------|----------|--------|-----------|----------------------------------|------------------------------------|----------------|-------------------|-----------------|
| 43     | Exterior              | Bozrah     | Bridge 00402     | Railing        |         | Metal    | Blue   | Defective | 16.7                             | 7.5                                | 2.1            | 1.9               | 3/21/2016 14:50 |
| 44     | Exterior              | Bozrah     | Bridge 00402     | Girder         |         | Metal    | Blue   | Defective | 19.0                             | 7.2                                | 2.2            | 2.2               | 3/21/2016 14:51 |
| 45     | Exterior              | Bozrah     | Bridge 00402     | Girder         |         | Metal    | Blue   | Defective | 19.3                             | 9.0                                | 1.6            | 1.6               | 3/21/2016 14:52 |
| 46     | Exterior              | Bozrah     | Bridge 00402     | Girder         |         | Metal    | Blue   | Defective | 17.0                             | 8.4                                | 2.1            | 1.6               | 3/21/2016 14:52 |
| 47     | Exterior              | Bozrah     | Bridge 00402     | Bearing        |         | Metal    | Blue   | Defective | 8.6                              | 7.3                                | 1.9            | 1.2               | 3/21/2016 14:52 |
| 48     | Exterior              | Bozrah     | Bridge 00402     | Bearing        |         | Metal    | Blue   | Defective | 2.8                              | 0.8                                | 1.7            | 1.9               | 3/21/2016 14:53 |
| 49     |                       |            | 0.7 calibration  |                |         |          |        |           | 0.8                              | 0.1                                | 1.2            | 6.7               | 3/21/2016 15:31 |
| 50     |                       |            | 3.6 calibration  |                |         |          |        |           | 3.6                              | 0.3                                | 1.3            | 5.3               | 3/21/2016 15:32 |
| 51     |                       |            | 1.6 calibration  |                |         |          |        |           | 1.5                              | 0.4                                | 1.1            | 2.1               | 3/21/2016 15:33 |
| 52     |                       |            | Self-Calibration |                |         |          |        |           |                                  |                                    |                |                   |                 |
| 53     |                       |            | 0.3 calibration  |                |         |          |        |           | 0.3                              | 0.2                                | 1.0            | 1.5               | 3/22/2016 9:42  |
| 54     |                       |            | 1.6 calibration  |                |         |          |        |           | 1.5                              | 0.4                                | 1.2            | 2.9               | 3/22/2016 9:45  |
| 55     |                       |            | 3.7 calibration  |                |         |          |        |           | 3.4                              | 0.3                                | 1.2            | 4.5               | 3/22/2016 9:46  |
| 56     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.1                              | 0.0                                | 1.9            | 5.5               | 3/22/2016 9:57  |
| 57     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 1.8            | 8.2               | 3/22/2016 9:59  |
| 58     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 1.0            | 3.8               | 3/22/2016 10:01 |
| 59     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 24.6                             | 4.0                                | 2.5            | 3.4               | 3/22/2016 10:02 |
| 60     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 1.6                              | 0.2                                | 2.1            | 6.0               | 3/22/2016 10:03 |
| 61     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.3                              | 0.1                                | 2.3            | 5.0               | 3/22/2016 10:05 |
| 62     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 1.0            | 3.8               | 3/22/2016 10:06 |
| 63     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Intact    | 0.0                              | 0.0                                | 1.0            | 4.8               | 3/22/2016 10:07 |
| 64     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 0.1                              | 0.0                                | 1.9            | 8.2               | 3/22/2016 10:12 |
| 65     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 0.1                              | 0.0                                | 2.1            | 4.8               | 3/22/2016 10:14 |
| 66     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.2            | 5.0               | 3/22/2016 10:16 |
| 67     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 18.4                             | 3.8                                | 2.3            | 3.1               | 3/22/2016 10:17 |
| 68     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 11.1                             | 3.0                                | 2.3            | 3.1               | 3/22/2016 10:17 |
| 69     | Exterior              | Stonington | Bridge 01802     | Cross beam     |         | Metal    | Green  | Defective | 33.7                             | 8.6                                | 2.6            | 2.6               | 3/22/2016 10:20 |
| 70     | Exterior              | Stonington | Bridge 01802     | Girder         |         | Metal    | Green  | Defective | 32.3                             | 10.0                               | 2.5            | 2.1               | 3/22/2016 10:21 |
| 71     | Exterior              | Stonington | Bridge 01802     | Rocker bearing |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 5.8               | 3/22/2016 10:23 |
| 72     | Exterior              | Stonington | Bridge 01802     | Rocker bearing |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 4.8               | 3/22/2016 10:26 |
| 73     | Exterior              | Stonington | Bridge 01802     | Rocker bearing |         | Metal    | Green  | Defective | 7.2                              | 4.0                                | 7.5            | 2.1               | 3/22/2016 10:27 |
| 74     | Exterior              | Stonington | Bridge 01802     | Railing        |         | Metal    | Silver | Defective | 18.6                             | 3.6                                | 3.1            | 3.3               | 3/22/2016 10:57 |
| 75     | Exterior              | Stonington | Bridge 01802     | Railing        |         | Metal    | Silver | Defective | 11.9                             | 3.1                                | 2.3            | 3.1               | 3/22/2016 10:59 |
| 76     | Exterior              | Stonington | Bridge 01802     | Railing        | Support | Metal    | Silver | Defective | 23.7                             | 3.2                                | 2.8            | 4.8               | 3/22/2016 11:01 |
| 77     | Exterior              | Stonington | Bridge 01802     | Railing        | Support | Metal    | Silver | Defective | 19.2                             | 3.8                                | 2.4            | 3.1               | 3/22/2016 11:01 |
| 78     |                       |            |                  |                |         |          |        |           |                                  |                                    |                |                   |                 |
| 79     | Exterior              | Stonington | Bridge 01803     | Cross beam     |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.1            | 4.3               | 3/22/2016 11:17 |
| 80     | Exterior              | Stonington | Bridge 01803     | Cross beam     |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 10.7              | 3/22/2016 11:18 |
| 81     | Exterior              | Stonington | Bridge 01803     | Girder         |         | Metal    | Green  | Defective | 2.2                              | 0.6                                | 2.0            | 2.6               | 3/22/2016 11:19 |
| 82     | Exterior              | Stonington | Bridge 01803     | Girder         |         | Metal    | Green  | Defective | 5.2                              | 2.1                                | 2.1            | 3.8               | 3/22/2016 11:20 |
| 83     | Exterior              | Stonington | Bridge 01803     | Girder         |         | Metal    | Green  | Defective | 10.3                             | 5.7                                | 2.6            | 2.1               | 3/22/2016 11:21 |
| 84     | Exterior              | Stonington | Bridge 01803     | Rocker bearing |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.4            | 4.5               | 3/22/2016 11:22 |

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|--------|-----------------------|------------|------------------|----------------|---------|----------|--------|-----------|----------------------------------|------------------------------------|----------------|-------------------|-----------------|
| 85     | Exterior              | Stonington | Bridge 01803     | Rocker bearing |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 8.2               | 3/22/2016 11:24 |
| 86     | Exterior              | Stonington | Bridge 01803     | Rocker bearing |         | Metal    | Green  | Defective | 0.0                              | 0.0                                | 1.0            | 5.3               | 3/22/2016 11:27 |
| 87     | Exterior              | Stonington | Bridge 01803     | Railing        |         | Metal    | Silver | Defective | 16.9                             | 6.3                                | 2.3            | 2.4               | 3/22/2016 11:44 |
| 88     | Exterior              | Stonington | Bridge 01803     | Railing        |         | Metal    | Silver | Defective | 16.8                             | 6.8                                | 2.3            | 2.1               | 3/22/2016 11:45 |
| 89     | Exterior              | Stonington | Bridge 01803     | Railing        |         | Metal    | Silver | Defective | 12.7                             | 5.5                                | 2.1            | 2.4               | 3/22/2016 11:46 |
| 90     | Exterior              | Stonington | Bridge 01803     | Railing        |         | Metal    | Silver | Defective | 13.3                             | 6.7                                | 2.3            | 1.9               | 3/22/2016 11:47 |
| 91     |                       |            | 0.3 calibration  |                |         |          |        |           | 0.3                              | 0.2                                | 1.1            | 2.4               | 3/22/2016 12:55 |
| 92     |                       |            | 1.6 calibration  |                |         |          |        |           | 1.5                              | 0.4                                | 1.1            | 2.2               | 3/22/2016 12:56 |
| 93     |                       |            | 3.7 calibration  |                |         |          |        |           | 3.4                              | 0.4                                | 1.2            | 3.4               | 3/22/2016 12:56 |
| 94     |                       |            | Self-Calibration |                |         |          |        |           | 1.4                              | 0.0                                |                | 223.4             | 3/23/2016 9:55  |
| 95     |                       |            | 0.3 calibration  |                |         |          |        |           | 0.3                              | 0.2                                | 1.0            | 2.4               | 3/23/2016 9:59  |
| 96     |                       |            | 1.6 calibration  |                |         |          |        |           | 1.5                              | 0.2                                | 1.1            | 4.1               | 3/23/2016 9:59  |
| 97     |                       |            | 3.6 calibration  |                |         |          |        |           | 3.5                              | 0.6                                | 1.2            | 3.1               | 3/23/2016 9:59  |
| 98     | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 8.4                              | 5.0                                | 1.6            | 2.1               | 3/23/2016 10:42 |
| 99     | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 11.0                             | 5.4                                | 1.8            | 2.2               | 3/23/2016 10:43 |
| 100    | Exterior              | Norwich    | Bridge 00281     | Girder         |         | Metal    | Grey   | Intact    | 10.4                             | 5.6                                | 1.7            | 2.1               | 3/23/2016 10:46 |
| 101    | Exterior              | Norwich    | Bridge 00281     | Girder         |         | Metal    | Grey   | Intact    | 8.6                              | 5.6                                | 1.6            | 1.7               | 3/23/2016 10:47 |
| 102    | Exterior              | Norwich    | Bridge 00281     | Rocker bearing |         | Metal    | Grey   | Intact    | 11.3                             | 5.6                                | 1.8            | 1.9               | 3/23/2016 10:48 |
| 103    | Exterior              | Norwich    | Bridge 00281     | Rocker bearing |         | Metal    | Grey   | Intact    | 8.0                              | 4.8                                | 1.7            | 1.9               | 3/23/2016 10:49 |
| 104    | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 7.3                              | 3.8                                | 1.7            | 0.9               | 3/23/2016 10:52 |
| 105    | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 9.7                              | 6.1                                | 1.8            | 1.7               | 3/23/2016 10:53 |
| 106    | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 7.3                              | 3.8                                | 1.7            | 0.7               | 3/23/2016 10:53 |
| 107    | Exterior              | Norwich    | Bridge 00281     | Cross beam     |         | Metal    | Grey   | Intact    | 7.3                              | 4.2                                | 1.7            | 0.7               | 3/23/2016 10:53 |
| 108    | Exterior              | Norwich    | Bridge 00281     | Girder         |         | Metal    | Grey   | Intact    | 11.1                             | 5.6                                | 1.9            | 2.1               | 3/23/2016 10:54 |
| 109    | Exterior              | Norwich    | Bridge 00281     | Girder         |         | Metal    | Grey   | Intact    | 9.9                              | 5.8                                | 1.7            | 1.9               | 3/23/2016 10:54 |
| 110    | Exterior              | Norwich    | Bridge 00281     | Rocker         |         | Metal    | Grey   | Intact    | 4.5                              | 1.2                                | 1.6            | 1.9               | 3/23/2016 10:58 |
| 111    | Exterior              | Norwich    | Bridge 00281     | Rocker         |         | Metal    | Grey   | Intact    | 5.2                              | 1.3                                | 1.8            | 2.1               | 3/23/2016 10:58 |
| 112    | Exterior              | Norwich    | Bridge 00281     | Abutment       |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 3.4            | 4.4               | 3/23/2016 11:04 |
| 113    | Exterior              | Norwich    | Bridge 00281     | Abutment       |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 1.1            | 5.6               | 3/23/2016 11:05 |
| 114    | Exterior              | Norwich    | Bridge 00934     | Girder         |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 1.7            | 5.5               | 3/23/2016 12:17 |
| 115    | Exterior              | Norwich    | Bridge 00934     | Girder         |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 2.0            | 6.5               | 3/23/2016 12:18 |
| 116    | Exterior              | Norwich    | Bridge 00934     | Girder         |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 1.0            | 0.2               | 3/23/2016 12:19 |
| 117    | Exterior              | Norwich    | Bridge 00934     | Girder         |         | Concrete | White  | Defective | 0.0                              | 0.0                                | 1.0            | 4.4               | 3/23/2016 12:19 |
| 118    | Exterior              | Norwich    | Bridge 00934     | Rocker bearing |         | Metal    | Silver | Defective | 3.3                              | 0.9                                | 1.6            | 2.1               | 3/23/2016 12:22 |
| 119    | Exterior              | Norwich    | Bridge 00934     | Rocker bearing |         | Metal    | Silver | Defective | 6.8                              | 2.0                                | 1.7            | 4.3               | 3/23/2016 12:32 |
| 120    |                       |            | 0.3 calibration  |                |         |          |        |           | 0.4                              | 0.1                                | 1.1            | 4.1               | 3/23/2016 14:32 |
| 121    |                       |            | 1.6 calibration  |                |         |          |        |           | 1.5                              | 0.4                                | 1.1            | 2.6               | 3/23/2016 14:33 |
| 122    |                       |            | 3.6 calibration  |                |         |          |        |           | 4.1                              | 0.3                                | 1.3            | 7.2               | 3/23/2016 14:33 |

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

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# 6030513

Report Date: March 29, 2016  
Project: CTDOT, Bridge  
Project Number: District 2 Bridge Inspections  
PO Number: 222165.5310.0710

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



New York Certification: 11982  
Rhode Island Certification: 199

CET # : 6030513

Project: CTDOT, Bridge

Project Number: District 2 Bridge Inspections

**SAMPLE SUMMARY**

The sample(s) were received at 24.2°C.

This report contains analytical data associated with following samples only.

| Sample ID                  | Laboratory ID | Matrix     | Collection Date/Time | Receipt Date |
|----------------------------|---------------|------------|----------------------|--------------|
| 1 Bridge 00402 Bozrah      | 6030513-01    | Paint Chip | 3/21/2016 14:50      | 03/23/2016   |
| 2 Bridge 00401 Bozrah      | 6030513-02    | Paint Chip | 3/21/2016 14:00      | 03/23/2016   |
| 3 Bridge 00407 Norwich     | 6030513-03    | Paint Chip | 3/21/2016 12:25      | 03/23/2016   |
| 4 Bridge 00407 Norwich     | 6030513-04    | Paint Chip | 3/21/2016 12:42      | 03/23/2016   |
| 5 Bridge 01802 Stonington  | 6030513-05    | Paint Chip | 3/22/2016 10:45      | 03/23/2016   |
| 6 Bridge 01802 Stonington  | 6030513-06    | Paint Chip | 3/22/2016 11:05      | 03/23/2016   |
| 7 Bridge 00408 Norwich     | 6030513-07    | Paint Chip | 3/21/2016 11:26      | 03/23/2016   |
| 8 Bridge 00408 Norwich     | 6030513-08    | Paint Chip | 3/21/2016 11:45      | 03/23/2016   |
| 10 Bridge 01803 Stonington | 6030513-09    | Paint Chip | 3/22/2016 11:46      | 03/23/2016   |
| 6 Bridge 01803 Stonington  | 6030513-10    | Paint Chip | 3/22/2016 11:30      | 03/23/2016   |

CET # : 6030513

Project: CTDOT, Bridge

Project Number: District 2 Bridge Inspections

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

**Analyst: SS**

**Prep: EPA 3050B**

**Matrix: Paint Chip**

| Laboratory ID | Client Sample ID          | Result | RL   | Units | Dilution | Batch   | Prepared   | Date/Time Analyzed | Notes |
|---------------|---------------------------|--------|------|-------|----------|---------|------------|--------------------|-------|
| 6030513-08    | 8 Bridge 00408<br>Norwich | ND     | 0.10 | %     | 1        | B6C2914 | 03/29/2016 | 03/29/2016 16:17   |       |

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

**Analyst: SS**

**Prep: EPA 3005A-1311**

**Matrix: Extract**

| Laboratory ID | Client Sample ID              | Result | RL    | Units | Dilution | Batch   | Prepared   | Date/Time Analyzed | Notes |
|---------------|-------------------------------|--------|-------|-------|----------|---------|------------|--------------------|-------|
| 6030513-01    | 1 Bridge 00402<br>Bozrah      | 280    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:16   |       |
| 6030513-02    | 2 Bridge 00401<br>Bozrah      | 210    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:20   |       |
| 6030513-03    | 3 Bridge 00407<br>Norwich     | 110    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:25   |       |
| 6030513-04    | 4 Bridge 00407<br>Norwich     | 0.73   | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:29   |       |
| 6030513-05    | 5 Bridge 01802<br>Stonington  | 160    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:34   |       |
| 6030513-06    | 6 Bridge 01802<br>Stonington  | 230    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:38   |       |
| 6030513-07    | 7 Bridge 00408<br>Norwich     | 93     | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:51   |       |
| 6030513-09    | 10 Bridge 01803<br>Stonington | 180    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 16:55   |       |
| 6030513-10    | 6 Bridge 01803<br>Stonington  | 190    | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 17:00   |       |

CET # : 6030513

Project: CTDOT, Bridge

Project Number: District 2 Bridge Inspections

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

Sincerely,



David Ditta  
Laboratory Director

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.

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 the specified detection limit

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

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

Complete Environmental Testing, Inc.

