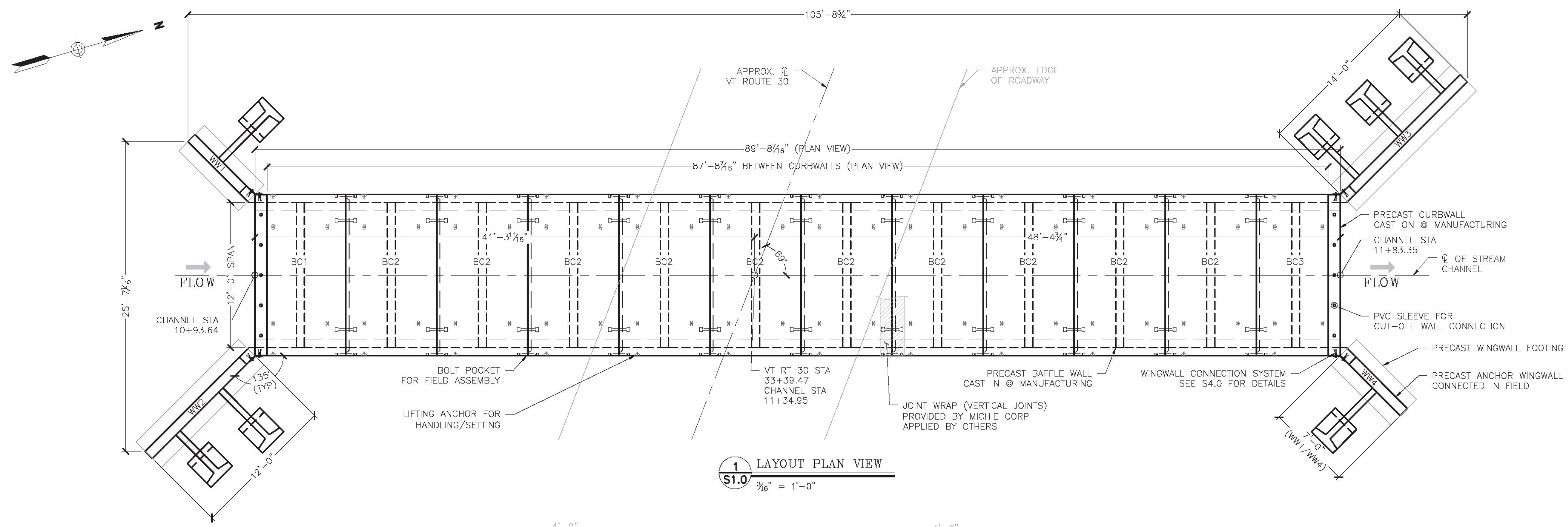
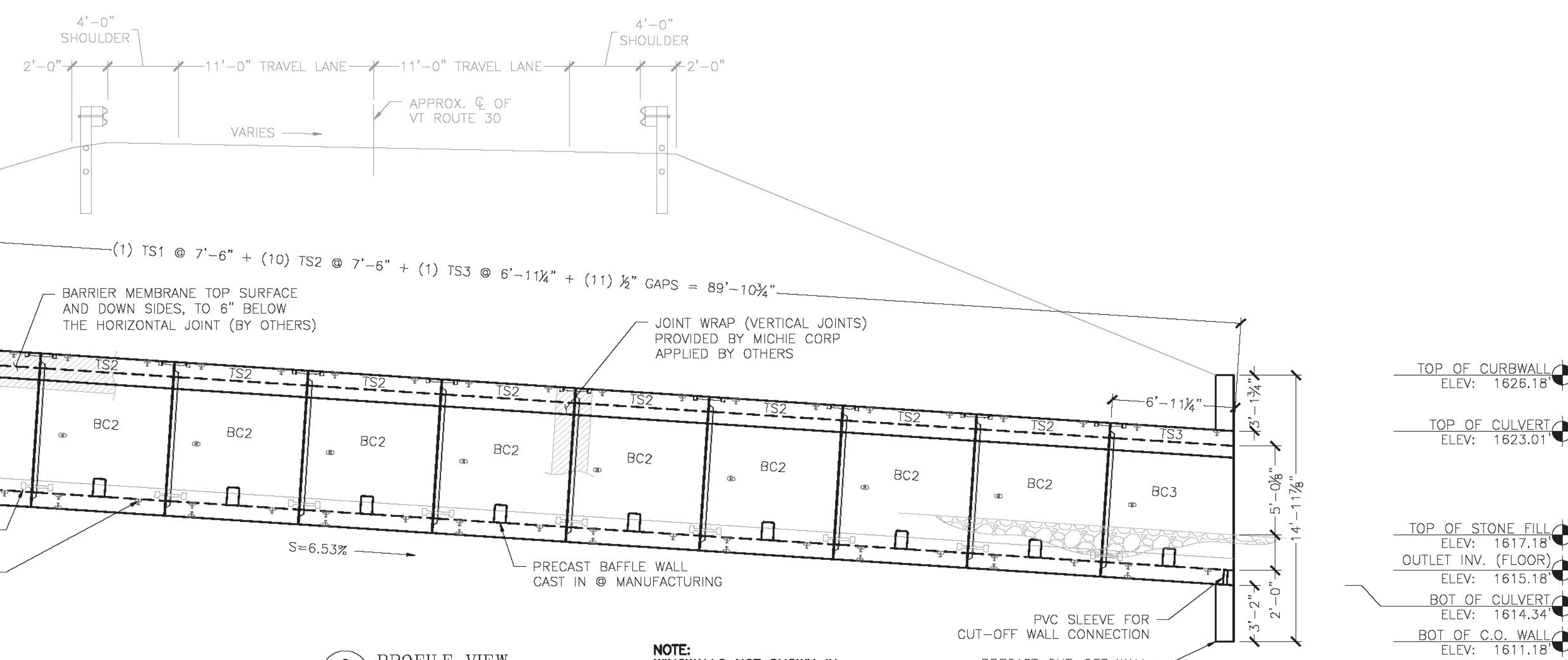


