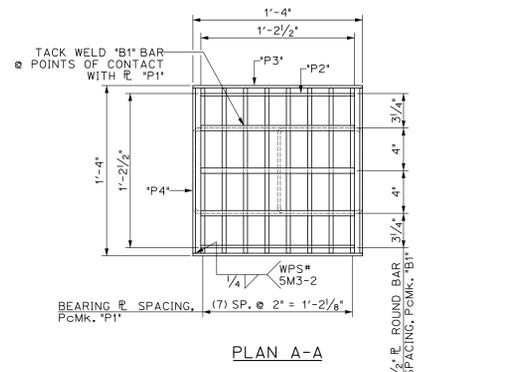
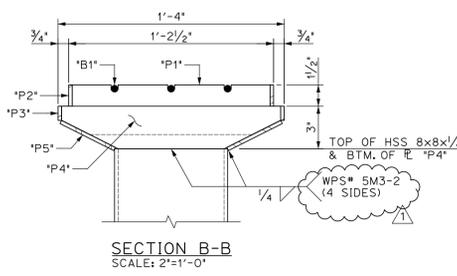


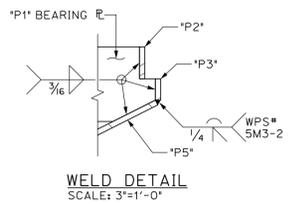
TYPICAL BRIDGE DRAIN SECTION  
SCALE: 1" = 1'-0"  
GIRDER 5 SHOWN, GIRDER 1 OPPOSITE HAND



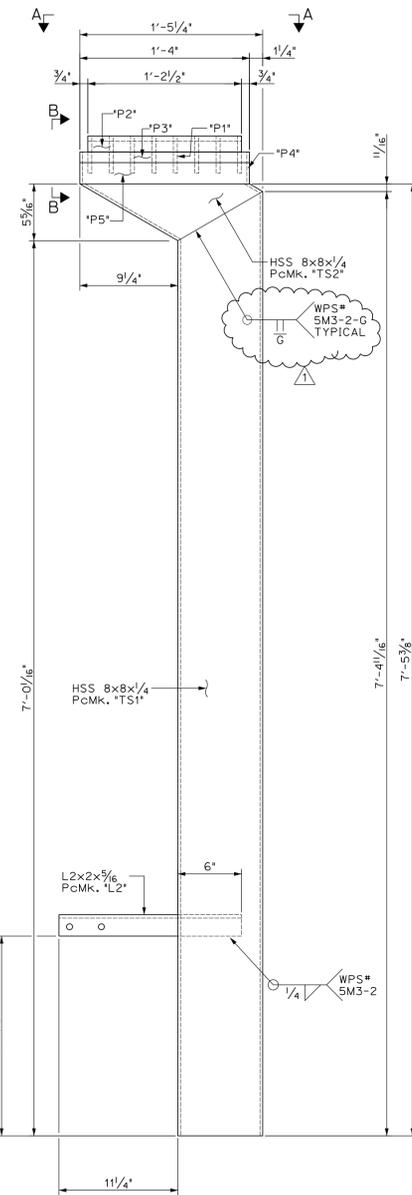
PLAN A-A



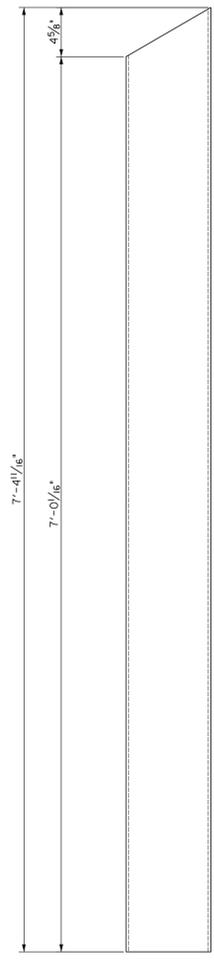
SECTION B-B  
SCALE: 2" = 1'-0"



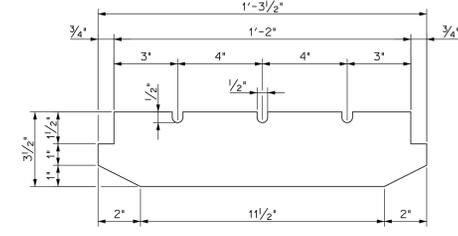
WELD DETAIL  
SCALE: 3" = 1'-0"