80 Lupes Drive, Stratford, CT 06615 • Tel: 203-377-9984 • Fax: 203-377-9952 • www.cetlabs.com

CET # : 6030513

Project: CTDOT, Bridge

Project Number: District 2 Bridge Inspections

CERTIFICATIONS

Certified Analyses included in this Report

| Analyte                   | Certifications |
|---------------------------|----------------|
| <i>EPA 6010C in Soil</i>  |                |
| Lead                      | CT,NY          |
| <i>EPA 6010C in Solid</i> |                |
| Lead                      | CT             |

Complete Environmental Testing operates under the following certifications and accreditations:

| Code | Description                    | Number | Expires    |
|------|--------------------------------|--------|------------|
| CT   | Connecticut Public Health      | PH0116 | 09/30/2016 |
| NY   | New York Certification (NELAC) | 11982  | 04/01/2016 |



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

**CHAIN OF CUSTODY**



6030513

Edition: September 2007  
 Supersede Previous Edition

LAB ID #

| TURNAROUND TIME |                                     |      |      |  |
|-----------------|-------------------------------------|------|------|--|
| 24hr            | 48hr                                | 3day | 5day |  |
|                 | <input checked="" type="checkbox"/> |      |      |  |
| 24hr            | 48hr                                | 3day | 5day |  |

PROJECT NUMBER: 222165.3310.0710  
 PROJECT NAME: District 2 Bridge Inspections  
 INSPECTOR: Mike Kostubog  
 SIGNATURE: *[Signature]*

| FIELD SAMPLE NUMBER | DATE    | TIME | TYPE |      | SAMPLE LOCATION         | TECP Pb | Total Pb | NOTES  |
|---------------------|---------|------|------|------|-------------------------|---------|----------|--|
|                     |         |      | COMP | GRAB |                         |         |          |  |
| #1                  | 3/21/16 | 1450 |      |      | Bridge 00402 - Bozrah   | X       |          | Paint from Railings & Seat Structural - Blue/Silver/Orange |
| #2                  |         | 1400 |      |      | Bridge 00501 - Bozrah   | X       |          | Paint from Railings & Seat Structural - Blue/Silver/Orange |
| #3                  |         | 1225 |      |      | Bridge 00402 - Norwich  | X       |          | Paint from Structural - Green/Orange                       |
| #4                  |         | 1242 |      |      | Bridge 01802 - Stamford | X       |          | Paint from Railings System - Grey/Red                      |
| #5                  | 3/22/16 | 1045 |      |      | Bridge 01802 - Stamford | X       |          | Paint from Railings System - Silver/Orange                 |
| #6                  |         | 1105 |      |      | Bridge 00408 - Norwich  | X       |          | Paint from Structural - Green/Silver/Orange                |
| #7                  | 3/21/16 | 1126 |      |      | Bridge 00408 - Norwich  | X       |          | Paint from Structural - Green/Silver/Orange                |
| #8                  |         | 1145 |      |      |                         | X       |          | Paint from Railings System - Paint Chip - Grey/Red/Orange  |
| #9                  |         | 1145 |      |      |                         | X       |          | Paint from Railings System - Silver/Orange                 |
| #10                 | 3/22/16 | 1146 |      |      | Bridge 01803 - Stamford | X       |          | Paint from Railings System - Silver/Orange                 |
| #11                 |         | 1130 |      |      |                         | X       |          | Paint from Structural - Green/Silver/Orange                |

Relinquished by: (Signature) *[Signature]* Date: 3/23/16 Received by: (Signature) *[Signature]* Date: 3/23/16  
 (Printed) Mike Kostubog Time: 1000 (Printed) Robert Puskas  
 Remarks: only analyze #9 if detectable amounts of Pb are found in it  
 (Printed) Robert Puskas Date: 3/23/16 Received by: (Signature) *[Signature]* Date: 3/23/16  
 (Printed) Robert Puskas Time: 1575 (Printed) Robert Puskas  
 Page of

*[Handwritten]* 222165.3310.0710

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# 6030560

Report Date: March 29, 2016  
Project: CTDOT, Bridge  
Project Number: Bridges 00281, 00934  
PO Number: 222165.5310.0710

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



New York Certification: 11982  
Rhode Island Certification: 199

CET # : 6030560

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

**SAMPLE SUMMARY**

The sample(s) were received at 25.5°C.

This report contains analytical data associated with following samples only.

| Sample ID      | Laboratory ID | Matrix     | Collection Date/Time | Receipt Date |
|----------------|---------------|------------|----------------------|--------------|
| 1 Bridge 00281 | 6030560-01    | Paint Chip | 3/23/2016 11:25      | 03/24/2016   |
| 2 Bridge 00934 | 6030560-02    | Paint Chip | 3/23/2016 12:40      | 03/24/2016   |
| 3 Bridge 00281 | 6030560-03    | Paint Chip | 3/23/2016 11:08      | 03/24/2016   |
| 4 Bridge 00934 | 6030560-04    | Paint Chip | 3/23/2016 12:28      | 03/24/2016   |

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

**Analyst: SS**

**Prep: EPA 3050B**

**Matrix: Paint Chip**

| Laboratory ID | Client Sample ID | Result      | RL   | Units | Dilution | Batch   | Prepared   | Date/Time Analyzed | Notes |
|---------------|------------------|-------------|------|-------|----------|---------|------------|--------------------|-------|
| 6030560-03    | 3 Bridge 00281   | ND          | 0.10 | %     | 1        | B6C2914 | 03/29/2016 | 03/29/2016 16:21   |       |
| 6030560-04    | 4 Bridge 00934   | <b>0.14</b> | 0.10 | %     | 1        | B6C2914 | 03/29/2016 | 03/29/2016 16:26   |       |

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

**Analyst: SS**

**Prep: EPA 3005A-1311**

**Matrix: Extract**

| Laboratory ID | Client Sample ID | Result     | RL    | Units | Dilution | Batch   | Prepared   | Date/Time Analyzed | Notes |
|---------------|------------------|------------|-------|-------|----------|---------|------------|--------------------|-------|
| 6030560-01    | 1 Bridge 00281   | <b>300</b> | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 17:31   |       |
| 6030560-02    | 2 Bridge 00934   | <b>3.1</b> | 0.013 | mg/L  | 1        | B6C2518 | 03/25/2016 | 03/25/2016 17:44   |       |

CET # : 6030560

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

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

Sincerely,



David Ditta  
Laboratory Director

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.

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 the specified detection 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 # : 6030560

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

CERTIFICATIONS

Certified Analyses included in this Report

| Analyte                   | Certifications |
|---------------------------|----------------|
| <i>EPA 6010C in Soil</i>  |                |
| Lead                      | CT,NY          |
| <i>EPA 6010C in Solid</i> |                |
| Lead                      | CT             |

Complete Environmental Testing operates under the following certifications and accreditations:

| Code | Description                    | Number | Expires    |
|------|--------------------------------|--------|------------|
| CT   | Connecticut Public Health      | PH0116 | 09/30/2016 |
| NY   | New York Certification (NELAC) | 11982  | 04/01/2016 |



21 GRIFFIN ROAD NORTH  
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FAX (860) 298-6380

### TCLP CHAIN OF CUSTODY



Edition: November 2013  
Supersede Previous Edition

LAB ID #

TURNAROUND TIME

|      |                                     |      |      |
|------|-------------------------------------|------|------|
| 24hr | 48hr                                | 3day | 5day |
|      | <input checked="" type="checkbox"/> |      |      |
| 24hr | 48hr                                | 3day | 5day |

PROJECT NUMBER: 222165.5310.0710

PROJECT NAME: Bridges 00281400934

INSPECTOR: (SIGNATURE) *David Heelon* (PRINTED)

*David Heelon*

*David Heelon*

| FIELD SAMPLE NUMBER | DATE    | TIME | TYPE |      | SAMPLE LOCATION                   | PARAMETERS |                     |               |         |         | MATERIAL |                                     |
|---------------------|---------|------|------|------|-----------------------------------|------------|---------------------|---------------|---------|---------|----------|-------------------------------------|
|                     |         |      | COMP | GRAB |                                   | RCRA Pb    | RCRA Pb, AS, CR, CD | 8 RCRA Metals | TCLP Pb | SPLP Pb |          | Total Lead                          |
| 1                   | 3/23/16 | 1135 | X    | X    | Bridge 00281 on Steel Bridge      |            |                     |               | X       |         |          | Paint chips (Silver)                |
| 2                   |         | 1240 | X    | X    | Bridge 00934 on Steel Deck        |            |                     |               | X       |         |          | Paint chips (Silver)                |
| 3                   |         | 1108 | X    | X    | Bridge 00281 on Concrete Abutment |            |                     |               | X       |         |          | Paint chips (off white/green/black) |
| 4                   |         | 1228 | X    | X    | Bridge 00934 on Concrete Abutment |            |                     |               | X       |         |          | Paint chips (white)                 |
| 5                   |         | 1110 | X    | X    | Bridge 00281 on Concrete Abutment |            |                     |               | X       |         |          | Paint chips (off white/green/black) |
| 6                   |         | 1230 | X    | X    | Bridge 00934 on Concrete Abutment |            |                     |               | X       |         |          | Paint chips (white)                 |

|  |                  |  |                  |
|--|------------------|--|------------------|
| Relinquished by: (Signature)<br><i>David M. Heelon</i> | Date:<br>3/23/16 | Received by: (Signature)<br><i>Paul M. G. 8-2445</i> | Date:<br>3-24-16 |
| (Printed)<br>David M. Heelon                           | Time:<br>1530    | (Printed)<br>PAUL M. G. 8-2445                       | Time:<br>1530    |
| Relinquished by: (Signature)                           | Date:            | Received by: (Signature)                             | Date:            |
| (Printed)  | Time:            | (Printed)  | Time:            |

IF sample # 3 (Total Lead) is positive, then analyze sample #5 (for TCLP)  
 IF sample # 4 (Total Lead) is positive, then analyze sample # 6 (for TCLP)  
 Email: david.heelon@trc-solutions.com  
 TSP 1/25/16

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# 6030634

Report Date: April 01, 2016  
Project: CTDOT, Bridge  
Project Number: Bridges 00281, 00934  
PO Number: 222165.5310.0710

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



New York Certification: 11982  
Rhode Island Certification: 199

CET # : 6030634

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

**SAMPLE SUMMARY**

The sample(s) were received at 25.5°C.

This report contains analytical data associated with following samples only.

| Sample ID      | Laboratory ID | Matrix     | Collection Date/Time | Receipt Date |
|----------------|---------------|------------|----------------------|--------------|
| 6 Bridge 00934 | 6030634-01    | Paint Chip | 3/23/2016 12:30      | 03/24/2016   |

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

**Analyst: SS**

**Prep: EPA 3005A-1311**

**Matrix: Extract**

| Laboratory ID | Client Sample ID | Result | RL    | Units | Dilution | Batch   | Prepared   | Date/Time Analyzed | Notes |
|---------------|------------------|--------|-------|-------|----------|---------|------------|--------------------|-------|
| 6030634-01    | 6 Bridge 00934   | ND     | 0.013 | mg/L  | 1        | B6C3145 | 03/31/2016 | 04/01/2016 09:17   |       |

CET #: 6030634

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

### QUALITY CONTROL SECTION

#### Batch B6C3145 - EPA 6010C

| Analyte                                | Result (mg/L) | RL (mg/L) | Spike Level | Source Result | % Rec | % Rec Limits | RPD   | RPD Limit | Notes                                  |
|--|---------------|-----------|-------------|---------------|-------|--------------|-------|-----------|--|
| <b>Blank (B6C3145-BLK1)</b>            |               |           |             |               |       |              |       |           | Prepared: 3/31/2016 Analyzed: 4/1/2016 |
| Lead                                   | ND            | 0.013     |             |               |       |              |       |           |  |
| <b>LCS (B6C3145-BS1)</b>               |               |           |             |               |       |              |       |           | Prepared: 3/31/2016 Analyzed: 4/1/2016 |
| Lead                                   | 0.198         | 0.013     | 0.200       |               | 99.1  | 80 - 120     |       |           |  |
| <b>Duplicate (B6C3145-DUP1)</b>        |               |           |             |               |       |              |       |           | Prepared: 3/31/2016 Analyzed: 4/1/2016 |
| Lead                                   | ND            | 0.013     |             | ND            |       |              |       | 20        |  |
| <b>Matrix Spike (B6C3145-MS1)</b>      |               |           |             |               |       |              |       |           | Prepared: 3/31/2016 Analyzed: 4/1/2016 |
| Lead                                   | 0.209         | 0.013     | 0.200       | ND            | 104   | 75 - 125     |       |           |  |
| <b>Matrix Spike Dup (B6C3145-MSD1)</b> |               |           |             |               |       |              |       |           | Prepared: 3/31/2016 Analyzed: 4/1/2016 |
| Lead                                   | 0.210         | 0.013     | 0.200       | ND            | 105   | 75 - 125     | 0.620 | 20        |  |

CET # : 6030634

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934



80 Lupes Drive  
Stratford, CT 06615

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

### Quality Control Definitions and Abbreviations

|                              |  |
|------------------------------|--|
| Internal Standard (IS)       | An Analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.   |
| Surrogate Recovery           | The % recovery for non-tarer organic compounds that are spiked into all samples. Used to determine method performance.   |
| Continuing Calibration Batch | An analytical standard analyzed with each set of samples to verify initial calibration of the system. Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period. |
| ND                           | Not detected   |
| RL                           | Reporting Limit  |
| Dilution                     | Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.   |
| Duplicate                    | Result from the duplicate analysis of a sample.  |
| Result                       | Amount of analyte found in a sample.   |
| Spike Level                  | Amount of analyte added to a sample  |
| Matrix Spike Result          | Amount of analyte found including amount that was spiked.  |
| Matrix Spike Dup             | Amount of analyte foun in duplicate spikes including amount that was spike.  |
| Matrix Spike % Recovery      | % Recovery of spiked amount in sample.   |
| Matrix Spike Dup % Recovery  | % Recovery of spiked duplicate amount in sample.   |
| RPD                          | Relative percent difference between Matrix Spike and Matrix Spike Duplicate.   |
| Blank                        | Method Blank that has been taken through all steps of the analysis.  |
| LCS % Recovery               | Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.   |
| Recovery Limits              | A range within which specified measurements results must fall to be compliant.   |
| CC                           | Calibration Verification   |

#### Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116  
Massachusetts Laboratory Certification M-CT903

New York Certification 11982  
Rhode Island Certification 199

Complete Environmental Testing, Inc.

80 Lupes Drive, Stratford, CT 06615 • Tel: 203-377-9984 • Fax: 203-377-9952 • www.cetlabs.com

CET #: 6030634

Project: CTDOT, Bridge

Project Number: Bridges 00281, 00934

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

Sincerely,



David Ditta  
Laboratory Director

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.

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 the specified detection 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 # : 6030634  
Project: CTDOT, Bridge  
Project Number: Bridges 00281, 00934

CERTIFICATIONS

Certified Analyses included in this Report

Analyte Certifications

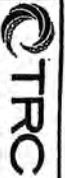
---

*EPA 6010C in Soil*

Lead CT,NY

Complete Environmental Testing operates under the following certifications and accreditations:

| Code | Description                    | Number | Expires    |
|------|--------------------------------|--------|------------|
| CT   | Connecticut Public Health      | PH0116 | 09/30/2016 |
| NY   | New York Certification (NELAC) | 11982  | 04/01/2016 |



6030634

Edition: November 2013  
Supersede Previous Edition

### TCLP CHAIN OF CUSTODY

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

PROJECT NUMBER: 222165.5310.0710  
PROJECT NAME: Bridges 00281 & 00934

INSPECTOR: (SIGNATURE) David Heelon

(PRINTED) David Heelon

LAB ID #

TURNAROUND TIME

|      |                                     |      |      |
|------|-------------------------------------|------|------|
| 24hr | 48hr                                | 3day | 5day |
|      | <input checked="" type="checkbox"/> |      |      |
| 24hr | 48hr                                | 3day | 5day |

| FIELD SAMPLE NUMBER | DATE    | TIME | TYPE |      | SAMPLE LOCATION                                | PARAMETERS |                     |               |         |         | MATERIAL |                                     |
|---------------------|---------|------|------|------|--|------------|---------------------|---------------|---------|---------|----------|-------------------------------------|
|                     |         |      | COMP | GRAB |  | RCRA Pb    | RCRA Pb, AS, CR, CD | 8 RCRA Metals | TCLP Pb | SPLP Pb |          |                                     |
| 1                   | 3/23/16 | 1125 | X    |      | Bridge 00281 Under bridge on Steel Beam        |            |                     |               | X       |         |          | Paint chips (Silver)                |
| 2                   |         | 1240 | X    |      | Bridge 00934 Steel Recker                      |            |                     |               | X       |         |          | Paint chips (Silver)                |
| 3                   |         | 1108 | X    |      | Bridge 00281 Under Bridge on Concrete abutment |            |                     |               | X       |         |          | Paint chips (off white/green/black) |
| 4                   |         | 1228 | X    |      | Bridge 00934 Under Bridge on concrete abutment |            |                     |               | X       |         |          | Paint chips (white)                 |
| 5                   |         | 1110 | X    |      | Bridge 00281 Under Bridge on concrete abutment |            |                     |               | X       |         |          | Paint chips (off white/green/black) |
| 6                   |         | 1230 | X    |      | Bridge 00934 Under Bridge on concrete abutment |            |                     |               | X       |         |          | Paint chips (white)                 |

|   |                  |   |                  |   |                  |   |
|---|------------------|---|------------------|---|------------------|---|
| Relinquished by: (Signature)<br>David M. Heelon | Date:<br>3/23/16 | Received by: (Signature)<br>[Signature] | Date:<br>3/24/16 | Relinquished by: (Signature)<br>[Signature] | Date:<br>3/24/16 | Received by: (Signature)<br>[Signature] |
| (Printed)<br>David M. Heelon                    | Time:<br>1530    | (Printed)<br>[Signature]                | Time:<br>1530    | (Printed)<br>[Signature]                    | Time:<br>1530    | (Printed)<br>[Signature]                |

IF sample #3 (Total Lead) is positive, then analyze sample #5 (for TCLP)

~~IF sample #4 (Total Lead) is positive, then analyze sample #6 (for TCLP)~~

Email results to E.O.I.m@trc-solutions.com

TCLP N 25550



**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047756  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00281

**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         | Yes        | No            | --        | 10% synthetic fiber    | ND         | None          |
| 02         | Grey         | Yes        | No            | --        | 10% synthetic fiber    | ND         | None          |
| 03         | Black        | Yes        | No            | --        | 5% synthetic fiber     | ND         | None          |
| 04         | Black        | Yes        | No            | --        | 5% synthetic fiber     | ND         | None          |
| 05         | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 06         | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 07         | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 08         | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 09         | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 010        | Black        | Yes        | No            | --        | ---                    | ND         | None          |

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



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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the 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: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, Approved Signatory

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code I01424-0 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



# 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 15693  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #00281  
**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 | ANT |                  |           |         |                  |                    |                  |
| NT119573 | 02       | Grey Pliable Expansion Joint |       | .2383          | .00              | .00 | .00 | .00 | .00 | 13.01            | 76.67     | 10.32   | ND               | Yes                | No               |
| NT119574 | 04       | Black Tar Expansion Joint    |       | .1267          | .90              | .00 | .00 | .00 | .00 | 11.29            | 72.45     | 16.26   | TR               | Yes                | No               |
| NT119575 | 08       | Tar Vapor Barrier            |       | .3900          | .00              | .00 | .00 | .00 | .00 | 10.82            | 76.36     | 12.82   | ND               | Yes                | No               |
| NT119576 | 10       | Asphaltic Plug               |       | .1609          | .00              | .00 | .00 | .00 | .00 | 1.74             | 90.55     | 7.71    | ND               | Yes                | No               |

