

REVIEWED	X
REVIEWED AS MODIFIED	
REVISION AND RESUBMIT	
NOT REVIEWED	

Date: 4/24/2015  
 By: Nathan Tirk

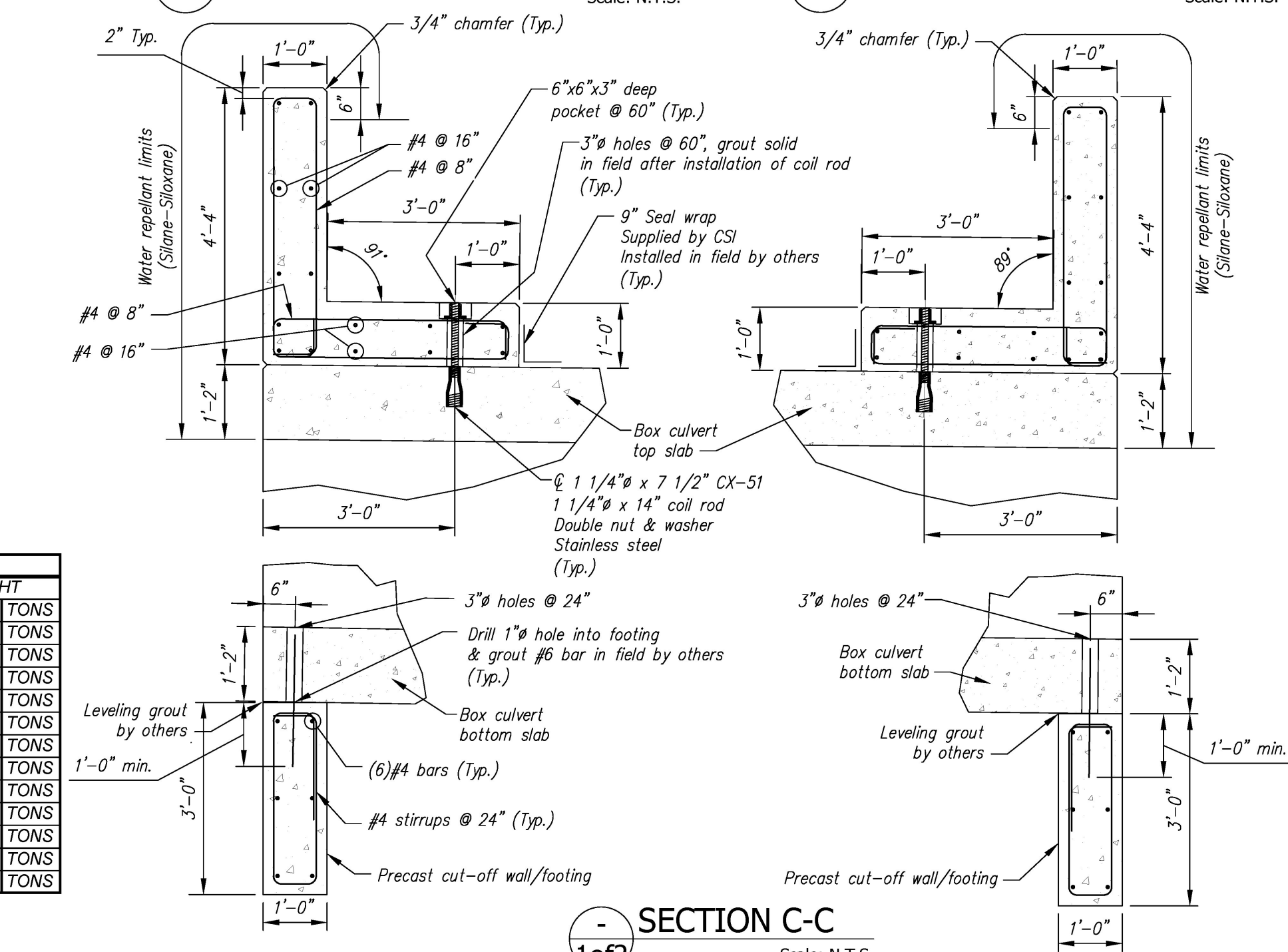
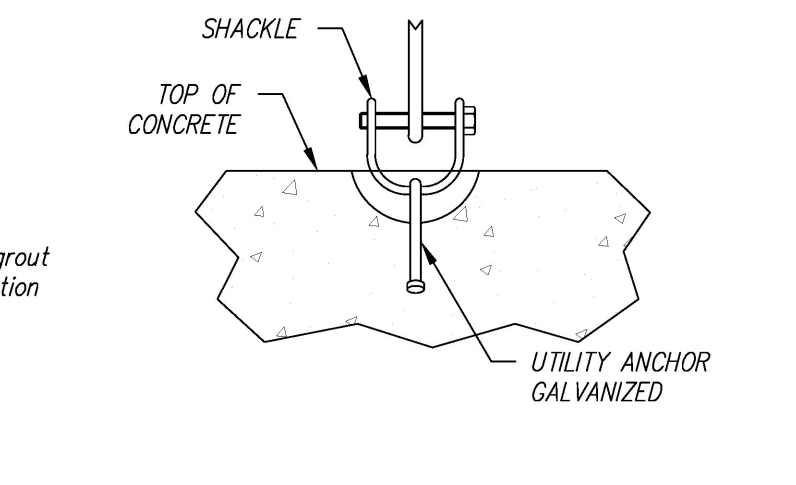
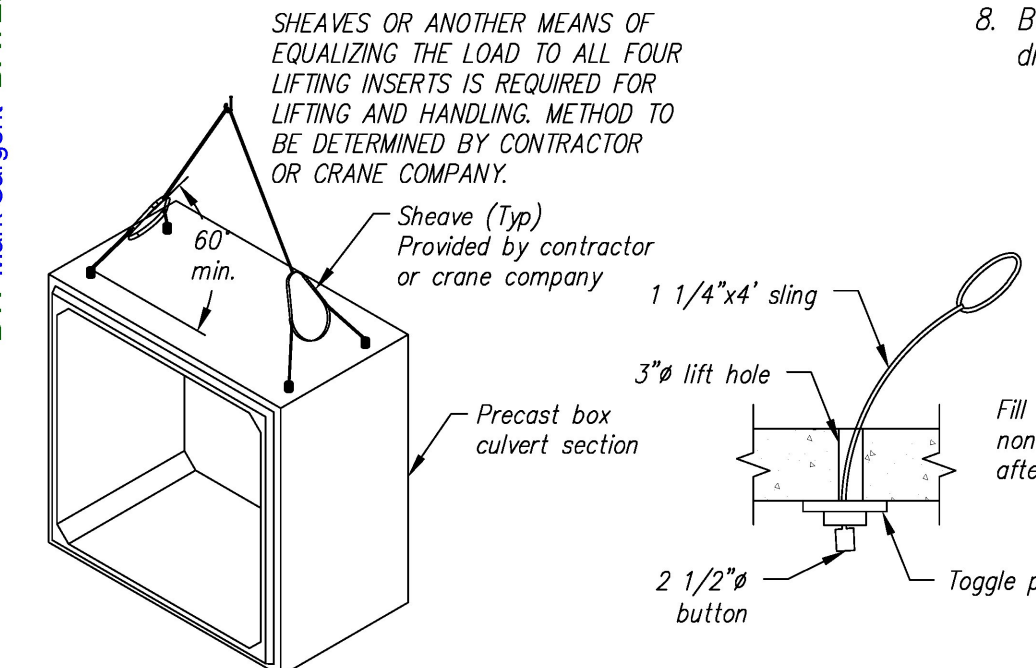
THIS REVIEW BY STANTEC CONSTITUTES SERVICE FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW SHALL NOT BE CONSIDERED AS A DESIGN REVIEW OR A REVIEW OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL DETAILS AND FOR THE COORDINATION OF THE WORK OF ALL CONTRACTORS.