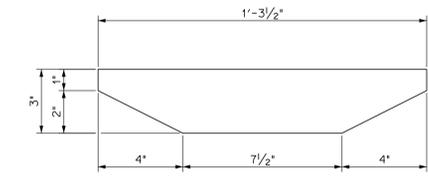
BRIDGE SCUPPER ELEVATION, Pc.Mk. \*D1\*  
SCALE: 1/2" = 1'-0"



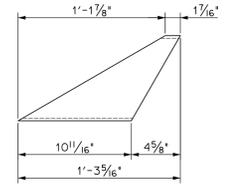
HSS 8x8x1/4, Pc.Mk. \*TS1\*  
SCALE: 1/2" = 1'-0"



3/8" BEARING PLATE, PcMk. \*P1\*  
SCALE: 3" = 1'-0"



1/4" BEARING PLATE, PcMk. \*P4\*  
SCALE: 3" = 1'-0"

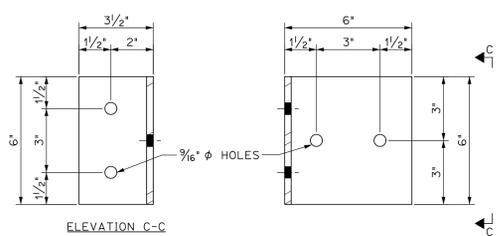


HSS 8x8x1/4, Pc.Mk. \*TS2\*  
SCALE: 1/2" = 1'-0"

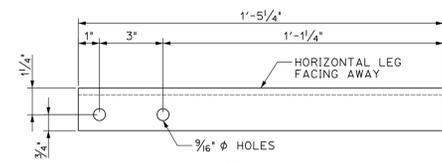
| BILL OF MATERIALS |           |          |            |                         |            |           |           |                    |  |
|-------------------|-----------|----------|------------|-------------------------|------------|-----------|-----------|--------------------|--|
| SHIP              | SHIP MARK | NO. PCS. | PIECE MARK | DESCRIPTION             | LENGTH     | WEIGHT    | FINISH    | MATERIAL           |  |
| 10                | D1        |          |            | BRIDGE SCUPPER ASSEMBLY |            | 305# EACH | GALVANIZE |                    |  |
|                   |           | 10       | TS1        | HSS 8x8x1/4             | 7'-4 1/16" | 200# EACH |           | ASTM A500, Gr.B    |  |
|                   |           | 10       | TS2        | HSS 8x8x1/4             | 1'-3 3/8"  | 25# EACH  |           | ASTM A500, Gr.B    |  |
|                   |           | 30       | B1         | 1/2" ϕ ROUND BAR        | 1'-2 1/2"  | 1# EACH   |           | AASHTO M270, Gr.36 |  |
|                   |           | 80       | P1         | 3/8" ϕ x 3 1/2"         | 1'-3 1/2"  | 5.5# EACH |           | AASHTO M270, Gr.50 |  |
|                   |           | 20       | **P2       | 1/4" x 1 1/2"           | 1'-2 1/2"  | 2# EACH   |           | AASHTO M270, Gr.50 |  |
|                   |           | 20       | **P3       | 1/4" x 1"               | 1'-4"      | 1.5# EACH |           | AASHTO M270, Gr.50 |  |
|                   |           | 20       | P4         | 1/4" x 3"               | 1'-3 1/2"  | 3# EACH   |           | AASHTO M270, Gr.50 |  |
|                   |           | 20       | **P5       | 1/4" x 4 1/4"           | 1'-4"      | 5# EACH   |           | AASHTO M270, Gr.50 |  |
|                   |           | 10       | L2         | L2x2x5/16               | 1'-5 1/4"  | 6# EACH   |           | AASHTO M270, Gr.36 |  |
| 10                | L1        |          |            | L6x3 1/2x5/16           | 0'-6"      | 5# EACH   |           | AASHTO M270, Gr.36 |  |

| FIELD BOLTS |     |                                 |        |                   |
|-------------|-----|---------------------------------|--------|-------------------|
| 20          | FB1 | 1/2" ϕ BOLT W/ N&W (GALVANIZED) | 1 3/4" | ASTM A325, TYPE 1 |
| 20          | FB2 | 1/2" ϕ BOLT W/ N&W (GALVANIZED) | 1 1/2" | ASTM A325, TYPE 1 |

NOTE: PIECES MARKED WITH A DOUBLE ASTERISK (\*\*) IN THIS BILL OF MATERIAL HAVE BEEN INCLUDED FOR QUANTITY PURPOSES ONLY. NO INDIVIDUAL PIECE MARK DETAIL HAS BEEN INCLUDED, THE MATERIAL IS JUST TO BE CUT TO THE DIMENSIONS SHOWN.