**Comments:**

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

*Aimee L Cormier*  
 Aimee Cormier, Analyst



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

LAB ID #. 47750

| PROJECT NUMBER       |  | PROJECT NAME                              |  | PARAMETERS                             |  |                  |                                |   | TURNAROUND TIME |                          |  |  |                  |                                |   |  |  |   |
|----------------------|--|---|--|--|--|------------------|--------------------------------|---|-----------------|--------------------------|--|--|------------------|--------------------------------|---|--|--|---|
|                      |  |   |  |  |  |                  |                                |   | PLM:            | 8hr                      | 24hr                                   | 48hr   | 3day             | 5day                           |   |  |  |   |
| 222165.5310.0710     |  | DOT Bridge 00401, RTE 2 EB,<br>Bozrah, CT |  | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | 24hr            | 48hr                     | 3day                                   | 5day   |                  |                                |   |  |  |   |
| SIGNATURE            |  | INSPECTOR                                 |  | MATERIAL                               |  |                  |                                |   |                 |                          |  |  |                  |                                |   |  |  |   |
| <br>Michael Kostruba |  | Michael Kostruba                          |  | FIELD SAMPLE NUMBER                    | DATE   | TIME             | TYPE                           | COMP                                    | GRAB            | SAMPLE LOCATION          | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) |  |  |   |
|                      |  |   |  | 1                                      | 3-21-16  | 1526             | X                              |   | X               | East side-trap-rock berm | X                                      |  |                  |                                |   |  |  | PT1-Black pipe tar coating on drain pipes                               |
|                      |  |   |  | 2                                      | 3-21-16  | 1529             | X                              |   | X               | East side-trap-rock berm | X                                      |  |                  |                                |   |  |  | PT1-Black pipe tar coating on drain pipes                               |
|                      |  |   |  | 3                                      | 3-21-16  | 1407             | X                              |   | X               | North side roadway wall  | X                                      |  |                  |                                |   |  |  | C1-Grey soft caulk in roadway wall at roadway expansion joint locations |
|                      |  |   |  | 4                                      | 3-21-16  | 1409             | X                              |   | X               | South side roadway wall  | X                                      |  |                  |                                |   |  |  | C1-Grey soft caulk in roadway wall at roadway expansion joint locations |
|                      |  |   |  | 5                                      | 3-21-16  | 1419             | X                              |   | X               | South railing system     | X                                      |  |                  |                                |   |  |  | C2-Tan hard caulk around base of railing system supports                |
|                      |  |   |  | 6                                      | 3-21-16  | 1417             | X                              |   | X               | North railing system     | X                                      |  |                  |                                |   |  |  | C2-Tan hard caulk around base of railing system supports                |
|                      |  |   |  | 7                                      | 3-21-16  | 1513             | X                              |   | X               | West abutment            | X                                      |  |                  |                                |   |  |  | VB1-Black tar paper vapor barrier between concrete deck and abutment    |
|                      |  |   |  | 8                                      | 3-21-16  | 1514             | X                              |   | X               | East abutment            | X                                      |  |                  |                                |   |  |  | VB1-Black tar paper vapor barrier between concrete deck and abutment    |
|                      |  |   |  | 9                                      | 3-21-16  | 1411             | X                              |   | X               | Roadway                  | X                                      |  |                  |                                |   |  |  | RET1-Black roadway expansion tar  |

|                              |                  |       |         |   |                     |       |         |
|------------------------------|------------------|-------|---------|---|---------------------|-------|---------|
| Relinquished by: (Signature) |                  | Date: | 3-23-16 | Received by: (Signature)  |                     | Date: | 3/23/16 |
| (Printed)                    | Michael Kostruba | Time: | 1630    | (Printed)   | Kathleen Williamson | Time: | 1630    |
| Send results to EP/SA        |                  |       |         | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Comments: |                     |       |         |



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 TELEPHONE (860) 298-9692  
 FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
 Supersede Previous Edition

LAB ID #. 47750

|   |  |  |  |                        |  |             |  |  |  |   |  |                         |  |  |  |
|---|--|--|--|------------------------|--|-------------|--|--|--|---|--|-------------------------|--|--|--|
| <b>PROJECT NUMBER</b><br>222165.5310.0710 |  | <b>PROJECT NAME</b><br>DOT Bridge 00401, RTE 2 EB,<br>Bozrah, CT |  | <b>PARAMETERS</b>      |  |             |  | <b>PLM:</b><br>8hr                             |  | <b>TEM:</b><br>24hr   |  | <b>TURNAROUND TIME</b>  |  |  |  |
|   |  |  |  |                        |  |             |  | <b>PLM EPA 600/R93/116<br/>(POSITIVE STOP)</b> |  | <b>PLM EPA 600/R93/116<br/>(w/ gravimetric reduction)<br/>(POSITIVE STOP)</b> |  | <b>ANALYZE BY LAYER</b> |  | <b>POINT COUNT<br/>(IF &gt;1% &amp; &lt;10%)</b> |  |
| <b>SIGNATURE</b><br>                      |  | <b>INSPECTOR</b><br>Michael Kostruba                             |  | <b>SAMPLE LOCATION</b> |  | <b>TYPE</b> |  | <b>DATE</b><br>3-21-16                         |  | <b>TIME</b><br>1413   |  | <b>GRAB</b><br>x        |  | <b>ROADWAY</b><br>x                              |  |
| <b>FIELD SAMPLE NUMBER</b><br>10          |  |  |  |                        |  |             |  |  |  |   |  |                         |  |  |  |
| <b>MATERIAL</b>                           |  |  |  |                        |  |             |  |  |  |   |  |                         |  |  |  |

|   |                         |   |                         |
|---|-------------------------|---|-------------------------|
| <b>Relinquished by: (Signature)</b><br> | <b>Date:</b><br>3-23-16 | <b>Received by: (Signature)</b><br>   | <b>Date:</b><br>3/23/16 |
| <b>(Printed)</b><br>Michael Kostruba    | <b>Time:</b><br>1630    | <b>(Printed)</b><br>Kathleen Williamson   | <b>Time:</b><br>1630    |
| <b>Send results to EP/SA</b>            |                         | <b>Condition of Samples:</b><br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                         |
|   |                         | <b>Comments:</b>  |                         |
|   |                         | Page 2 of 2   |                         |

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047750  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00401, Rte. 2 EB, Bozrah, 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          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 2          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 3          | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Tan   | Yes        | No            | --        | ---                    | 10%        | Chrysotile    |
| 6          | --    | --         | --            | --        | --                     | NA/PS      | --            |
| 7          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 9          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 10         | Black | Yes        | No            | --        | ---                    | ND         | None          |

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



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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

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Analyzed by: K. Williamson Reviewed by: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, 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



# 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 15687  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #00401, Rt. 2, EB, Bozrah, 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 |                  |           |         |                  |                    |                  |
| NT119545 | 2        | Black pipe tar coating      |       | .2945          | .00              | .00 | .00 | .00 | .00              | 61.46     | 5.30    | ND               | Yes                | No               |
| NT119546 | 4        | Grey soft caulk             |       | .4994          | .00              | .00 | .00 | .00 | 50.66            | 30.24     | 19.10   | ND               | Yes                | No               |
| NT119547 | 8        | Black tar paper             |       | .0353          | .00              | .00 | .00 | .00 | 5.67             | 82.72     | 11.61   | ND               | Yes                | No               |
| NT119548 | 10       | Black roadway expansion tar |       | .1367          | .00              | .00 | .00 | .00 | 1.69             | 87.56     | 10.75   | ND               | 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



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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
 Supersede Previous Edition

LAB ID #. 47751

| PROJECT NUMBER<br>222165.5310.0710 |  | PROJECT NAME<br>DOT Bridge 00402, RTE 2 WB,<br>Bozrah, CT |  | PARAMETERS                             |  |  |  |                  | TURNAROUND TIME |                                |      |   |      |          |      |
|------------------------------------|--|---|--|--|--|--|--|------------------|-----------------|--------------------------------|------|---|------|----------|------|
|                                    |  |   |  |  |  |  |  |                  | PLM:            | 8hr                            | 24hr | 48hr                                    | 3day | TEM:     | 24hr |
| SIGNATURE                          |  | INSPECTOR   |  | PLM EPA 600/R93/116<br>(POSITIVE STOP) |  | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) |  | ANALYZE BY LAYER |                 | POINT COUNT<br>(IF >1% & <10%) |      | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) |      | MATERIAL |      |
| <br>Michael Kostruba               |  | Michael Kostruba  |  | SAMPLE LOCATION                        |  | PLM EPA 600/R93/116<br>(POSITIVE STOP)                               |  | ANALYZE BY LAYER |                 | POINT COUNT<br>(IF >1% & <10%) |      | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) |      |          |      |
|                                    |  |   |  | TYPE                                   |  | GRAB   |  | TIME             |                 | DATE                           |      | FIELD SAMPLE NUMBER                     |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1530             |                 | 3-21-16                        |      | 1                                       |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1527             |                 | 3-21-16                        |      | 2                                       |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1445             |                 | 3-21-16                        |      | 3                                       |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1448             |                 | 3-21-16                        |      | 4                                       |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1458             |                 | 3-21-16                        |      | 5                                       |      |          |      |
|                                    |  |   |  | X                                      |  | X  |  | 1459             |                 | 3-21-16                        |      | 6                                       |      |          |      |
| X                                  |  | X   |  | 1450                                   |  | 3-21-16  |  | 7                |                 |                                |      |   |      |          |      |
| X                                  |  | X   |  | 1453                                   |  | 3-21-16  |  | 8                |                 |                                |      |   |      |          |      |

|                                  |                  |  |                  |
|----------------------------------|------------------|--|------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br>   | Date:<br>3/23/16 |
| (Printed)<br>Michael Kostruba    | Time:<br>1630    | (Printed)<br>Kathleen Williamson   | Time:<br>1600    |
| Send results to EP/SA            |                  | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                  |
|                                  |                  | Comments:<br>Page 1 of 1   |                  |

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047751  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00402, Rte. 2 WB, Bozrah, 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          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 2          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 3          | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Black | Yes        | No            | --        | 20% synthetic fiber    | ND         | None          |
| 6          | Black | Yes        | No            | --        | 20% synthetic fiber    | ND         | None          |
| 7          | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Black | 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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the 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: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, 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



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## Laboratory Report

**Batch:** NT 15688  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #00402, Rt. 2 WB, Bozrah, 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 |                  |           |         |                  |                    |                  |
| NT119549 | 2        | Black pipe tar coating      |       | .2370          | .00              | .00 | .00 | .00 | 23.12            | 66.37     | 10.51   | ND               | Yes                | No               |
| NT119550 | 4        | Grey soft caulk             |       | .5304          | .00              | .00 | .00 | .00 | 47.17            | 31.41     | 21.42   | ND               | Yes                | No               |
| NT119551 | 6        | Black tar paper             |       | .2801          | .00              | .00 | .00 | .00 | 16.49            | 72.51     | 11.00   | ND               | Yes                | No               |
| NT119552 | 8        | Black roadway expansion tar |       | .5820          | .00              | .00 | .00 | .00 | 3.58             | 88.09     | 8.33    | ND               | 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





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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
 Supersede Previous Edition

LAB ID #. 47753

| PROJECT NUMBER<br>222165.5310.0710   |         | PROJECT NAME<br>DOT Bridge 00407, RTE 2 EB-WB,<br>Norwich |      | PARAMETERS                             |  |  |  |   | TURNAROUND TIME                |   |      |      |      |      |      |      |
|--|---------|---|------|--|--|--|--|---|--------------------------------|---|------|------|------|------|------|------|
|  |         |   |      | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER                       | POINT COUNT<br>(IF >1% & <10%)                                       | TEM NY NOR 198.4<br>(IF PLM SERIES NEG) | PLM:                           | 8hr                                     | 24hr | 48hr | 3day | 5day |      |      |
| SIGNATURE<br> |         | INSPECTOR<br>Michael Kostruba                             |      | MATERIAL                               |  |  |  |   |                                |   |      |      |      |      |      |      |
| FIELD<br>SAMPLE<br>NUMBER  | DATE    | TIME  | TYPE | SAMPLE LOCATION                        |  | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER                        | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOR 198.4<br>(IF PLM SERIES NEG) | PLM: | 8hr  | 24hr | 48hr | 3day | 5day |
|  |         |   |      | COMP                                   | GRAB   |  |  |   |                                |   |      |      |      |      |      |      |
| 9  | 3-21-16 | 1215  | X    | West abutment                          |  | X                                      |  |   |                                |   |      |      |      |      |      |      |
| 10   | 3-21-16 | 1218  | X    | East abutment                          |  | X                                      |  |   |                                |   |      |      |      |      |      |      |
| 11   | 3-21-16 | 1219  | X    | East abutment                          |  | X                                      |  |   |                                |   |      |      |      |      |      |      |
| 12   | 3-21-16 | 1240  | X    | West Abutment                          |  | X                                      |  |   |                                | X                                       |      |      |      |      |      |      |
| 13   | 3-21-16 | 1225  | X    | Roadway                                |  | X                                      |  |   |                                |   |      |      |      |      |      |      |
| 14   | 3-21-16 | 1228  | X    | Roadway                                |  | X                                      |  |   |                                | X                                       |      |      |      |      |      |      |

|   |                  |   |                  |
|---|------------------|---|------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br> | Date:<br>3/23/16 |
| (Printed)<br>Michael Kostruba   | Time:<br>1630    | (Printed)<br>Kathleen Williamson  | Time:<br>1630    |
| Send results to EP/SA   |                  | Condition of Samples:<br>Acceptable: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>          |                  |
|   |                  | Comments:   |                  |

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047753  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00407, Rte. 2 EB-WB, Norwich, 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          | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 2          | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 3          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 6          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 7          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 9          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 10         | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 11         | Black        | Yes        | No            | --        | 10% cellulose          | ND         | None          |
| 12         | Black        | Yes        | No            | --        | 10% cellulose          | ND         | None          |
| 13         | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 14         | Black        | Yes        | No            | --        | ---                    | ND         | None          |

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



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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

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Analyzed by: K. Williamson      Reviewed by: Margaret Flanagan      Date Issued  
 Kathleen Williamson, Laboratory Manager      Margaret Flanagan, Approved Signatory      03/24/2016

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 #I-09-004      NJ #CT004      CA #2907  
 CO# AL-15020      PHIL# 461      PA#68-03387



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## Laboratory Report

Client Project #: 222165.5310-0710  
 Client Reference: CT DOT - Bridge #00407, Rte. 2 EB-WB, Norwich, CT  
 PO #: C222165  
 Client #: 297  
 Client Name: TRC Environmental Corp. (CT)

Batch: NT 15690  
 Method: NOB  
 Date Received: 3/28/2016  
 Date Analyzed: 3/30/2016  
 Date of Report: 3/30/2016

| LAB ID   | Field ID | Description:                                 | Color | Initial Weight | % Asbestos Types |     |     |     |     |     | Total % Asbestos | Analyzed / Charged | Preped / Charged |                  |           |         |    |
|----------|----------|--|-------|----------------|------------------|-----|-----|-----|-----|-----|------------------|--------------------|------------------|------------------|-----------|---------|----|
|          |          |  |       |                | CHR              | AMO | ACT | CRO | ANT | TRE |                  |                    |                  | % Other Non-asb. | % Organic | % Carb. |    |
| NT119556 | 2        | Tan Caulk                                    |       | .1358          | .00              | .00 | .00 | .00 | .00 | .00 | .00              | 11.85              | 81.52            | 6.63             | ND        | Yes     | No |
| NT119557 | 4        | Grey Soft Caulk                              |       | .8611          | .00              | .00 | .00 | .00 | .00 | .00 | .00              | 31.95              | 36.87            | 31.18            | ND        | Yes     | No |
| NT119558 | 6        | Grey Hard Caulk                              |       | .1575          | .00              | .00 | .00 | .00 | .00 | .00 | .00              | 14.54              | 66.41            | 19.05            | ND        | Yes     | No |
| NT119559 | 8        | Grey Gummy Caulk                             |       | .1333          | .00              | .00 | .00 | .00 | .00 | .00 | .00              | 22.88              | 30.53            | 46.59            | ND        | Yes     | No |
| NT119560 | 12       | Black Hard Tar-like Expansion Joint Material |       | .2422          | 1.60             | .00 | .00 | .00 | .00 | .00 | .00              | 6.41               | 86.50            | 5.49             | 1.60      | Yes     | No |
| NT119561 | 14       | Black Roadway Expansion Tar                  |       | .2194          | .00              | .00 | .00 | .00 | .00 | .00 | .00              | 5.79               | 80.13            | 14.08            | ND        | 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





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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
 Supersede Previous Edition

LAB ID #. 47755

| PROJECT NUMBER<br>222165.5310.0710 |         | PROJECT NAME<br>DOT Bridge 00408, RTE 2 EB-WB,<br>Norwich |      | PARAMETERS                             |  |                  |                                |   | TURNAROUND TIME |     |      |      |      |      |  |
|------------------------------------|---------|---|------|--|--|------------------|--------------------------------|---|-----------------|-----|------|------|------|------|--|
|                                    |         | INSPECTOR<br>Michael Kostruba                             |      | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | PLM:            | 8hr | 24hr | 48hr | 3day | 5day |  |
| FIELD<br>SAMPLE<br>NUMBER          | DATE    | TIME  | TYPE | SAMPLE LOCATION                        | COMP   | GRAB             | X                              | X                                       | X               | X   | X    | X    | X    | X    | MATERIAL   |
|                                    |         |   |      |  |  |                  |                                |   |                 |     |      |      |      |      |  |
| 10                                 | 3-21-16 | 1034  | X    | West abutment                          | X  |                  |                                |   |                 |     |      |      |      |      | BP1-White cloth-like rocker bearing pad (covered in paint) |
| 11                                 | 3-21-16 | 1045  | X    | East abutment                          | X  |                  |                                |   |                 |     |      |      |      |      | EJ1-Black hard tar-like sheet expansion joint material     |
| 12                                 | 3-21-16 | 1043  | X    | West Abutment                          | X  |                  |                                |   |                 |     |      |      | X    |      | EJ1-Black hard tar-like sheet expansion joint material     |
| 13                                 | 3-21-16 | 1102  | X    | Roadway EB                             | X  |                  |                                |   |                 |     |      |      |      |      | RET1-Black roadway expansion tar                           |
| 14                                 | 3-21-16 | 1026  | X    | Roadway WB                             | X  |                  |                                |   |                 |     |      |      | X    |      | RET1-Black roadway expansion tar                           |

|                                  |                  |                                  |                  |  |                          |
|----------------------------------|------------------|----------------------------------|------------------|--|--------------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br>     | Date:<br>3/23/16 | Relinquished by: (Signature)   | Received by: (Signature) |
| (Printed)<br>Michael Kostruba    | Time:<br>1630    | (Printed)<br>Kathleen Williamson | Time:<br>1630    | (Printed)  | (Printed)                |
| Send results to EP/SA            |                  |                                  |                  | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                          |
|                                  |                  |                                  |                  | Page 2 of 2  |                          |