Wingwall connection plate on backside of joint (Typ.)  
 See Elevations "A-A" & "B-B" on sheet 2 of 2 for plate designations & locations. Cover all corners with 2' wide strip of barrier membrane by Contractor.

- WINGWALL GENERAL NOTES:**
- Reference standard: AASHTO LRFD Bridge Design Specifications
  - Design Parameters:  
 Soil Bearing: 4300 psf  
 Earth Cover: 5' to 7.5'  
 Concrete: Design strength  $f'_c = 5000$  psi  
 Unit weight = 150 pcf  
 Reinforcing: ASTM A615 (rebar), grade 60, Black  
 Soil: Unit weight = 140 pcf  
 Minimum lateral pressure coefficient .25  
 Maximum lateral pressure coefficient .50  
 Cover to reinforcing: 2" u.n.o.
  - The wingwalls have been designed for general site conditions. The project engineer shall be responsible for the structure's suitability to the existing site conditions and for the hydraulic evaluation, including scour and confirmation of soil conditions.
  - Prior to construction, contractor must verify all elevations shown through the engineer.

- GENERAL NOTES:**
- Reference Standards:  
 AASHTO "LRFD Bridge Design Specifications"  
 ASTM C1577
  - Design Parameters:  
 Live load: HL-93  
 Earth Cover: 9' to 12'  
 Concrete: Design strength  $f'_c = 5000$  psi  
 Unit weight = 150 pcf  
 Reinforcing: ASTM A615 (rebar) GR 60, Black  
 Soil: Unit weight = 140 pcf  
 Minimum lateral pressure coefficient .25  
 Maximum lateral pressure coefficient .50  
 Cover to reinforcing: 2" headwalls  
 1 1/2" elsewhere u.n.o.
  - Dimensions include a joint gap. Actual culvert piece length is 1/2" shorter (i.e. A2 = 6'-0").
  - No dampproofing or waterproofing supplied by CSI.
  - DBS are Dowel Bar Splicers and DI are Dowel Ins. Both are supplied by CSI. DI's are to be installed and cut/bent in the field by others as required.
  - Headwalls are not designed for impact load.
  - Water repellent (Silvane Siloxane) by CSI on all exposed faces of culvert, headwalls, and wingwalls to 1' inside culvert ends.
  - Baffle wall details taken from Sheet 12 of 55 of the contract drawings.

Vermont Agency of Transportation  
**RECEIVED**  
 ON: April 30, 2015  
 and Checked for  
**CONFORMANCE**  
 BY: Mark Sargent DATE: 5/7/2015



MARK	QTY	LENGTH	YDS	WEIGHT
A1	1	6.06	16.08	32.56 TONS
A2	9	6.00	15.70	31.79 TONS
A3	1	6.06	15.62	31.63 TONS
HW1A	1	22.00	5.98	12.11 TONS
HW2A	1	22.00	5.98	12.11 TONS
WW1A	1	11.50	7.09	14.36 TONS
WW2A	1	11.50	7.09	14.36 TONS
WW3A	1	13.00	7.90	16.00 TONS
WW4A	1	12.00	7.44	15.07 TONS
F1A	1	21.17	4.57	9.25 TONS
F2A	1	21.17	4.57	9.25 TONS
F3A	1	22.50	4.99	10.10 TONS
F4A	1	21.58	4.71	9.54 TONS

**ELEVATION**  
 Scale: 1/4" = 1'-0"

**BAFFLE WALL BENDING SCHEDULE**  
 Scale: N.T.S.

**BAFFLE WALL DETAIL**  
 Scale: N.T.S.

**BAFFLE WALL SECTION**  
 Scale: N.T.S.

**CULVERT REINFORCING DETAIL**  
 Scale: 3/8" = 1'-0"

**BENDING SCHEDULE**  
 Scale: N.T.S.

Contractor is to verify that all information shown on drawings has been thoroughly checked, complies with the contract documents and is adequate to meet the field conditions. Some dimensions and details may differ slightly from contract drawings to accommodate the manufacturing or design process. Approval of this drawing indicates that any deviation from the contract documents has been reviewed and found to be acceptable. Production will not commence until receipt of signed, approved shop drawings.

This drawing contains information proprietary to CONCRETE SYSTEMS, INC. This drawing is disclosed with the understanding that it will be retained in confidence and its use limited solely to the purpose for which it is disclosed. It is understood that no reproduction of this drawing is authorized without permission from CONCRETE SYSTEMS, INC. and that it will be returned to CONCRETE SYSTEMS, INC. upon request.

Stamp for structural design only

Rev.	Date	DESCRIPTION	By
5			
4			
3			
2			
1	01APR2015	CONSPAN WW ANCHORS WERE TYPE 'D', WWS WERE 10" THK, WW & FTG WEIGHTS UPDATED	RY

This drawing is based upon information provided from the following documents and/or sources:

Engineer: STATE OF VT AOT PROGRAM DEVELOPMENT  
 Project No: STPCULV30  
 Drawings: VT/AOT PROPOSED IMPROVEMENT BRIDGE PROJECT SHEETS 1 THRU 24 & 32 OF 55  
 Specifications: ----  
 Other Sources: ----

Concrete Systems Inc.  
 9 Commercial St., Hudson, NH, 03051  
 Phone 603-889-4163  
 Fax 603-889-2417

STATE AGENCY  
 VTrans  
 Working to Get You There  
 Safer, Smarter, Greener

J A MCDONALD, INC.  
 VT/AOT BRIDGE - STEEL CULVERT REPLACEMENT  
 BRIDGE #6, VT ROUTE 58, IRASBURG, VT

Drawn by: R. YEAGER Reviewed by: B. KOLANOWE Approved by:	Date: 09MAR2015 Date: 02APR2015 Date:	Drawing No: C22283-L01A Project No: STPCULV30	REV 1 SHEET 1A OF 2A
---	---	--	-------------------------