SUGGESTED CONSTRUCTION SEQUENCE:

1. FORM ABUTMENTS AND PLACE REBAR
2. ATTACH BEARING PLATE TO SPINE OF TWO OUTSIDE ARCHES (SEE SHEET 9 DETAIL A)
3. INSERT END REINFORCEMENT CAGES INTO ARCH ENDS AND INSTALL ARCHES IN ABUTMENTS
4. PLACE DECKING - CUT TO FIT SKEW - SCREW TO ARCHES - DRILL SHEAR BOLT HOLES AND INSTALL SHEAR BOLTS - INSTALL HEADWALL CLIPS ON OUTER ARCHES
5. CAST ARCHES IN ABUTMENTS
6. DRILL 3" HOLE AT APEX OF ARCH AND FILL ARCHES WITH SELF-CONSOLIDATING CONCRETE - INSTALL CLOSURE STRIP OF DECKING AT APEX OF ARCH TO COVER FILL HOLES
7. INSTALL HEADWALL HARDWARE - ERECT AND TEMPORARILY BRACE HEADWALLS
8. BACKFILL STRUCTURE ATTACHING PRIMARY GEOTEXTILE AT 32" LIFTS TO HEADWALL AND PLACING SECONDARY GEOTEXTILE HALFWAY BETWEEN PRIMARY GEOTEXTILE LIFTS (SEE SHEET 8 FOR DETAILS)
9. INSTALL HEADWALL CAP AND FASCIA PLATES

ARCH FILLING NOTES:

1. SELF-CONSOLIDATING CONCRETE MAY BE PLACED BY PUMP OR WITH A CONCRETE BUCKET AND FUNNEL
2. EACH ARCH WILL TAKE AN ESTIMATED 1.3 CUBIC YARDS OF CONCRETE
3. NO CONCRETE SHALL BE PLACED IN THE ARCH IF IT DOES NOT MEET THE SLUMP FLOW REQUIREMENTS OF 24" - 30" SPREAD
4. DRILL THE 3" FILL HOLE IN THE ARCH AT THE APEX BETWEEN THE GAP IN THE DECKING. LEAVE THE SHEAR BOLTS OUT OF THE ADJACENT CORRUGATIONS TO ALLOW AIR VENTING DURING FILLING. INSERT SHEAR BOLTS AND PLACE CLOSURE STRIP AFTER FILLING IS COMPLETE.
5. ARCHES CAN BE INSPECTED FOR VOIDS AFTER FILLING BY TAPPING THE ARCH AND LISTENING FOR A HOLLOW SOUND. REPAIR IN ACCORDANCE WITH THE SPECIFICATIONS.

HEADWALL CONSTRUCTION NOTES:

1. THE CENTER PANEL SHOULD BE CENTERED OVER THE APEX OF THE ARCH
2. PANELS MUST BE JOINED BY INSERTING THE BUTTERFLY TOGGLE IN THE KEY WAY. THE TOGGLE MAY BE CUT AND INSERTED WITH THE AID OF A PALM HAMMER
3. HEADWALL BACK BATTER OF 1:32 IS TYPICAL TO RESULT IN A VERTICAL INSTALLATION AFTER BACKFILL. ADJUST IN FIELD AS NECESSARY
4. USE ONLY WALK BEHIND COMPACTORS WITHIN 3 FEET OF HEADWALL WITH A MINIMUM OF THREE PASSES
5. BACKFILL ARCH IN MAXIMUM 8" LOOSE LIFTS, ALTERNATING LIFTS ON EACH SIDE OF THE ARCH TO MAINTAIN BALANCED LOADING. THE MAXIMUM DEVIATION FROM EQUAL BACKFILLING WILL BE 24 INCHES.