**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047755  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00408, Rte. 2 EB-WB, Norwich, 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          | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 2          | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 3          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 6          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 7          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 9          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 10         | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 11         | Black        | Yes        | No            | --        | 10% synthetic fiber    | ND         | None          |
| 12         | Black        | Yes        | No            | --        | 10% synthetic fiber    | ND         | None          |
| 13         | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 14         | Black        | Yes        | No            | --        | ---                    | ND         | None          |

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



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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the 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  
 Kathleen Williamson, Laboratory Manager

Reviewed by: Margaret Flanagan  
 Margaret Flanagan, Approved Signatory

**Date Issued**  
 03/24/2016

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



# 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 15692  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #00408, Rte 2, EB-WB, Norwich, 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 |                  |           |         |                  |                    |                  |
| NT119567 | 2        | Tan Caulk  |       | .3361          | .00              | .00 | .00 | .00 | .00              | .00       | 19.76   | ND               | Yes                | No               |
| NT119568 | 4        | Grey Soft Caulk                                    |       | .7902          | .00              | .00 | .00 | .00 | .00              | .00       | 26.13   | ND               | Yes                | No               |
| NT119569 | 6        | Grey Hard Caulk                                    |       | .3454          | .00              | .00 | .00 | .00 | .00              | .00       | 6.43    | ND               | Yes                | No               |
| NT119570 | 8        | Grey Gummy Caulk                                   |       | 1.0095         | .00              | .00 | .00 | .00 | .00              | .00       | 39.65   | ND               | Yes                | No               |
| NT119571 | 12       | Black Hard Tar-like Sheet Expansion Joint Material |       | .3522          | 1.16             | .00 | .00 | .00 | .00              | .00       | 24.87   | 1.16             | Yes                | No               |
| NT119572 | 14       | Black Roadway Expansion Tar                        |       | .1397          | .00              | .00 | .00 | .00 | .00              | .00       | 10.45   | ND               | Yes                | No               |

**Comments:**

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

*Gene L. Clemens*  
 Mark Derosier, Analyst



**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047752  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #00934

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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
| 01         | White | Yes        | No            | --        | ---                    | ND         | None          |
| 02         | White | Yes        | No            | --        | ---                    | ND         | None          |
| 03         | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 04         | Grey  | Yes        | No            | --        | ---                    | ND         | None          |
| 05         | Black | Yes        | No            | --        | ---                    | ND         | None          |
| 06         | Black | 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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the 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: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, 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



# ProScience Analytical Services, Inc.

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## Laboratory Report

**Batch:** NT 15689  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #00934  
**PO #:** C222165  
**Client #:** 297  
**Client Name:** TRC Environmental Corp. (CT)

| 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 |                  |           |         |                  |                    |                  |
| NT119553 | 02       | White Caulk Around Base of Bearings |       | .5988          | .00              | .00 | .00 | .00 | .00              | 27.19     | 8.38    | ND               | Yes                | No               |
| NT119554 | 04       | Pliable Grey Expansion Joint        |       | .3637          | .00              | .00 | .00 | .00 | .00              | 70.22     | 9.71    | ND               | Yes                | No               |
| NT119555 | 06       | Black Tar Asphaltic Plug            |       | .3460          | .00              | .00 | .00 | .00 | .00              | 89.42     | 8.96    | ND               | 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





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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
 Supersedes Previous Edition

LAB ID #. 47754

| PROJECT NUMBER<br>222165.5310.0710 |         | PROJECT NAME<br>DOT Bridge 01802-195 NB,<br>Stonington CT |      | INSPECTOR<br>Michael Kostruba |                 | PARAMETERS   |  |  |                                |   | TURNAROUND TIME                         |      |      |      |      |      |      |      |  |
|------------------------------------|---------|---|------|-------------------------------|-----------------|--|--|--|--------------------------------|---|---|------|------|------|------|------|------|------|--|
|                                    |         |   |      |                               |                 | PLM EPA 600/R93/116<br>(POSITIVE STOP)                               | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER   | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | PLM:                                    | 8hr  | 24hr | x    | 48hr | 3day | 5day |      |  |
| FIELD<br>SAMPLE<br>NUMBER          | DATE    | TIME  | TYPE |                               | SAMPLE LOCATION | MATERIAL   |  |  |                                |   |   |      |      |      |      |      |      |      |  |
|                                    |         |   | COMP | GRAB                          |                 |  | PLM EPA 600/R93/116<br>(POSITIVE STOP)                               | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER               | POINT COUNT<br>(IF >1% & <10%)          | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | PLM: | 8hr  | 24hr | x    | 48hr | 3day | 5day |  |
| 10                                 | 3-22-16 | 1029  | X    | X                             | East Abutment   | VB1-Black tar paper vapor barrier between abutment and concrete deck | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 11                                 | 3-22-16 | 1034  | X    | X                             | West pier       | TC1-Tan granular textured coating over concrete                      | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 12                                 | 3-22-16 | 1035  | X    | X                             | East pier       | TC1-Tan granular textured coating over concrete                      | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 13                                 | 3-22-16 | 1039  | X    | X                             | East pier       | TC1-Tan granular textured coating over concrete                      | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 14                                 | 3-22-16 | 1040  | X    | X                             | East pier       | TC1-Tan granular textured coating over concrete                      | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 15                                 | 3-22-16 | 1044  | X    | X                             | West pier       | TC1-Tan granular textured coating over concrete                      | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 16                                 | 3-22-16 | 1006  | X    | X                             | Roadway         | RET1-Black roadway expansion tar                                     | X  |  |                                |   |   |      |      |      |      |      |      |      |  |
| 17                                 | 3-22-16 | 1012  | X    | X                             | Roadway         | RET1-Black roadway expansion tar                                     | X  |  |                                |   |   |      |      |      |      |      |      |      |  |

|                                  |                  |                                  |                  |  |                                       |
|----------------------------------|------------------|----------------------------------|------------------|--|---------------------------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br>     | Date:<br>3/23/16 | Relinquished by: (Signature)<br>(Printed)<br>Kathleen Williamson   | Received by: (Signature)<br>(Printed) |
| (Printed)<br>Michael Kostruba    | Time:<br>1630    | (Printed)<br>Kathleen Williamson | Time:<br>1630    | (Printed)  | (Printed)                             |
| Send results to EP/SA            |                  |                                  |                  | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |
|                                  |                  |                                  |                  | Page 2 of 2  |                                       |



**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047754  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #01802, I95 NB, Stonington, 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          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 2          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 3          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 6          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 7          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 9          | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 10         | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 11         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 12         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 13         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 14         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 15         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 16         | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 17         | Black        | Yes        | No            | --        | ---                    | ND         | None          |

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

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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

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Analyzed by: K. Williamson Reviewed by: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, 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



# ProScience Analytical Services, Inc.

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## Laboratory Report

Client Project #: 222165.5310.0710  
 Client Reference: CT DOT - Bridge #01802, 195 NB, Stonington, CT  
 PO #: C222165  
 Client #: 297  
 Client Name: TRC Environmental Corp. (CT)

Batch: NT 15691  
 Method: NOB  
 Date Received: 3/28/2016  
 Date Analyzed: 3/30/2016  
 Date of Report: 3/30/2016

| LAB ID   | Field ID | Description:                | Color | Initial Weight | % Asbestos Types |     |     |     |     |     | TRE | % Other Non-asp. | % Organic | % Carb. | Total % Asbestos | Analyzed / Charged | Preped / Charged |
|----------|----------|-----------------------------|-------|----------------|------------------|-----|-----|-----|-----|-----|-----|------------------|-----------|---------|------------------|--------------------|------------------|
|          |          |                             |       |                | CHR              | AMO | ACT | CRO | ANT | ANT |     |                  |           |         |                  |                    |                  |
| NT119562 | 4        | Grey Soft Caulk             |       | 1.1335         | .00              | .00 | .00 | .00 | .00 | .00 | .00 | 21.03            | 34.74     | 44.23   | ND               | Yes                | No               |
| NT119563 | 6        | Black Caulk                 |       | .3933          | .00              | .00 | .00 | .00 | .00 | .00 | .00 | 26.83            | 67.81     | 5.36    | ND               | Yes                | No               |
| NT119564 | 8        | Black Tar Material          |       | .1369          | .00              | .00 | .00 | .00 | .00 | .00 | .00 | 29.00            | 63.18     | 7.82    | ND               | Yes                | No               |
| NT119565 | 10       | Black Tar Vapor Barrier     |       | .0765          | .00              | .00 | .00 | .00 | .00 | .00 | .00 | 7.06             | 67.06     | 25.88   | ND               | Yes                | No               |
| NT119566 | 17       | Black Roadway Expansion Tar |       | .1016          | .00              | .00 | .00 | .00 | .00 | .00 | .00 | 7.48             | 69.29     | 23.23   | ND               | 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



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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
Supersedes Previous Edition

LAB ID #. 47757

| PROJECT NUMBER<br>222165.5310.0710 |         | PROJECT NAME<br>DOT Bridge 01803-195 SB,<br>Stonington CT |      | INSPECTOR<br>Michael Kostruba |      | PARAMETERS                             |  |  |                                |   | TURNAROUND TIME                         |     |      |      |      |      |
|------------------------------------|---------|---|------|-------------------------------|------|--|--|--|--------------------------------|---|---|-----|------|------|------|------|
|                                    |         |   |      |                               |      | PLM EPA 600/R93/116<br>(POSITIVE STOP) | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER   | POINT COUNT<br>(IF >1% & <10%) | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | PLM:                                    | 8hr | 24hr | 48hr | 3day | TEM: |
| FIELD<br>SAMPLE<br>NUMBER          | DATE    | TIME  | TYPE | SAMPLE LOCATION               |      | MATERIAL                               | PLM EPA 600/R93/116<br>(POSITIVE STOP)                               | PLM EPA 600/R93/116<br>(w/ gravimetric reduction)<br>(POSITIVE STOP) | ANALYZE BY LAYER               | POINT COUNT<br>(IF >1% & <10%)          | TEM NY NOB 198.4<br>(IF PLM SERIES NEG) | 8hr | 24hr | 48hr | 3day | 5day |
|                                    |         |   |      | COMP                          | GRAB |  |  |  |                                |   |   |     |      |      |      |      |
| 1                                  | 3-22-16 | 1135  | X    | West abutment                 |      |  | X  |  |                                |   |   |     |      |      |      |      |
| 2                                  | 3-22-16 | 1137  | X    | East abutment                 |      |  | X  |  |                                |   |   |     |      |      |      |      |
| 3                                  | 3-22-16 | 1130  | X    | North roadway wall            |      |  | X  |  |                                |   |   |     |      |      |      |      |
| 4                                  | 3-22-16 | 1133  | X    | South roadway wall            |      |  | X  |  |                                | X                                       |   |     |      |      |      |      |
| 5                                  | 3-22-16 | 1140  | X    | North curb                    |      |  | X  |  |                                |   |   |     |      |      |      |      |
| 6                                  | 3-22-16 | 1138  | X    | South curb                    |      |  | X  |  |                                | X                                       |   |     |      |      |      |      |
| 7                                  | 3-22-16 | 1144  | X    | North side of west abutment   |      |  | X  |  |                                |   |   |     |      |      |      |      |
| 8                                  | 3-22-16 | 1148  | X    | South side of east abutment   |      |  | X  |  |                                | X                                       |   |     |      |      |      |      |
| 9                                  | 3-22-16 | 1134  | X    | West abutment                 |      |  | X  |  |                                |   |   |     |      |      |      |      |

|                                  |                  |  |                  |                          |
|----------------------------------|------------------|--|------------------|--------------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br>   | Date:<br>3/23/16 | Received by: (Signature) |
| (Printed)<br>Michael Kostruba    | Time:<br>1630    | (Printed)<br>Kathleen Williamson   | Time:<br>1630    | (Printed)                |
| Send results to EP/SA            |                  | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                  | Page 1 of 2              |



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## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009  
Supersede Previous Edition

LAB ID #. 47757

| PROJECT NUMBER<br>222165.5310.0710 |         | PROJECT NAME<br>DOT Bridge 01803-195 SB,<br>Stonington CT |      | PARAMETERS |                 |                                     |  |                  | TURNAROUND TIME                     |  |  |                             |                                      |      |      |      |      |      |
|------------------------------------|---------|---|------|------------|-----------------|-------------------------------------|--|------------------|-------------------------------------|--|--|-----------------------------|--------------------------------------|------|------|------|------|------|
|                                    |         |   |      |            |                 |                                     |  |                  | PLM:                                | 8hr  | 24hr   | x                           | 48hr                                 | 3day | 5day |      |      |      |
| SIGNATURE<br>                      |         | INSPECTOR<br>Michael Kostruba                             |      | MATERIAL   |                 |                                     |  |                  | TEM:                                | 24hr   | x  | 48hr                        | 3day                                 | 5day |      |      |      |      |
|                                    |         |   |      |            |                 |                                     |  |                  | PLM EPA 600/R93/116 (POSITIVE STOP) | PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP) | ANALYZE BY LAYER   | POINT COUNT (IF >1% & <10%) | TEM NY NOB 198.4 (IF PLM SERIES NEG) |      |      |      |      |      |
| FIELD SAMPLE NUMBER                | DATE    | TIME  | TYPE | GRAB       | SAMPLE LOCATION | PLM EPA 600/R93/116 (POSITIVE STOP) | PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP) | ANALYZE BY LAYER | POINT COUNT (IF >1% & <10%)         | TEM NY NOB 198.4 (IF PLM SERIES NEG)                           | MATERIAL   | PLM:                        | 8hr                                  | 24hr | x    | 48hr | 3day | 5day |
| 10                                 | 3-22-16 | 1132  | X    | X          | East Abutment   | X                                   |  |                  |                                     | x  | VBI-Black tar paper vapor barrier between abutment and concrete deck |                             |                                      |      |      |      |      |      |
| 11                                 | 3-22-16 | 1152  | X    | X          | West pier       | X                                   |  |                  |                                     |  | TC1-Tan granular textured coating over concrete                      |                             |                                      |      |      |      |      |      |
| 12                                 | 3-22-16 | 1144  | X    | X          | West pier       | X                                   |  |                  |                                     |  | TC1-Tan granular textured coating over concrete                      |                             |                                      |      |      |      |      |      |
| 13                                 | 3-22-16 | 1146  | X    | X          | West pier       | X                                   |  |                  |                                     |  | TC1-Tan granular textured coating over concrete                      |                             |                                      |      |      |      |      |      |
| 14                                 | 3-22-16 | 1148  | X    | X          | East pier       | X                                   |  |                  |                                     |  | TC1-Tan granular textured coating over concrete                      |                             |                                      |      |      |      |      |      |
| 15                                 | 3-22-16 | 1150  | X    | X          | East pier       | X                                   |  |                  |                                     |  | TC1-Tan granular textured coating over concrete                      |                             |                                      |      |      |      |      |      |
| 16                                 | 3-22-16 | 1132  | X    | X          | Roadway         | X                                   |  |                  |                                     |  | RET1-Black roadway expansion tar                                     |                             |                                      |      |      |      |      |      |
| 17                                 | 3-22-16 | 1136  | X    | X          | Roadway         | X                                   |  |                  |                                     | x  | RET1-Black roadway expansion tar                                     |                             |                                      |      |      |      |      |      |

|                                  |                  |  |                  |
|----------------------------------|------------------|--|------------------|
| Relinquished by: (Signature)<br> | Date:<br>3-23-16 | Received by: (Signature)<br>   | Date:<br>3/23/16 |
| (Printed)<br>Michael Kostruba    | Time:<br>1630    | (Printed)<br>Kathleen Williamson   | Time:<br>1630    |
| Send results to EP/SA            |                  | Condition of Samples:<br>Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                  |
|                                  |                  | Comments:<br>Page 2 of 2   |                  |

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0047757  
 Project #: 222165.5310.0710  
 Date Received: 03/23/2016  
 Date Analyzed: 03/24/2016

Site: DOT Bridge #01803, I95 SB, Stonington, 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          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 2          | White/Orange | Yes        | No            | --        | 60% cellulose          | ND         | None          |
| 3          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 4          | Grey         | Yes        | No            | --        | ---                    | ND         | None          |
| 5          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 6          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 7          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 8          | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 9          | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 10         | Black        | Yes        | No            | --        | 20% cellulose          | ND         | None          |
| 11         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 12         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 13         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 14         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 15         | Tan          | Yes        | No            | --        | ---                    | ND         | None          |
| 16         | Black        | Yes        | No            | --        | ---                    | ND         | None          |
| 17         | Black        | Yes        | No            | --        | ---                    | ND         | None          |

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



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

| Sample No. | Color | Homogenous | Multi-Layered | Layer No. | Other Matrix Materials | Asbestos % | Asbestos Type |
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|
|------------|-------|------------|---------------|-----------|------------------------|------------|---------------|

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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the 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: Margaret Flanagan Date Issued: 03/24/2016  
 Kathleen Williamson, Laboratory Manager Margaret Flanagan, 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



# 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 15686  
**Method:** NOB  
**Date Received:** 3/28/2016  
**Date Analyzed:** 3/30/2016  
**Date of Report:** 3/30/2016

**Client Project #:** 222165.5310.0710  
**Client Reference:** CT DOT - Bridge #01803 , 195 SB, Stonington, 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 | ANT |                  |           |         |                  |                    |                  |
| NT119540 | 4        | Grey soft caulk             |       | .7350          | .00              | .00 | .00 | .00 | .00 | .00              | 31.93     | 37.25   | ND               | Yes                | No               |
| NT119541 | 6        | Black caulk                 |       | .6224          | .00              | .00 | .00 | .00 | .00 | .00              | 65.81     | 5.72    | ND               | Yes                | No               |
| NT119542 | 8        | Black tar material          |       | .4780          | .00              | .00 | .00 | .00 | .00 | .00              | 67.07     | 5.59    | ND               | Yes                | No               |
| NT119543 | 10       | Black tar paper             |       | .6251          | .00              | .00 | .00 | .00 | .00 | .00              | 46.09     | 20.86   | ND               | Yes                | No               |
| NT119544 | 17       | Black roadway expansion tar |       | .1727          | .00              | .00 | .00 | .00 | .00 | .00              | 88.13     | 10.19   | ND               | 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 CTDOT - Bridge #00281