L6x3 1/2x5/16, PcMk. \*L1\*  
SCALE: 3" = 1'-0"



L2x2x5/16, PcMk. \*L2\*  
SCALE: 3" = 1'-0"

|   |   |  |
|---|---|--|
| REVIEWED  | X |  |
| REVIEWED AS MODIFIED  |   |  |
| REVISE AND RESUBMIT   |   |  |
| NOT REVIEWED  |   |  |
| Date: 5/26/2016   |   |  |
| By: Nathan Tirk   |   |  |
| <p>This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc. approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the jobsite, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.</p> |   |  |

- GENERAL FABRICATION NOTES**
- FOR SCUPPER LOCATIONS, SEE FRAMING PLAN ON SHEET BR111 OF THE CONTRACT DETAILS OR THE FRAMING PLAN ON SHEET #1 OF THE GIRDER SHOP DETAILS.
  - DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH SUBSECTION 726.08
  - ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
  - PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO A 1/16" RADIUS.
  - IN THE EVENT THAT THERE ARE AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 726.08.
  - THE TOP OF THE GRATE HAVE BEEN DETAILED LEVEL, RESULTING IN 1/4" DIFFERENCE FROM THE CONTRACT DETAILS, AT THE FACE OF THE CURB. SEE "TYPICAL DRAIN SECTION".

**Approved**

BY: **D Bonneau**

DATE: **05/27/16**

RESUBMIT: **No**

RECEIVED: **May 25, 2016**

CKD BY: **Stantec**

**STATE OF VERMONT**  
AGENCY OF TRANSPORTATION

PROJECT No. IM 089-2(43)  
ITEM No. 506.60

|              |                    |         |                    |
|--------------|--------------------|---------|--------------------|
| FINISH       | GALVANIZED         |         |                    |
| MATERIAL     | AS NOTED           |         |                    |
| HOLES        | AS NOTED           |         |                    |
| ELECTRODES   | PER WELD PROCEDURE |         |                    |
| WELDS        | PER WELD PROCEDURE |         |                    |
| SURFACE PREP | 1                  | 5/25/16 | ADDRESSED COMMENTS |
|              | NO                 | DATE    | DESCRIPTION        |

REVISIONS

|     |      |             |    |
|-----|------|-------------|----|
| NO. | DATE | DESCRIPTION | BY |
|     |      |             |    |

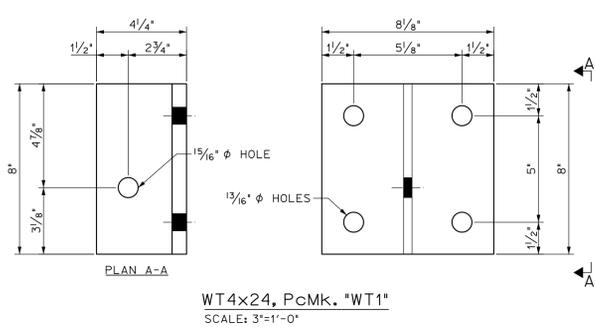
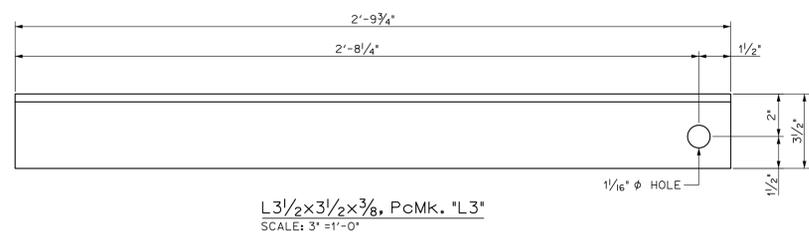
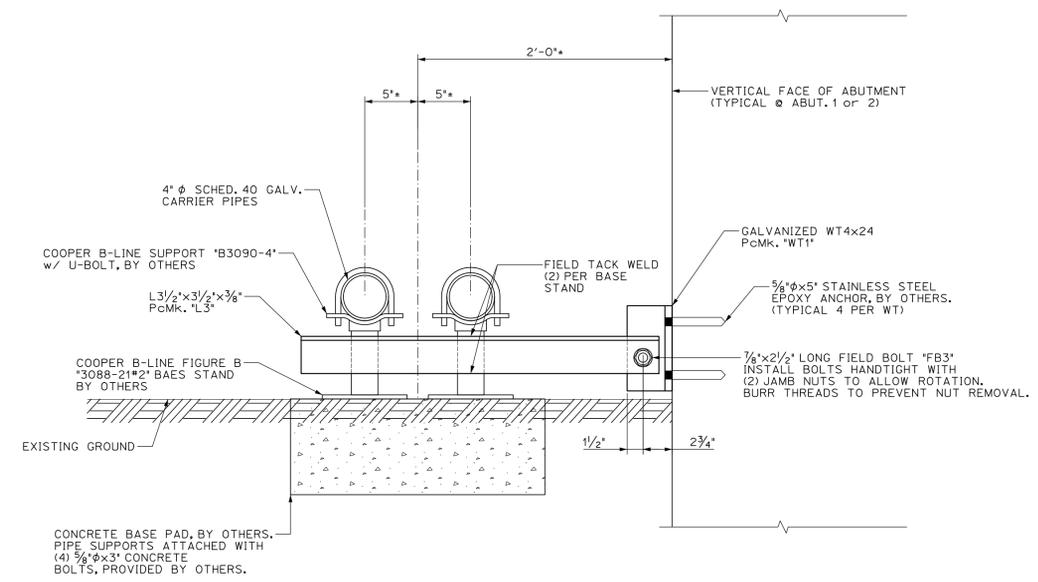
**ARC ENTERPRISES, INC.**

**ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED**

P.O. BOX 120 KINGFIELD, ME. 04947  
PHONE: (207) 265-2646 - FAX: (207) 265-4054

|         |           |  |             |
|---------|-----------|--|-------------|
| DRAFTER | JJH       | BRIDGE 46A SCUPPERS                              | PROJECT NO. |
| DATE    | AUG. 2015 | WATERBURY, VT. BRIDGES 46A                       | 14-148      |
| CHECKED | GNM       | I-89 EXIT RAMP B OVER STOWE ST. & THATCHER BROOK | DWG. NO.    |
| DATE    | AUG. 2015 | BECK & BELLUCCI                                  | 1           |

| BILL OF MATERIALS |           |          |            |   |           |          |                   |                    |
|-------------------|-----------|----------|------------|---|-----------|----------|-------------------|--------------------|
| SHIP              | SHIP MARK | NO. PCS. | PIECE MARK | DESCRIPTION                               | LENGTH    | WEIGHT   | FINISH            | MATERIAL           |
| 2                 | WT1       |          |            | WT4x24                                    | 0'-8"     | 16# EACH | GALVANIZE         | AASHTO M270, Gr.50 |
| 2                 | L3        |          |            | L3/2x3/2x3/8                              | 2'-9 3/4" | 25# EACH |                   | AASHTO M270, Gr.36 |
| FIELD BOLTS       |           |          |            |   |           |          |                   |                    |
| 2                 | FB3       |          |            | 7/8" φ BOLT (GALVANIZED) w/ (2) JAMB NUTS | 2 1/2"    |          | ASTM A325, TYPE 1 |                    |



|                      |   |
|----------------------|---|
| REVIEWED             | X |
| REVIEWED AS MODIFIED |   |
| REVISE AND RESUBMIT  |   |
| NOT REVIEWED         |   |

Date: 5/26/2016

By: Nathan Tirk

This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the jobsite, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.



**Approved**

BY: **D Bonneau**

DATE: **05/27/16**

RESUBMIT: **No**

RECEIVED: **May 25, 2016**

CKD BY: **Stantec**

**STATE OF VERMONT**  
AGENCY OF TRANSPORTATION

PROJECT No. IM 089-2(43)  
ITEM No. 506.60

|              |                    |
|--------------|--------------------|
| FINISH       | GALVANIZED         |
| MATERIAL     | AS NOTED           |
| HOLES        | AS NOTED           |
| ELECTRODES   | PER WELD PROCEDURE |
| WELDS        | PER WELD PROCEDURE |
| SURFACE PREP |                    |

| NO        | DATE | DESCRIPTION | BY |
|-----------|------|-------------|----|
| REVISIONS |      |             |    |

**ARC**  
ENTERPRISES, INC.

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ENTERPRISES, INCORPORATED

P.O. BOX 120 KINGFIELD, ME. 04947  
PHONE: (207) 265-2646 - FAX: (207) 265-4054

|         |           |  |             |
|---------|-----------|--|-------------|
| DRAFTER | JJH       | BRIDGE 46A ~ PIPE SUPPORT BRACKETS               | PROJECT NO. |
| DATE    | AUG. 2015 | WATERBURY, VT. BRIDGES 46A                       | 14-148      |
| CHECKED | GNM       | I-89 EXIT RAMP B over STOWE ST. & THATCHER BROOK | DWG. NO.    |
| DATE    | AUG. 2015 | CC: BECK & BELLUCCI                              | 2           |