MATERIAL NOTES:

1. SELECT BACKFILL SHALL CONTAIN NOT MORE THAN 5% FINES (US NO. 200 SIEVE)
2. ALL STRUCTURAL FASTENERS SHALL CONFORM TO AASHTO M232 HOT DIP GALV.
3. ALL SCREWS SHALL BE 410 STAINLESS STEEL
4. STRUCTURAL ADHESIVE SHALL BE PILOGRIP 7770 OR APPROVED EQUAL

SUPPLIED PARTS LIST:

1.	9 UNITS	COMPOSITE ARCHES
2.	25 UNITS	ATLAS DECK PANELS, 42' x 20.9" x3.7" - FIELD FITTING REQUIRED
3.	1 UNIT	DECK CLOSURE STRIP, 42' LONG $\frac{1}{4}$"x8" FRP PLATE
4.	1 LUMP SUM	STRUCTURAL ADHESIVE FOR DECK TO DECK CONNECTION, PLIOGRIP 7770
5.	1 LUMP SUM	DECKING SCREWS, $\frac{1}{4}$"x2" ZINC PLATED
6.	1 LUMP SUM	DECK-TO-ARCH SHEAR BOLTS, $\frac{1}{2}$"x6"
7.	1 LUMP SUM	HEADWALL TO DECK BASE ANGLES, (A36 GALV.) 2" WIDE L7"x4"x $\frac{3}{8}$"
8.	38 UNITS	HEADWALL PANELS - PRE-CUT AND PRE-DRILLED
9.	1 LUMP SUM	HEADWALL BUTTERFLY TOGGLE CONNECTION, 20' SECTIONS
10.	1 LUMP SUM	HEADWALL WALER, 23-$\frac{1}{2}$" SECTIONS
11.	1 LUMP SUM	HEADWALL CHANNEL CAP, 20' SECTIONS
12.	1 LUMP SUM	HEADED BOLTS FOR HEADWALL ATTACHMENT (A307 GR.A), $\frac{1}{2}$"x10"
13.	1 LUMP SUM	$\frac{1}{2}$" x3-3/16" SCH.40 SPACER PIPE (A53 GR. B)
14.	1 LUMP SUM	$\frac{1}{2}$" HEAVY HEX NUT (A564DH GR. A)
15.	1 LUMP SUM	$\frac{1}{2}$" GALVANIZED ROUND WASHER
16.	1 LUMP SUM	$\frac{3}{8}$"x4-$\frac{1}{4}$" OD x 9/16" ID GALVANIZED PLATE WASHER
17.	1 LUMP SUM	PRIMARY GEOGRID REINFORCEMENT, 6'x150' ROLLS
18.	1 LUMP SUM	SECONDARY GEOGRID REINFORCEMENT, 6' x150' ROLLS
19.	1 LUMP SUM	BEARING PLATES FOR OUTSIDE ARCHES, $\frac{3}{16}$"x8"
20.	1 LUMP SUM	#6 1" SCREWS FOR BEARING PLATE-TO-ARCH CONNECTION AND HEADWALL CAP
21.	22 UNITS	FASCIA PLATES, $\frac{1}{10}$"x8"x48"

X **Approved** _____ **Approved As Noted**

_____ **Rejected**

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during the review do not relieve the Contractor from compliance with the requirements of the Plans and Specifications. Review of a specific item shall not include review of an assembly of which an item is a component. The Contractor is responsible for dimensions to be confirmed and corrected at the job site; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of other trades and performing all Work in a safe and satisfactory manner.

McFarland Johnson

Date 6/6/2014

By T. Traver

STATE OF VERMONT ... 73284 ... Structural ... ENGINEER 5/20/14

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PROJECT: Wanzer Road Bridge No. 48

LOCATION: Fairfield, VT JN: 12018

DRAWING STATUS: Approved for Construction

Correct scale on size B paper (11x17 Ledger)

TITLE: CONSTRUCTION NOTES

	INITIALS	DATE
DRAWN BY:	JEK	4-9-2014
DESIGNED BY:	JEK	4-9-2014
CHECKED BY:	ZU	5-20-2014

SHEET NUMBER: 2 OF 10

REV: 05-20-2014