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

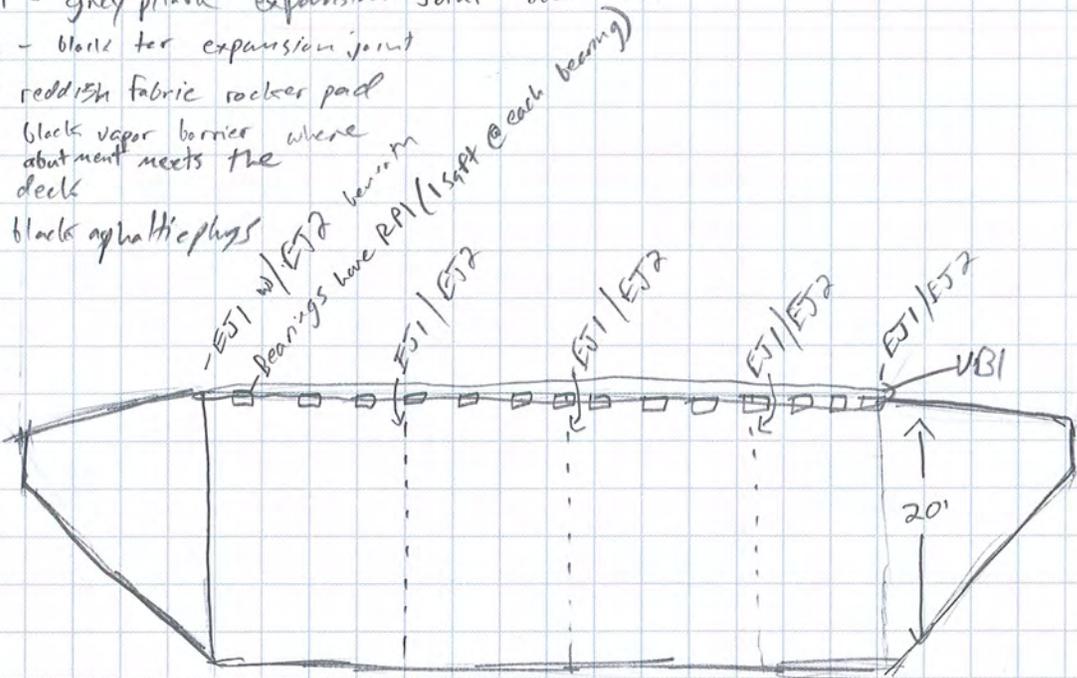
DATE 3-27

BY CG/DH

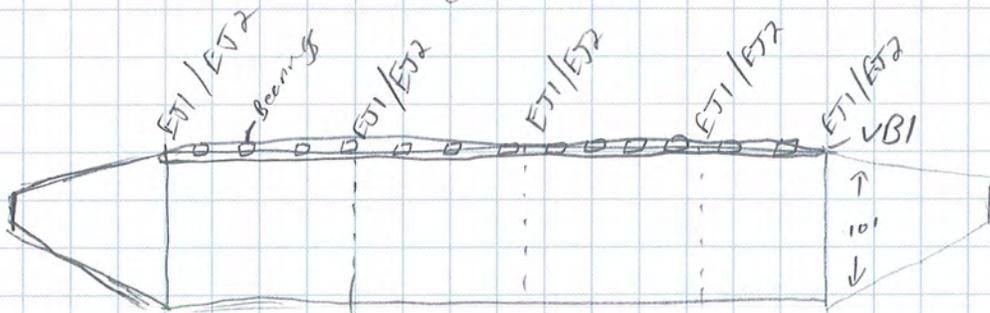
CHK'D \_\_\_\_\_

ACM List

- EJ1 - grey pliable expansion joint over EJ2
- EJ2 - black tar expansion joint
- RPI - reddish fabric rocker pad
- VBI - black vapor barrier where abutment meets the deck
- API - black asphaltic plys



Abutment South  
concrete unpainted



Abutment North



SUBJECT CTDOT - Bridge #00781

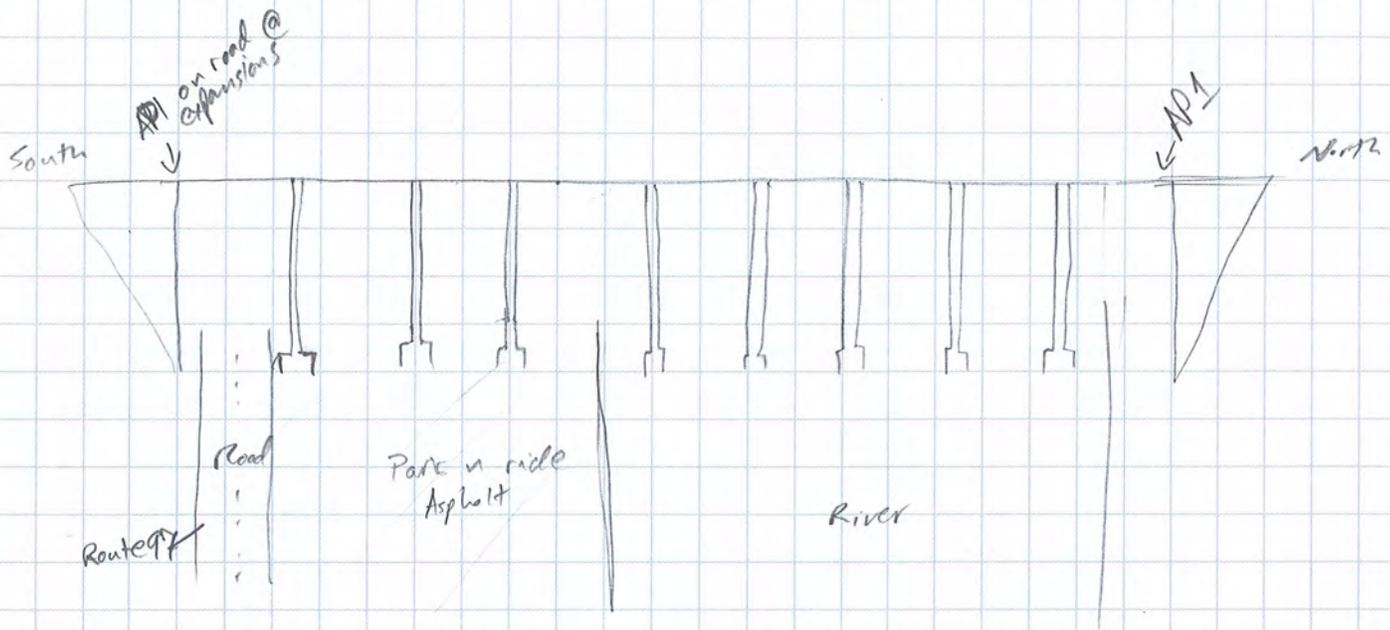
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

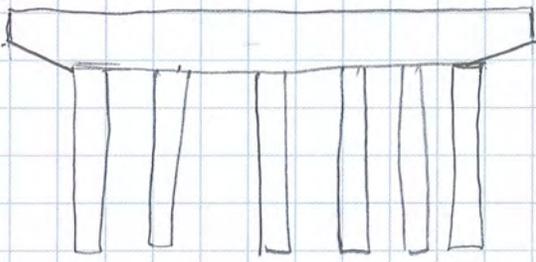
DATE 3-23

BY CG / DH

CHK'D \_\_\_\_\_



- Notes:
- Drain pipes are PVC
  - North side has telephone/cable line
  - 2 lights on underside over Rt. 97
  - A lot of guano & birds
  - Top side railing unpainted w/ rubber pads
  - 6 street lights
  - Top side is 4 lanes wide



Pier Drawing

Each pier has 14 bearings



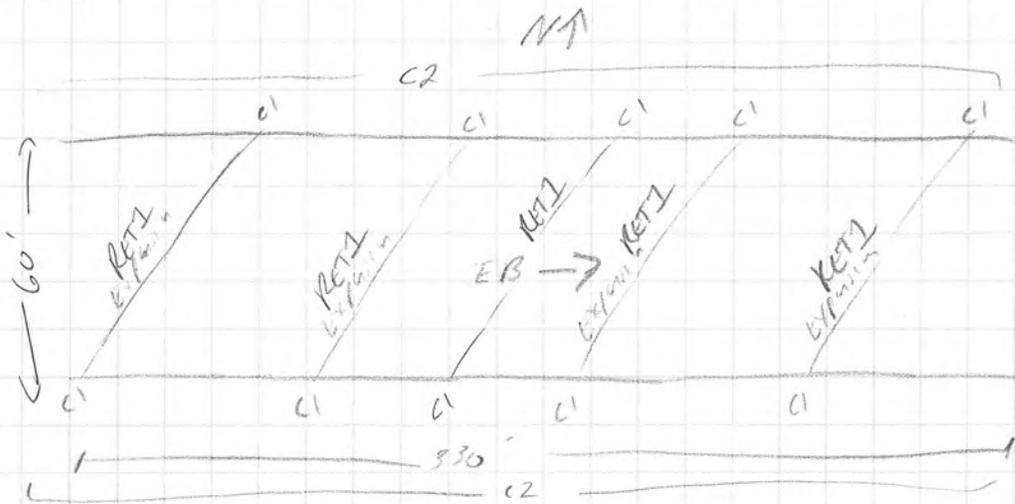


SUBJECT Bridge 00401 - Borrah St - pt2  
EB

SHEET NO. 1 OF 2  
PROJECT NO. \_\_\_\_\_  
DATE 3/21/16  
BY mk / HH  
CHK'D \_\_\_\_\_

Topside

RCP only - Railings / Structural same



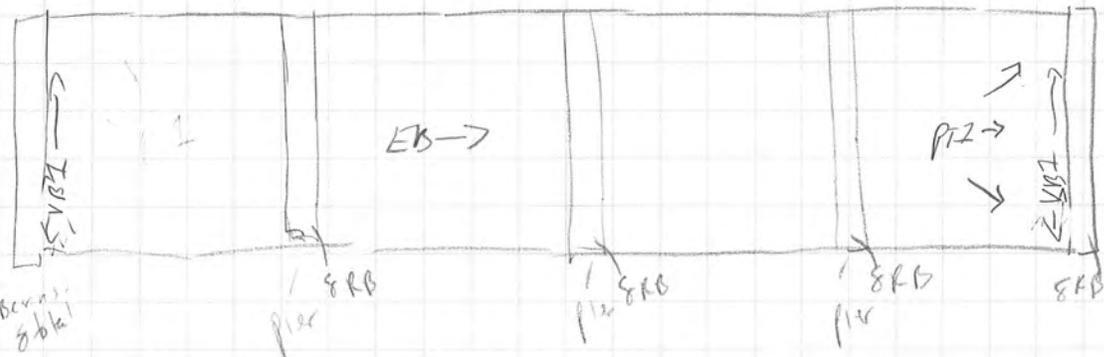
- C2: caulk below Railings support plates - approximately 40 base plates each side - N + S
- Railings + supports painted blue/silver/orange
- Assume membrane below Asphalt

underside

N↑

West Abut

East Abut



- Assume Damp proofing issue w/ Abutment
- No membrane or foam visible ~~between pier and abutment~~
- All concrete unpainted
- No suspect material assoc. with Kicker beams, on Abutment, - Views not accessible
- Drain pipes in trap rock - East side 6' Long - 3 total - PT2
- Structural Blue/silver/orange paint
- VB7 between top of Abutment + Conc Deck - sparse pieces -
- Birds nests - 4 seen - No guano seen



SUBJECT Bridge 00401 - Bozrahst - Elk 2  
EB

SHEET NO. 2 OF 2  
PROJECT NO. \_\_\_\_\_  
DATE 3/11/16  
BY MK/MH  
CHK'D \_\_\_\_\_

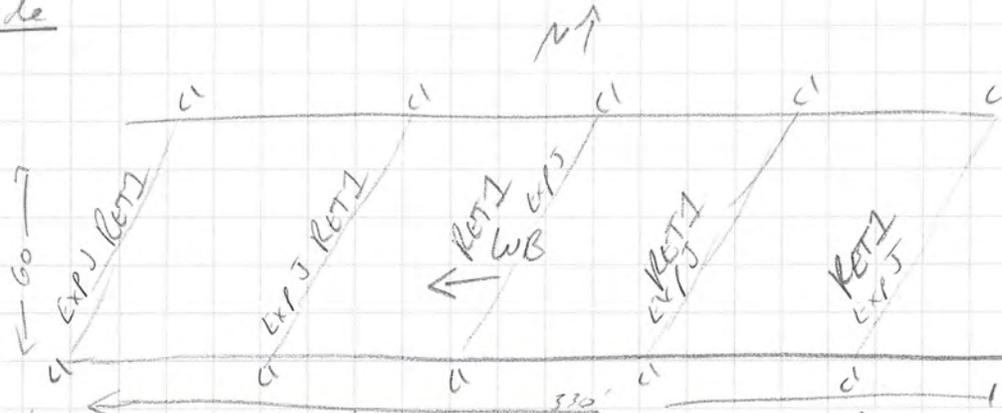
- C1 - Caulk between concrete walls @ expansion joints, in roadways - possibly under Asphalt
- C2 - tar based caulk at Railings Support base plate,
- VBI - Black tar paper-thin - Vapor Barrier like material - sparse - between concrete deck and frost protection
- PTI - Black Drain pipe for coating
- RET2 - Black Roadway Expansion Tar



SUBJECT Bridge 00402 - Buzrah St - Kto 2 WB

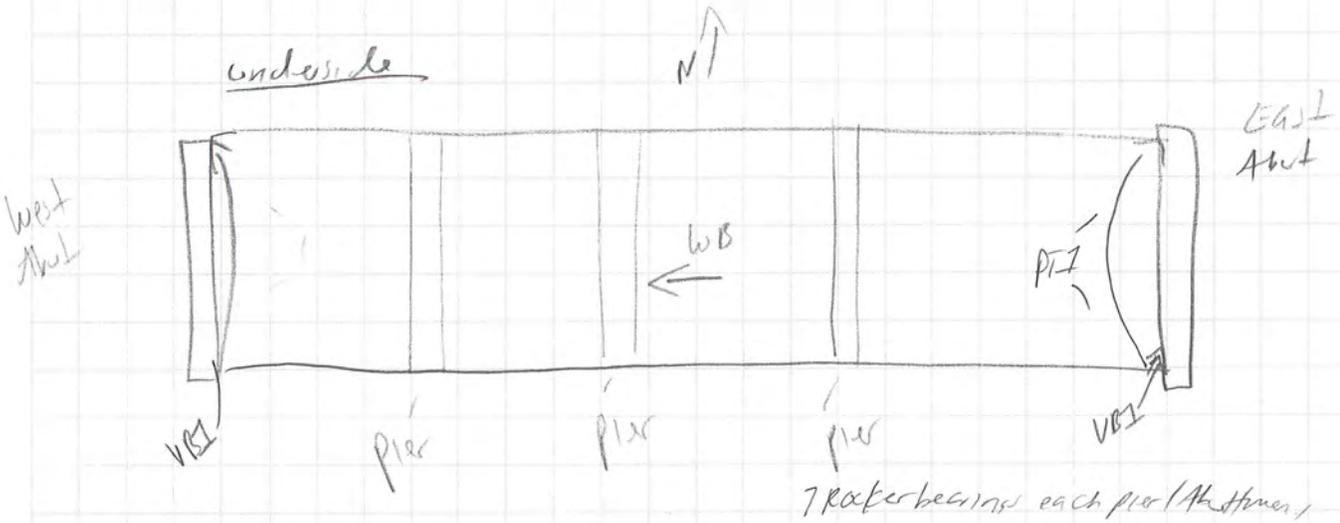
SHEET NO. 1 OF 2  
 PROJECT NO. \_\_\_\_\_  
 DATE 3/21/16  
 BY mt/HH  
 CHK'D \_\_\_\_\_

Topside



Railroad supports - Blue/silver/orange  
 No caulk at boxes at rail line support - deteriorated?  
 Assume membrane under Asphalt

underside



All concrete unpainted  
 All structural same as Railroad system Blue/silver/orange  
 No expansion joints marked in Abutments  
 VBI between deck and top of Abutment  
 Assume damp proofing Assoc. with Abutments  
 - tar coating on metal drain pipes in track - PT7 2 pipe 6' long east side  
 Pier beams plate inaccessible  
 No caulk seen on piers where accessible



SUBJECT Bridge 00402 - Bozrah St - WB  
Rte 2

SHEET NO. 2 OF 2

PROJECT NO. \_\_\_\_\_

DATE 3/21/16

BY mk/HH

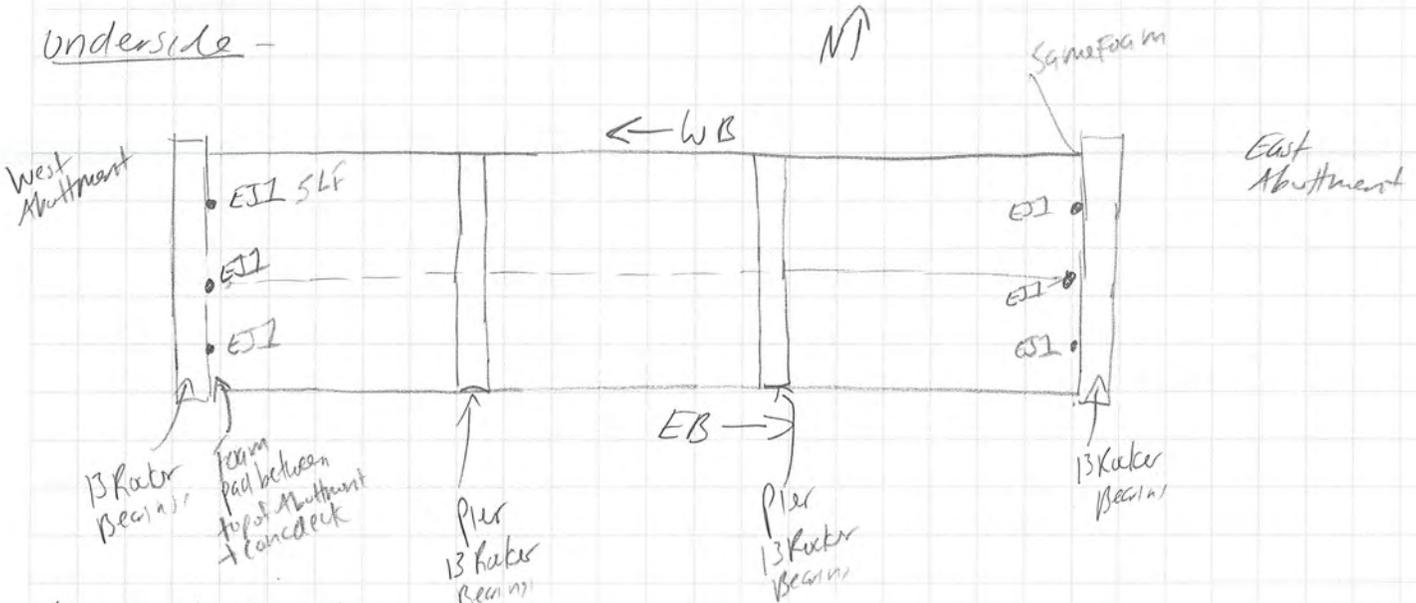
CHK'D \_\_\_\_\_

- CI - Gray tar soft caulk at ~~ERT~~ Roadway, Expansion Joint Area + in concrete wall
- VB1 - Black tar paper vapor barrier between top of Abutment + concrete deck
- PT1 - Black Drain pipe tar coating.
- RET1 Black Roadway Expansion Tar



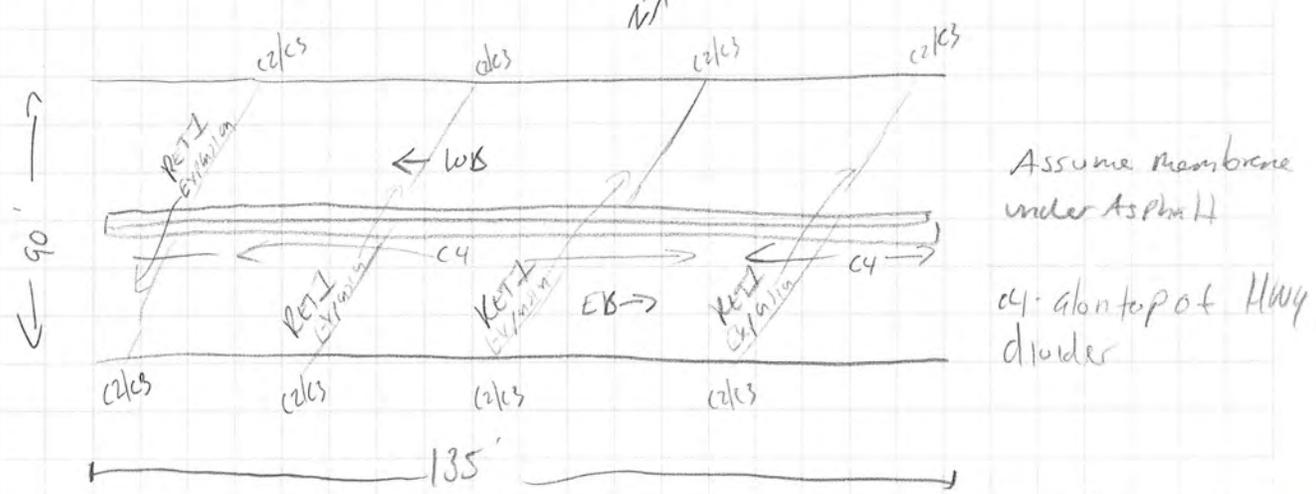
SUBJECT Bridge 60407 - WAWPECUS

SHEET NO. 1 OF 2  
 PROJECT NO. \_\_\_\_\_  
 DATE 3/21/16  
 BY mt/HH  
 CHK'D \_\_\_\_\_



- Assume Abutment dampers
- BPI - Bearings pad / cloth on underkicker bearings at abutments - Assume on Pier - some bearings have replacement kicker pads - 10%
- 2 mercury vapor or Halogen Fixtures underneath.
- EJ1 - in between Abutment sections
- All concrete - No paint
- 3 birds nests seen - NO birds seen.
- Bridge looks to have been blasted and repainted - small sections missed - some old paint remains on structural - New - Green / old orange

Topside - Railings - Gray/Red - CI under <sup>bases to Railings supports</sup> 16 each side (32) 15' each



c1c3 between Jersey Barriers @ Roadway expansion joints - possibly under Asphalt?