DATE: 2015.09.01



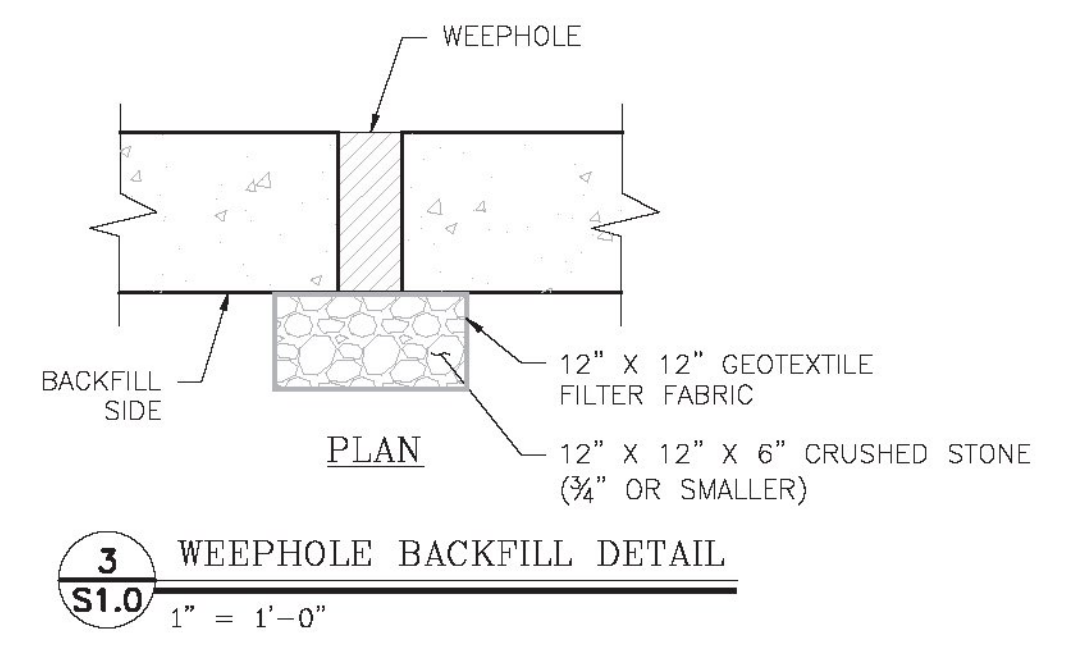
1 LAYOUT PLAN VIEW
 S1.0 3/8" = 1'-0"



2 PROFILE VIEW
 S1.0 3/8" = 1'-0"

NOTE: WINGWALLS NOT SHOWN IN THIS VIEW FOR CLARITY

BILL OF MATERIALS			
QTY	DESCRIPTION	IN STOCK	ORDERED FROM
148	RL-24 4TON X 3.5\"/>		



3 WEEPHOLE BACKFILL DETAIL
 S1.0 1" = 1'-0"

GENERAL NOTES:

- THE PLANS ARE INTENDED TO BE DRAWN TO SCALE. HOWEVER, IF A CRITICAL DIMENSION IS NOT PROVIDED, MICHE CORPORATION SHOULD BE CONTACTED FOR VERIFICATION.
 - IF ANY OF THE WORK TO BE DONE AS SHOWN ON THE DRAWINGS DOES NOT CORRESPOND WITH THE EXISTING FIELD CONDITIONS, CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
 - FIELD-VERIFY ALL ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES, CONSULT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
 - MAINTAIN MINIMUM 60 DEGREE SLING ANGLE WHEN HANDLING PRECAST COMPONENTS.
 - PRECAST COMPONENTS SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI PRIOR TO STRIPPING, AND THE MINIMUM DESIGN COMPRESSIVE STRENGTH PRIOR TO SHIPPING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 - ALL JOINTS AND VOIDS SHALL BE FILLED WITH NON-SHRINK GROUT. VERTICAL SURFACE VOIDS MAY BE FILLED WITH FOAM SEALANT.
 - SHOP DRAWINGS WERE DEVELOPED USING THE FOLLOWING RESOURCES FOR THE CONTRACT:
 - "PROPOSED IMPROVEMENT BRIDGE PROJECT, TOWN OF WINHALL, VT ROUTE 30, BRIDGE NUMBERS 47 AND 52", PAGES 1-60 OF 60, PREPARED BY STANTEC CONSULTING SERVICES, INC. OF SOUTH BURLINGTON, VT. DATED 9/25/2014 WITH NO REVISION DATE.
 - IF THERE IS ADDITIONAL INFORMATION PERTINENT TO THE FABRICATION AND INSTALLATION OF THESE UNITS THAT IS NOT CONTAINED WITHIN THE RESOURCES LISTED ABOVE IT SHALL BE BROUGHT TO THE ATTENTION OF MICHE CORPORATION. FAILURE TO MAKE SUCH ADDITIONAL INFORMATION AVAILABLE SHALL RELIEVE MICHE CORPORATION OF ALL LIABILITIES ARISING FROM ERRORS OR OMISSIONS RELATED TO THE OMITTED INFORMATION.
- PRECAST CONCRETE FOOTING NOTES:**
- FOOTING CONCRETE SHALL BE SELF-CONSOLIDATING CONFORMING TO ASTM C260 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. AGGREGATE SHALL CONFORM TO ASTM C-33 WITH A MAXIMUM DIAMETER OF 3/4". CEMENT SHALL CONFORM TO ASTM C150.
 - REINFORCING SHALL BE GRADE 60 DEFORMED BLACK BARS CONFORMING TO ASTM A-615. ALL BARS SHALL BE BENT COLD.
 - ALL EXPOSED EDGES EXCEPT WHERE NOTED SHALL BE CHAMFERED 3/4".
 - SUBGRADE PREPARATION FOR WINGWALL FOOTINGS SHALL CONFORM TO VTRANS 204.07 BEDDING FOR STRUCTURES. FOOTINGS SHALL BE PLACED AT ELEVATIONS SHOWN ON A MINIMUM OF 1'-0" OF CRUSHED STONE CONFORMING TO VTRANS 704.05(A). ALL TOPSOIL, LOOSE FILL, AND DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE PLACING BACKFILL. SUBGRADE PREPARATION FOR CUT-OFF WALLS PER DETAIL ON SHEET 16 OF THE CONTRACT PLANS.

BOX CULVERT NOTES:

- BOX CULVERT SECTIONS ARE DESIGNED IN ACCORDANCE WITH
 - AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS", 6TH EDITION,
 - VTRANS 2011 "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
- THE FOLLOWING CRITERIA WAS USED FOR DESIGN:
 - LIVE LOAD: N/A (DEPTH OF FILL)
 - EARTH COVER: 13 FEET
 - BACKFILL SOIL UNIT WEIGHT: 140 PCF
 - BACKFILL SOIL FRICTION ANGLE: 34 DEGREES
 - CONCRETE STRENGTH: 5,000 PSI
 - STEEL YIELD STRENGTH: 60,000 PSI
- BOX CULVERT AND CURBWall CONCRETE SHALL BE SELF-CONSOLIDATING CONFORMING TO ASTM C260 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. AGGREGATE SHALL CONFORM TO ASTM C-33 WITH A MAXIMUM DIAMETER OF 3/4". CEMENT SHALL CONFORM TO ASTM C150.
- REINFORCING SHALL BE GRADE 60 DEFORMED BLACK BARS CONFORMING TO ASTM A-615. ALL BARS SHALL BE BENT COLD.
- ALL EXPOSED EDGES EXCEPT WHERE NOTED SHALL BE CHAMFERED 3/4".
- SUBGRADE PREPARATION SHALL CONFORM TO VTRANS 204.07 BEDDING FOR STRUCTURES. FOOTINGS SHALL BE PLACED AT ELEVATIONS SHOWN ON A MINIMUM OF 1'-0" OF CRUSHED STONE CONFORMING TO VTRANS 704.05(A). ALL TOPSOIL, LOOSE FILL, AND DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE PLACING MATERIAL.
- BACKFILL MATERIAL SHALL CONFORM TO VTRANS SECTION 704.08 GRANULAR BACKFILL FOR STRUCTURES. BACKFILL SHALL EXTEND FOR A MINIMUM DISTANCE OF 3'-0" BEYOND THE HORIZONTAL LIMITS OF THE STRUCTURE. PLACEMENT SHALL CONFORM TO VTRANS SECTION 204.08.
- EXPOSED SURFACES SHOULD BE COATED WITH VTRANS APPROVED WATER REPELLENT (SUPPLIED BY OTHERS).
- EACH SECTION SHALL BE PROVIDED WITH BOLT POCKETS FOR ATTACHMENT TO ADJACENT SECTIONS. 7/8" DIA. GALV. THREADED ROD, WASHERS AND NUTS SHALL BE PROVIDED FOR ASSEMBLY IN THE FIELD. CLOSED-CELL NEOPRENE JOINT SEALANT SHALL BE USED IN ALL JOINTS UNLESS NOTED OTHERWISE.
- 2FT WIDE ROYSTON JOINT WRAP WITH ADHESIVE PROVIDED BY MICHE CORP, INSTALLED BY OTHERS, CENTER ON JOINT AFTER GROUTING. BARRIER MEMBRANE PROVIDED AND INSTALLED BY OTHERS OVER TOP OF STRUCTURE, AND DOWN SIDES TO 6" BELOW HORIZONTAL JOINT.

WING WALL NOTES:

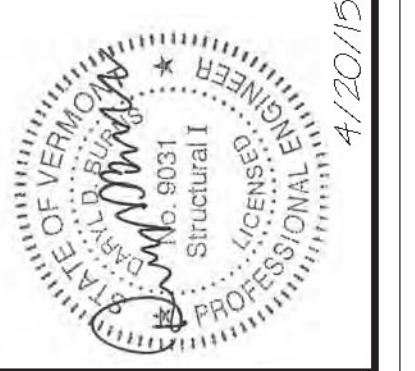
- SECTIONS ARE DESIGNED IN ACCORDANCE WITH
 - AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS", 6TH EDITION
 - VTRANS 2011 "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
- THE FOLLOWING SOIL PROPERTIES WERE USED IN THE DESIGN:

SOIL WEIGHT [PCF]	FRICTION ANGLE [DEG]
RETAINED SOIL 140	34
FOUNDATION SOIL 140	40

 - LIVE LOAD SURCHARGE = N/A
 - BACKSLOPE ANGLE: ±2:1
 - FACTORED BEARING RESISTANCE = 6000PSF (SERVICE), 15400PSF (STRENGTH)
- CONCRETE SHALL BE SELF-CONSOLIDATING CONFORMING TO ASTM C260 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. AGGREGATE SHALL CONFORM TO ASTM C-33 WITH A MAXIMUM DIAMETER OF 3/4". CEMENT SHALL CONFORM TO ASTM C150.
- REINFORCING SHALL BE GRADE 60 DEFORMED BLACK BARS CONFORMING TO ASTM A-615. ALL BARS SHALL BE BENT COLD.
- BACKFILL MATERIAL SHALL CONFORM TO VTRANS SECTION 704.08 GRANULAR BACKFILL FOR STRUCTURES. PLACEMENT SHALL CONFORM TO VTRANS SECTION 204.08.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE COATED WITH A VTRANS APPROVED WATER REPELLANT (BY OTHERS).
- SUBGRADE PREPARATION SHALL CONFORM TO VTRANS 204.07 BEDDING FOR STRUCTURES. FOOTINGS SHALL BE PLACED AT ELEVATIONS SHOWN ON A MINIMUM OF 1'-0" OF CRUSHED STONE CONFORMING TO VTRANS 704.05(A). ALL TOPSOIL, LOOSE FILL, AND DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE PLACING BACKFILL.

LIST OF SHEETS:

- S1.0 LAYOUT & PROFILE VIEW
- S2.0 FOOTING LAYOUT, END ELEVATIONS & DETAILS
- S3.0 BOX CULVERT DETAILS
- S4.0 WINGWALL DETAILS
- S5.0 ANCHOR DETAILS



MICHE CORPORATION
 173 BUXTON INDUSTRIAL DRIVE - PO BOX 870
 HENNIKER, NH 03242
 PHONE: 603-428-3218
 WWW.MICHECORP.COM

Bridge 47 - Route 30 - VAOT STP Culv(31)
Winhall, VT
12'x7' Open Top Box Culvert - Layout and Profile View
 Project No. 5779
 Date: 2/26/2015
 Designed by: PDL/CFP
 Drawn by: CFP
 Scale: AS SHOWN
 Checked by: PDL

Prepared for:
Renaud Brothers, Inc.
283 Fort Bridgeman Rd #2
Vernon, VT 05354

DWG NO.
S1.0