SUBJECT Bridge 00407 - Wauwacous

SHEET NO. 2 OF 2

PROJECT NO. \_\_\_\_\_

DATE 3/21/16

BY mk/HH

CHK'D \_\_\_\_\_

Materials

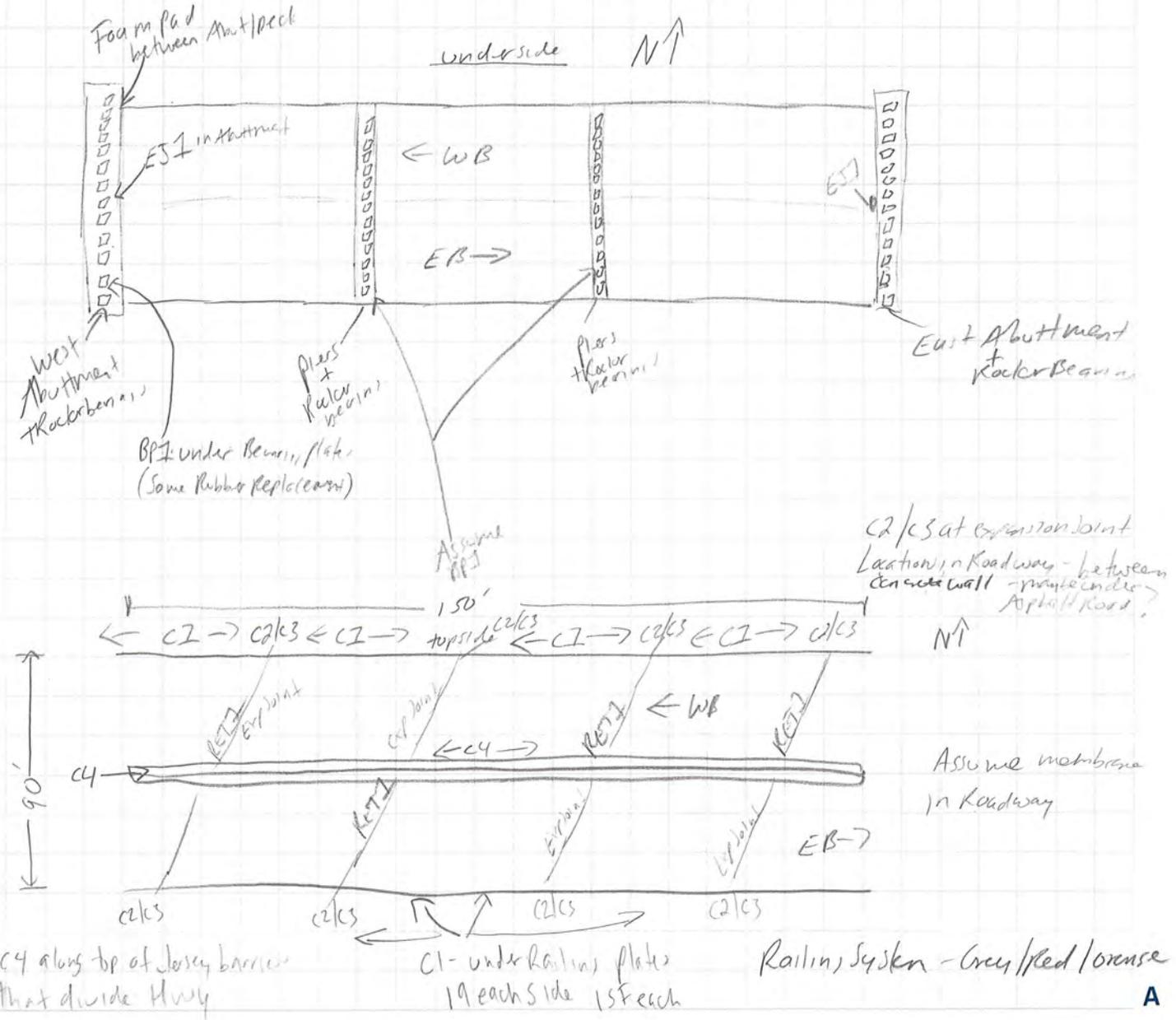
- C1 - tan caulk under railing support base
- C2 - Gray soft caulk in between Jersey barriers @ Roadway - abutment joint
- C3 - Gray hard caulk under C2
- C4 - Soft greyish grey caulk along top of Hwy divider
- PP1 - clothlike ~~sheet~~ rocker bearing pad.
- ES1 - Black expansion joint like material in Abutment Section
- RET1 - Black Roadway Expansion Tar



SUBJECT Bridge 00408 - Rte 2 - McClellan Ave

SHEET NO. 1 OF 2  
 PROJECT NO. \_\_\_\_\_  
 DATE 3/21/16  
 BY MK/H4  
 CHK'D \_\_\_\_\_

- 2 - mercury vapor or Halogen bulbs - underside of Deck
- Handful of Bird nests - NO Gannus seen.
- Deck Concrete - unpainted
- Structural - outer coat is green - was Repainted @ one time - original orange Green/silver/orange
- Abuttments - concrete - Assume Damp proofing - 13 Rocker Bearings each side
- 4 sets of concrete Piers - 46 total Rocker bearings on train (All 4 totaled)  
 Both Abuttments / Piers unpainted  
 - Trap rock hill on either side to Access top of Abuttment





SUBJECT Bridges-

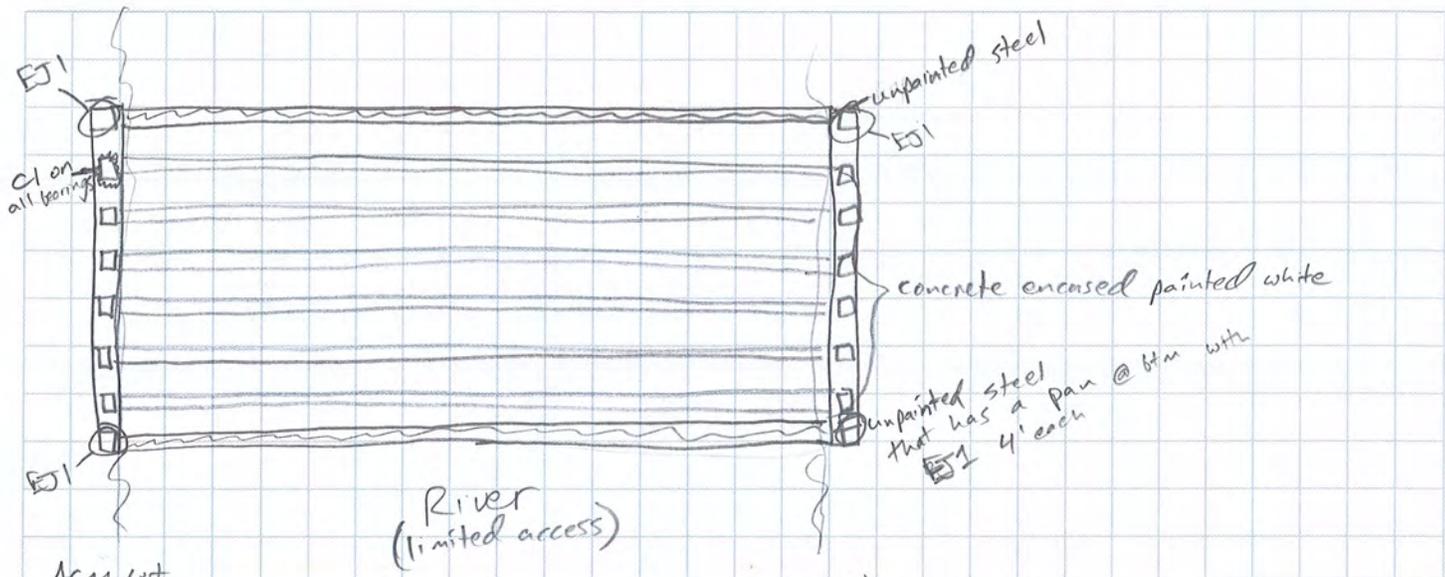
Bridge 00408 - materials

- RET1 - Black Roadway Expansion Tar
- EJ1 - black hard for like Abutment expansion joint material
- BP1 - cloth like bearing pad.
- C1 - caulk at base of Railings - under base plates - tan
- C2 - Gray/tan salt caulk @ Roadway expansion joint location - between Jersey Barrier
- C3 - under C2 - flatter gray
- C4 - gummy grey caulk along top of Jersey Barrier that divide Hwy.



SUBJECT CTDOT - Bridge # 00934

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 PROJECT NO. \_\_\_\_\_  
 DATE 3-23  
 BY CG/DH  
 CHK'D \_\_\_\_\_



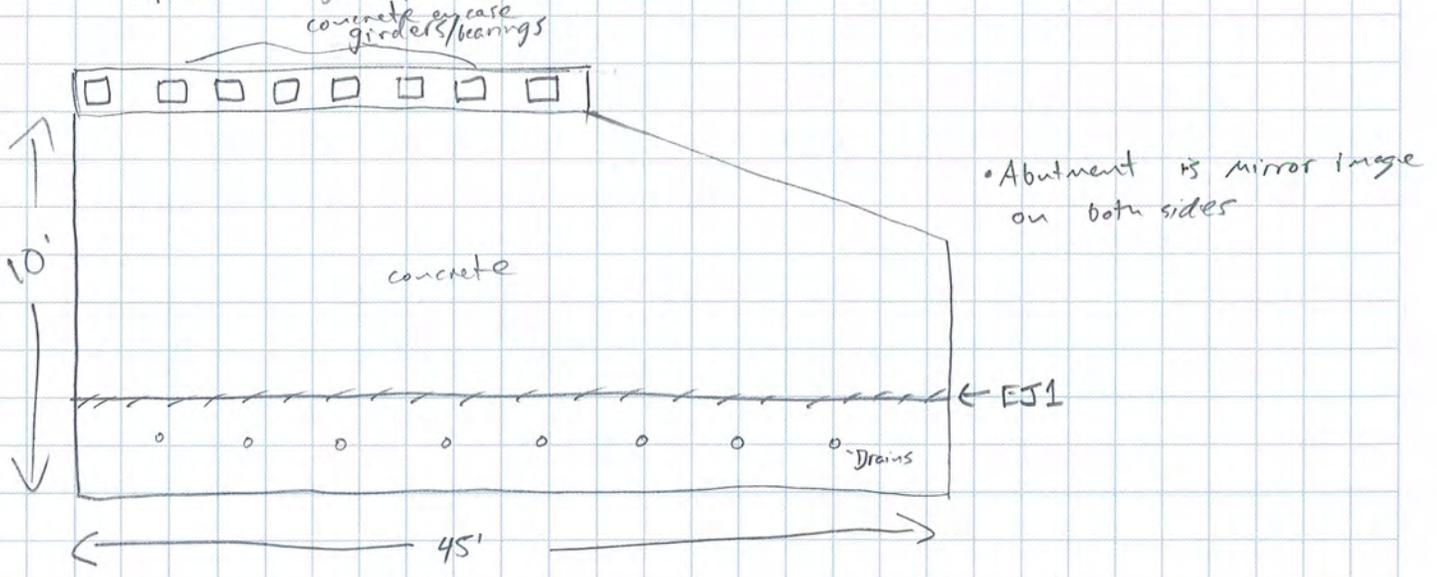
Acu CST

C1 - white caulk around base of bearing (1.5' x 1.5') 12 bearings

EJ1 - gray expansion joint

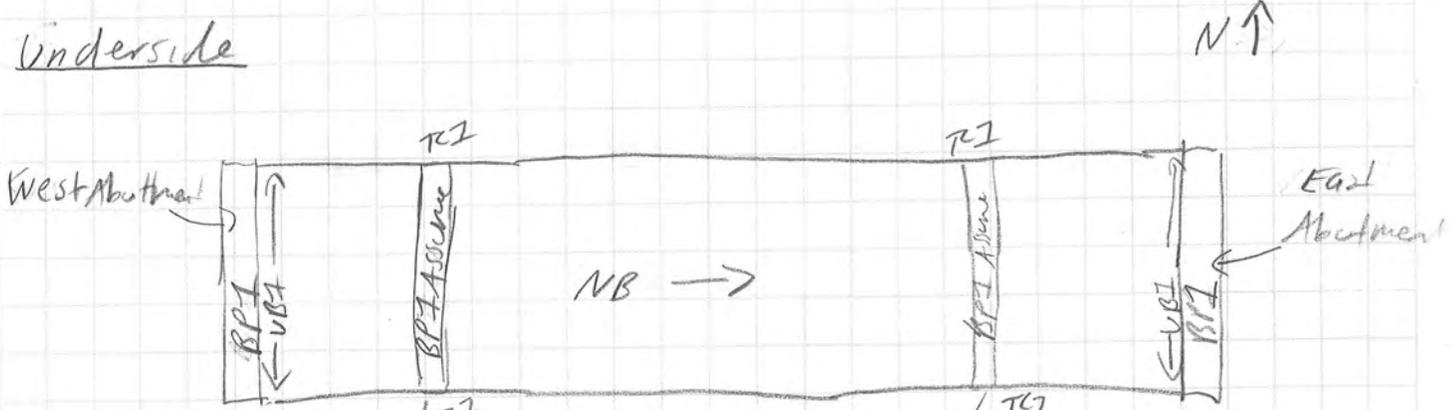
AP1 - black gummy tar plug

- Notes:
- Top of bridge has Asphaltic plugs @ each end where road meets bridge (AP1)
  - Bearings/rocks painted silver w/ C1 around base of each
  - 2 outer beams are unpainted steel
  - girders in between are encased in painted concrete
  - crossbeams unpainted
  - Topside Railings unpainted w/ silicone expansion joints where abutment meets road deck

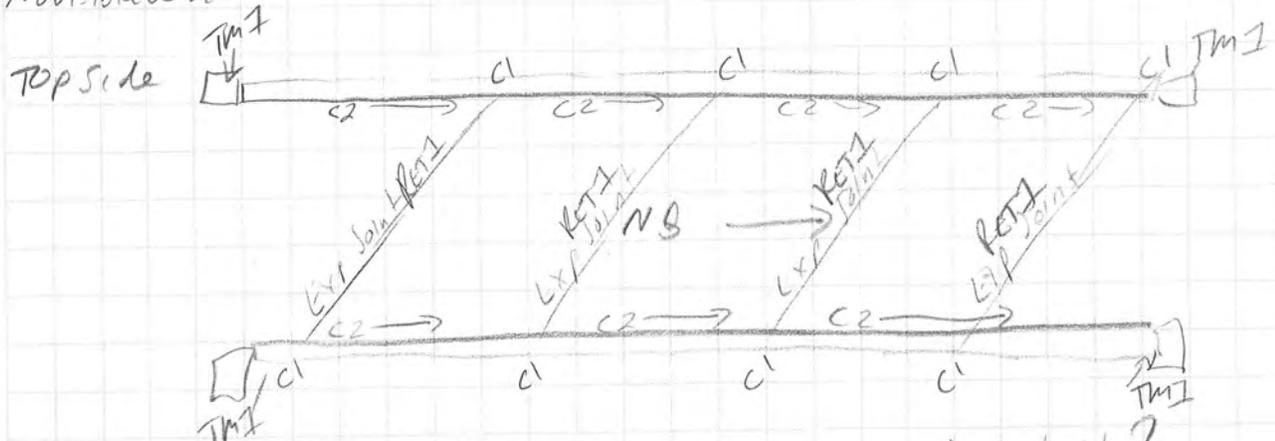




SUBJECT Bridge 01802 - NB - I95 - Taylors Rd



- TCI Pier columns / beam - made <sup>press</sup> on concrete for bearings
- Assume Ramp Profiles - Abutment
- 6 Rocker Bearings on each pier / Abutment
- Structural All painted Green / orange
- All concrete unpainted
- BPI under Rocker Bearings on Abutments / Assume on pier - Inaccessible
- VBI at top of Abutment / under Deck
- Deck concrete - unpainted.
- No expansion joint material between Abutment section underside
- No pipes underside of Deck
- NO Drain pipes in trap rock
- No visible sound



C1 - between concrete wall joints @ Roadway expansion joint area - under Asphalt?  
 C2 - along concrete curb  
 TM1 - in Abutment joint - 4 - North side + South side - runs horizontal through Abutment  
 No caulk at railing base plate  
 Railing post / Support post Silver / orange  
 Assume membrane below Asphalt



SUBJECT Bridge 01802 - NB I 95 - Tauximaru

SHEET NO. 2 OF 2

PROJECT NO. \_\_\_\_\_

DATE 3/22

BY MK/DH

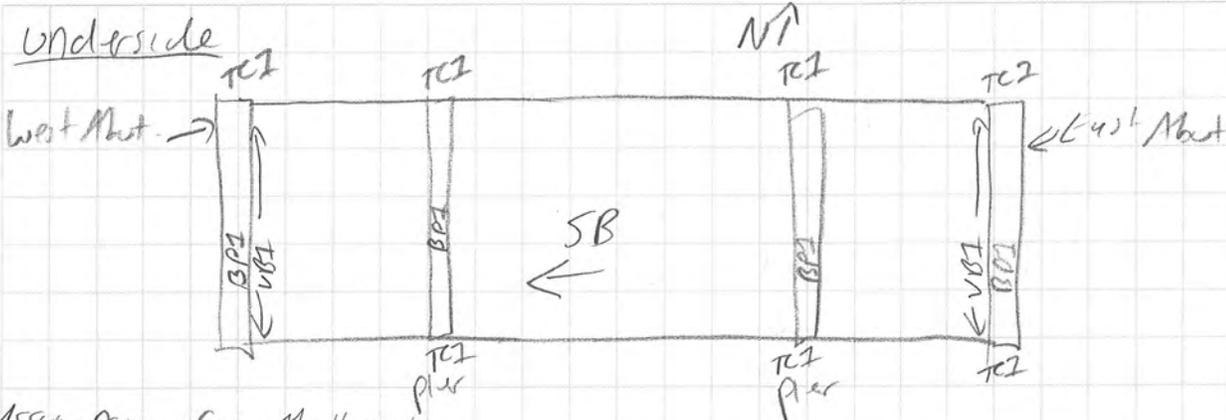
CHK'D \_\_\_\_\_

- BPI - Bearing Pad material - white/cloth like 15F each
- VBI - Black tar paper vapor barrier between Abutment/Deck
- C1 - tan/gray soft caulk associated with concrete wall @ Roadway exp joint
- C2 - caulk along curb -
- TM1 - black tar material found in Abutment Joint - Runs Horizontal - Not vertical
- TZ - Tan textured coating over concrete piers / columns
- RET1 - Black Roadway Expansion Tar.



SUBJECT Bridge 01803-T95-SB-Tauswerk Rd.

SHEET NO. 1 OF 2  
 PROJECT NO. \_\_\_\_\_  
 DATE 3/22/16  
 BY ML/DH  
 CHK'D \_\_\_\_\_



Assume Disproving - Abutments

Structural Painted green/silver/orange

No drain pipe in trap rock

No utility pipes underside

No exp joint treated in Bridge Abutment Joints - underside

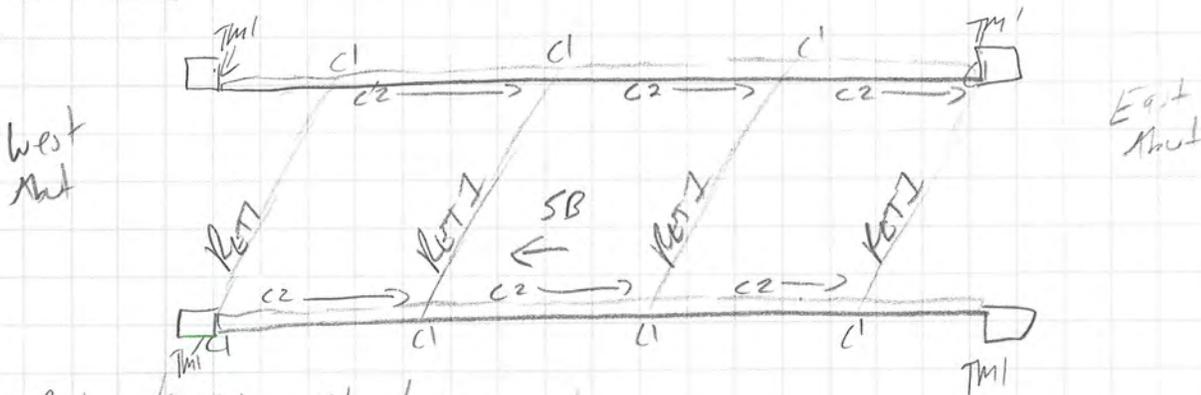
No beam visible

All concrete unpainted - TC2 on pier columns + beams - possibly Bearings Footings on top beam

& Rocker beams on each pier/abutment - w/BP1 - 15F each

VBT at Abutment/Rect Joint

Topside



- Railings/Supports - silver/orange paint

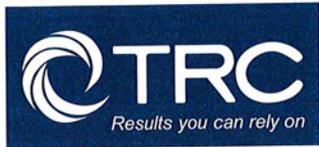
- No cwalk at base of Railings Support

- TM1 Run horizontal in Abutment Joint

- C2 along curb

C1 at Exp Joint - Roadway Location - in conc. wall - under Asphalt?

- Assume membrane under Asphalt



SUBJECT Bridge 01803-SB-195 - Tar work CHK'D \_\_\_\_\_

SHEET NO. 2 OF 2  
PROJECT NO. \_\_\_\_\_  
DATE 3/22/16  
BY mic/PH

- TM1 - Tar material in Abutment Joint - Run Horizontal
- TC1 - Tan - textured coating on pier column/beam.
- C1 - Tan/gray soft caulk in concrete wall joints at Roadway expansion joint locs
- C2 - Black caulk along Heavy curb
- BP1 - white cloth bearing pad.
- VB1 - Black tar paper waterproofer between Abutment/pile
- RET1 - Black Roadway Expansion Tar

STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

m e m o r a n d u m

**subject:** Project No. 172-446  
Rehab of Bridges Nos. 401,  
402, 407, 934, 1802, 1803,  
281 & 408, District 2

**date:** March 14, 2016

**to:** Rabih M. Barakat  
Principal Engineer  
Bureau of Engineering and  
Construction

**from:** Christopher J. Bonsignore  
Principal Engineer  
Bureau of Engineering and  
Construction

In response to your memo dated March 7, 2016, this project has been re-evaluated and determined that no further soil investigations are warranted. Attached is a copy of the Task 100, Environmental Screening Review form by which the project was evaluated. If the scope should change, then further work may be required.

Upon receipt of approved Preliminary Design Plans, this project will be forwarded to TRC Environmental Corp. who will survey the Project for lead based paint and any other contaminated or hazardous materials (e.g. asbestos, guano, hazmat items, etc.). Plans, specifications and cost estimate will be provided, if required, pending the results of this review.

If you have any questions or comments, please call Mr. Roger Levesque, Project Engineer, at ext. 3339.

Attachment

Roger Levesque:  
cc: Kevin Blasi-Ryan Martin  
~~Christopher J. Bonsignore-Judith Nemecek~~ RJE

S:/ENVIRON/Levesque/Barakat100e-172-446

RECEIVED  
MAR 15 2016  
Division of Environmental Compliance

## **PROJECT DESCRIPTION**

### **PROJECT #172-446 – BEAM END REPAIRS AND BEARING REPLACEMENT IN DISTRICT 2**

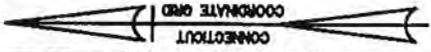
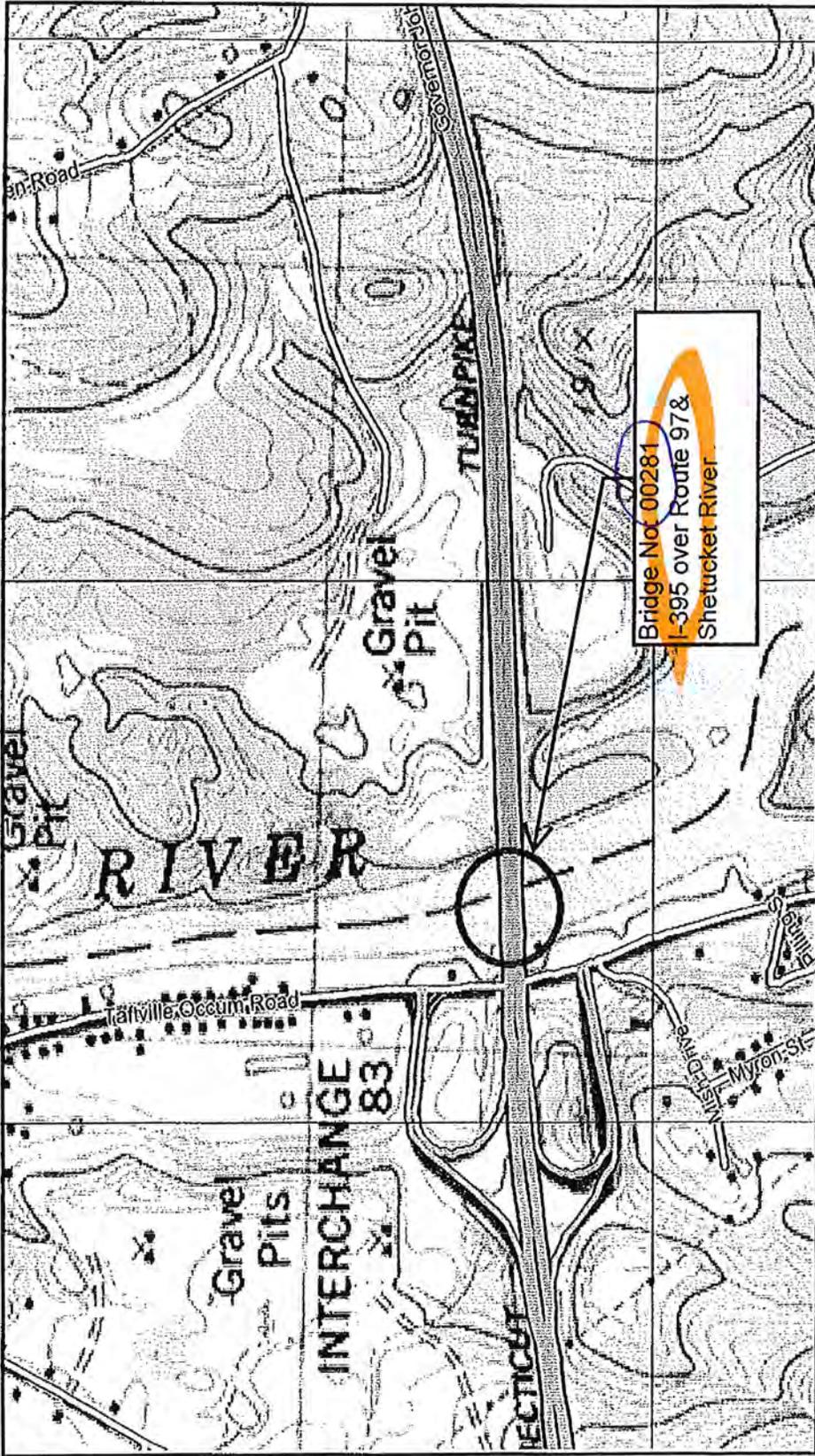
The bridge modifications associated with this Scope of Services for Project #172-446 includes the design of repairs for the rehabilitation of 8 bridges.

Bridge # 00401, Route 2 EB over Fitchville Pond and Bozrah Street, Bozrah  
Bridge #00402, Route 2 WB over Fitchville Pond and Bozrah Street, Bozrah  
Bridge #00407, Route 2 over Wawecus Street, Norwich  
Bridge #00934, Route 32 over Yantic River, Norwich  
Bridge #01802, I-95 NB over Taugwank Road, Stonington  
Bridge #01803, I-95 SB over Taugwank Road, Stonington  
Bridge #00281, I-395 over Route 97 & Shetucket River, Norwich  
Bridge #00408, Route 2 over McClellan Avenue, Norwich

The bridge rehabilitation that will be performed in this project are minor in nature and will primarily be of a maintenance type of work. The following types of repairs are anticipated

- Bearing replacements
- Steel beam end repairs
- Beam end painting
- Bearing pedestal repairs
- Joint replacements
- Reconstruction of deck ends
- Deck patching
- New deck membrane and overlay
- Remove hollow girder haunches over roadways
- Substructure concrete repairs

All project Access will be from the top of deck side and from underside of the bridge where accessible and in non-wetland areas. Where required, in areas adjacent to traffic (pedestrian, railroad and vehicular) and in areas over wetlands, temporary debris shields will be installed prior to any deck concrete removal to prevent debris from falling onto roadways or streams below the bridge. All staging is expected to be from platforms suspended from the superstructure or from ground supported scaffolding where feasible. All work will be performed using temporary lane closures in off peak hours. No excavation or other earthwork is anticipated beyond minor excavation that may be required for the foundations of temporary jacking towers/supports.



Project Location Map

STATE PROJECT NO.:  
**172-446**  
 CITY/TOWN:  
**NORWICH**

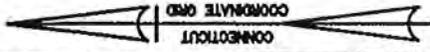
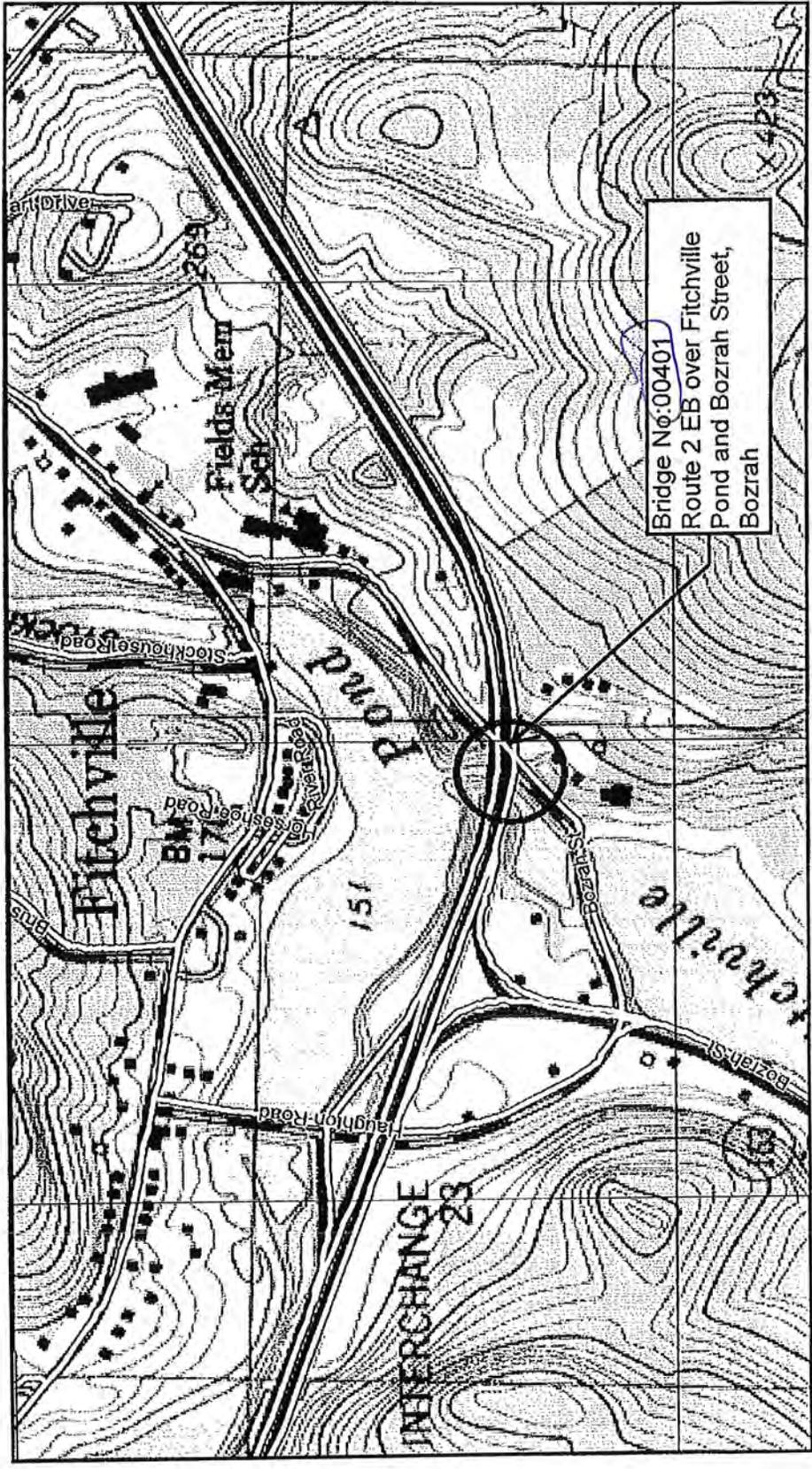


STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION  
**REHABILITATION OF BRIDGE # 00281**  
 I-395 over Route 97 & Shetucket River

OFFICE OF  
 ENGINEERING



DATE:



Project Location Map

STATE PROJECT NO.:  
**172-446**  
 CITY/TOWN:  
**BOZRAH**

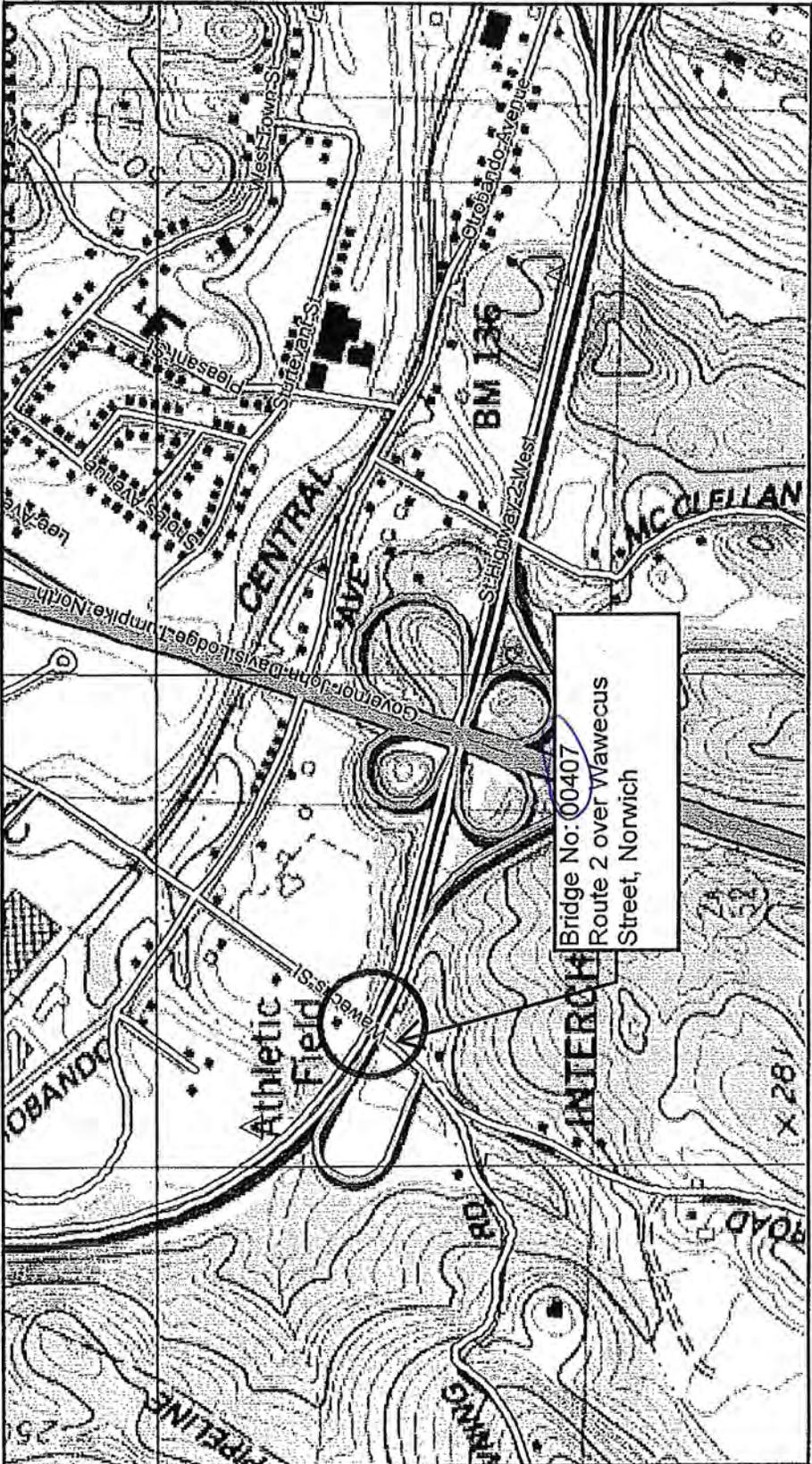

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  

**REHABILITATION OF BRIDGE # 00401**  
 Route 2 EB over Fitchville Pond and Bozrah  
 Street, Bozrah

OFFICE OF  
 ENGINEERING  


DATE:





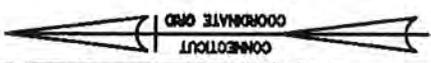
Project Location Map

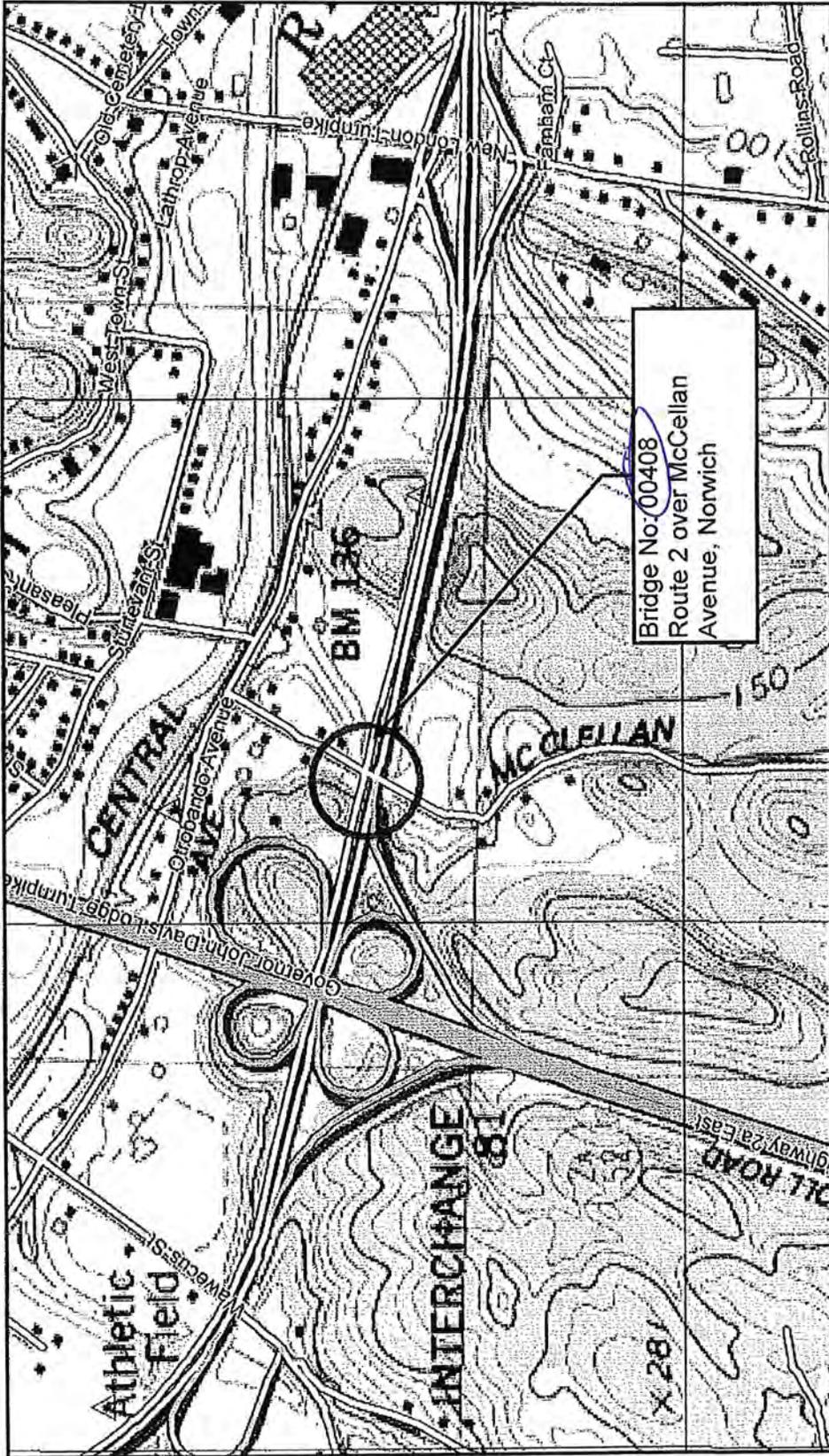
STATE PROJECT NO.:  
**172-446**  
 CITY/TOWN:  
**NORWICH**


**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
  
**REHABILITATION OF BRIDGE # 00407**  
 Route 2 over Wawecus Street, Norwich

OFFICE OF  
 ENGINEERING  


DATE:





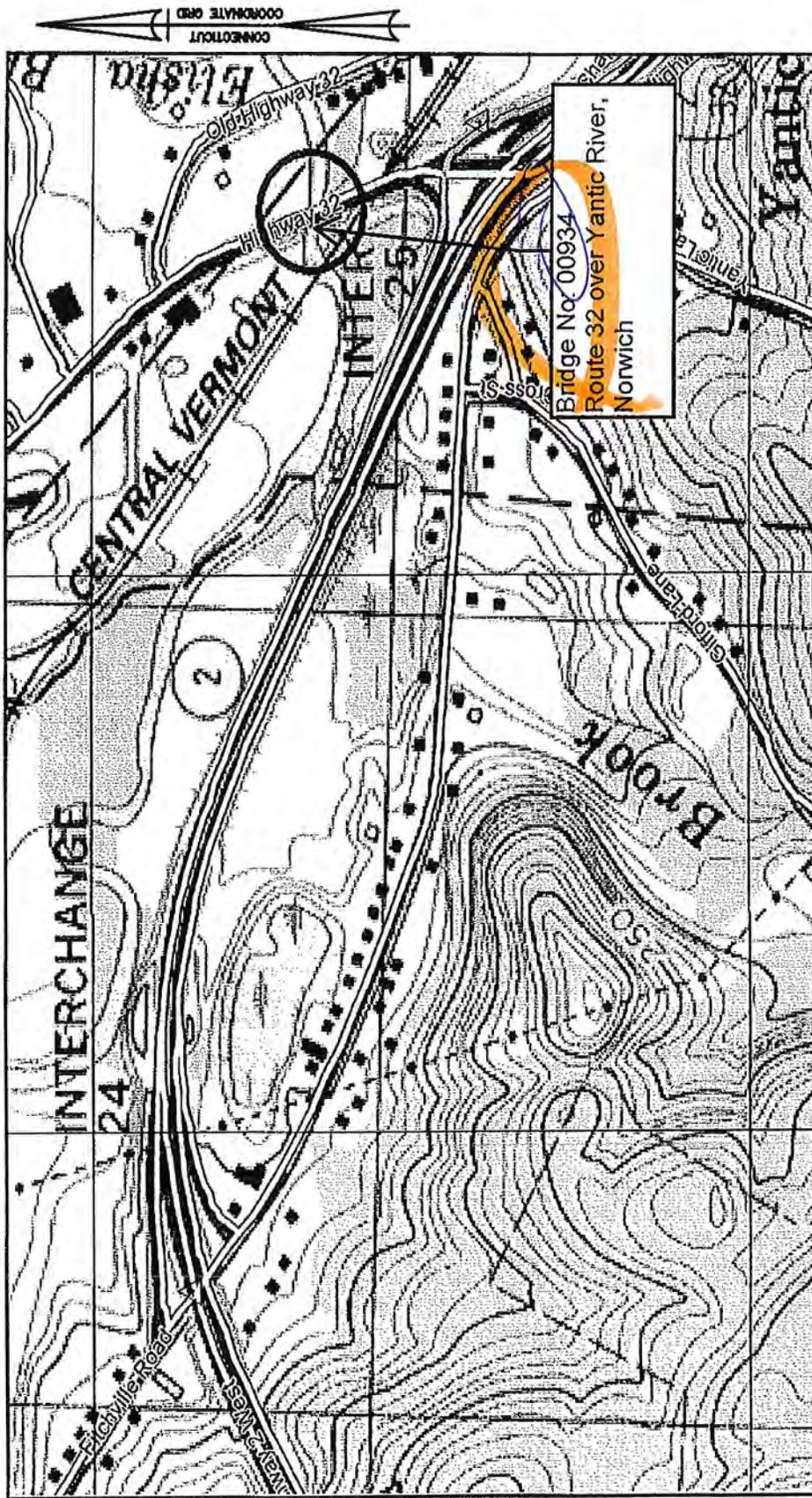
Project Location Map

STATE PROJECT NO.:  
**172-446**  
 CITY/TOWN:  
**NORWICH**

STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION  
  
 REHABILITATION OF BRIDGE # 00408  
 Route 2 over McCellan Avenue, Norwich

OFFICE OF  
 ENGINEERING  


DATE:



Project Location Map

STATE PROJECT NO.:

172-446

CITY/TOWN:

NORWICH

DATE:

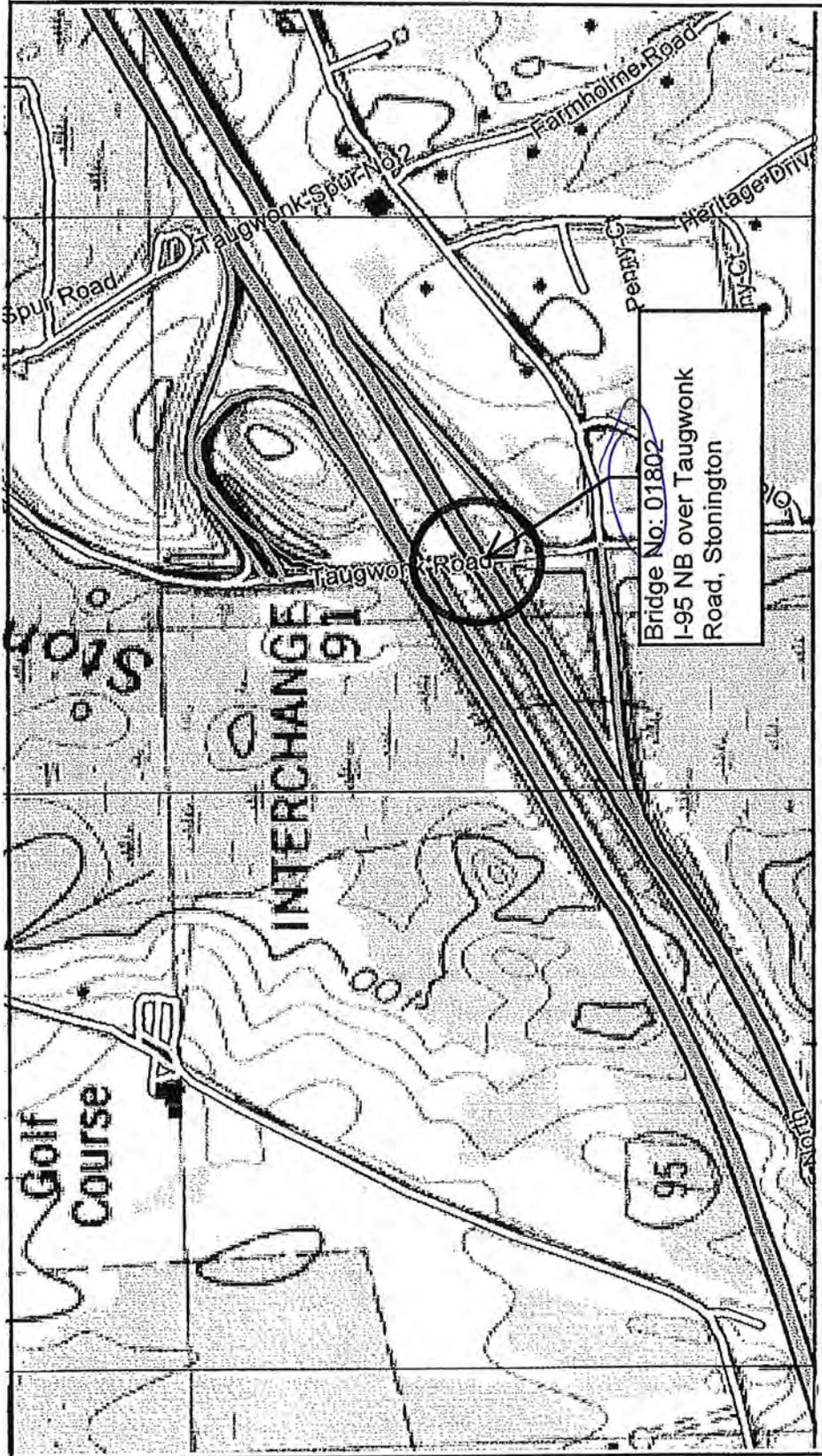
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STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION



REHABILITATION OF BRIDGE # 00934  
Route 32 over Yantic River, Norwich



Project Location Map

STATE PROJECT NO.:

172-446

CITY/TOWN:

STONINGTON

DATE:

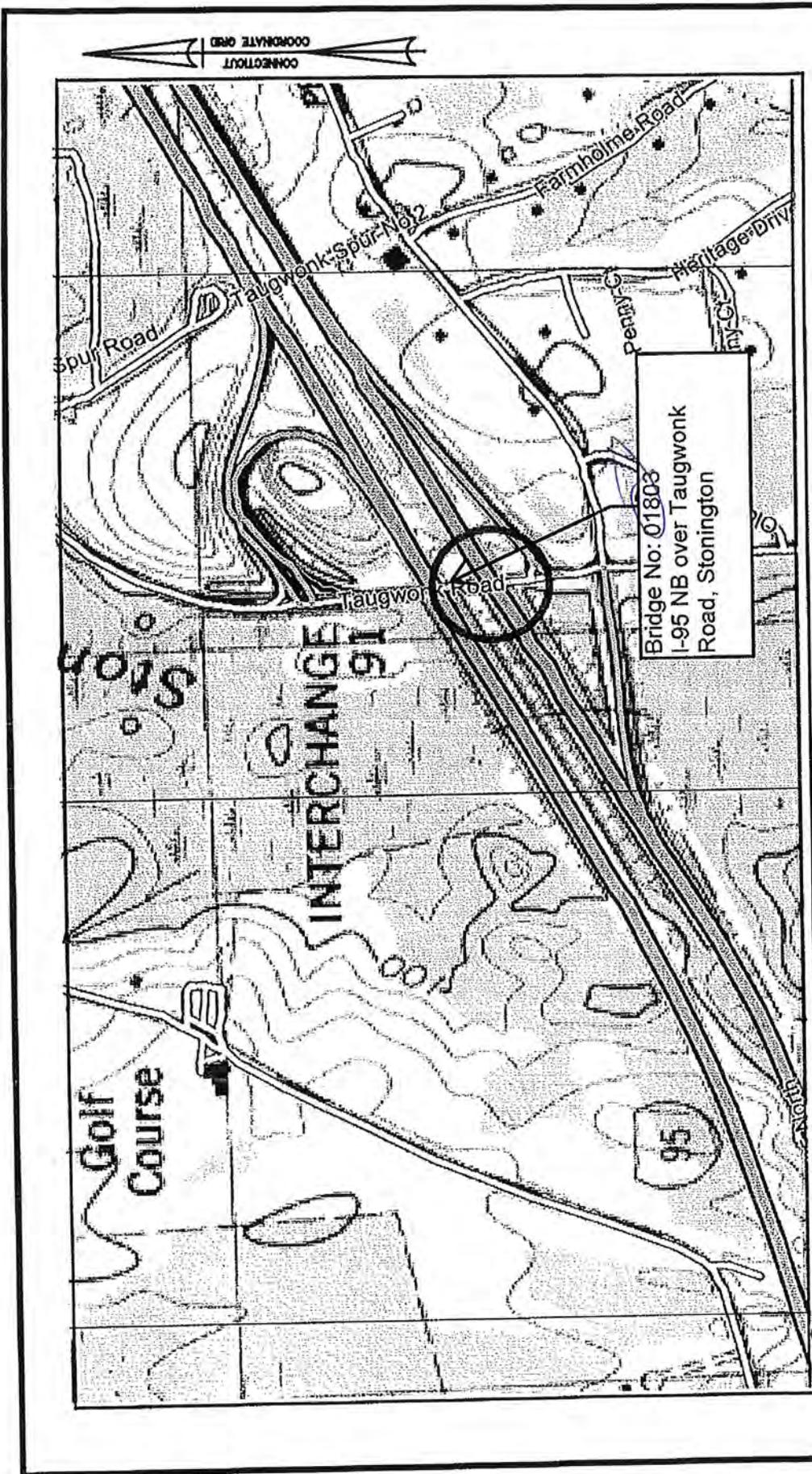
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STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION



REHABILITATION OF BRIDGE # 01802  
I-95 NB over Taugwonk Road, Stonington



Project Location Map

STATE PROJECT NO.:  
**172-446**  
 CITY/TOWN:  
**STONINGTON**

STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION



REHABILITATION OF BRIDGE # 01803  
 I-95 NB over Taugwonk Road, Stonington

OFFICE OF ENGINEERING



DATE: