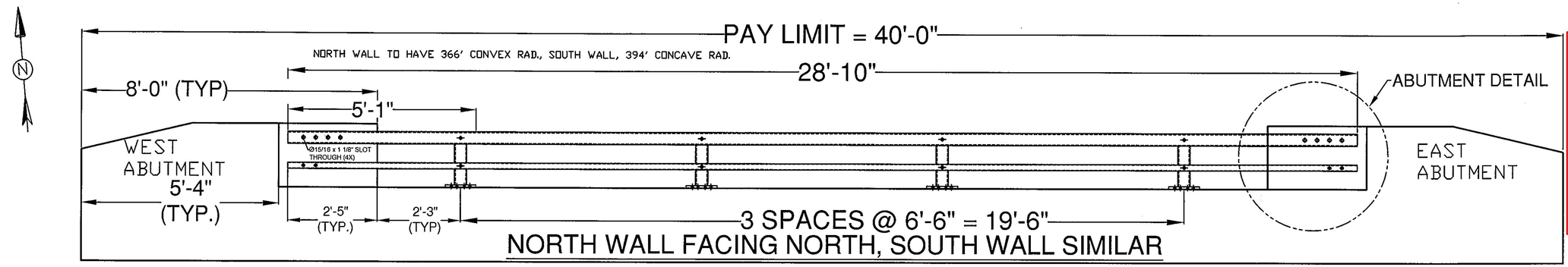


SHOP DRAWING REVIEW

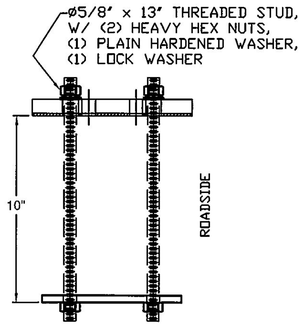
☐ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☒ APPROVED AS NOTED

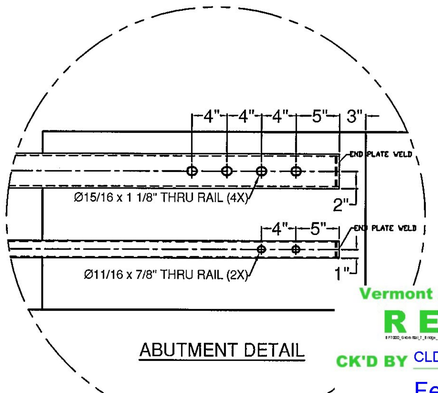
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
540 Commercial Street
Manchester, NH 03101
603-668-8223

Job Number: 140116
Reviewed by: S.Beaumont
Date: 02/27/2017



ANCHORAGE DETAIL



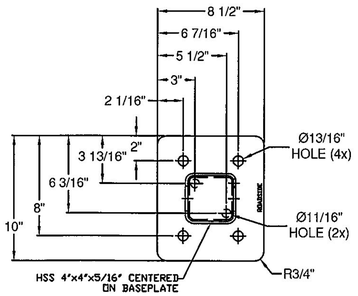
ABUTMENT DETAIL

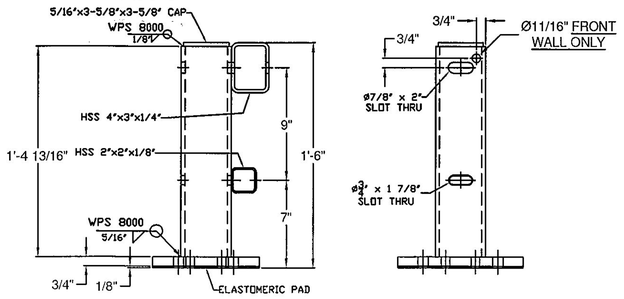
Vermont Agency of Transportation
RECEIVED
CK'D BY CLD/RYAN OK'D BY WPELLETIER
February 27, 2017
RESUBMIT nO Approved AsNoted
BY WPELLETIER DATE 03/02/2017

COATED BLACK

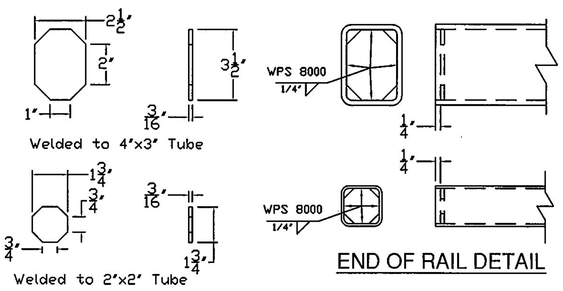
BILL OF MATERIAL				
ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	8	0033.90017	TWO RAIL POST & BASE PLATE ASSEMBLY	A572 Gr. 50, A500 Gr. B
2N	1	TBD	4" X 3" X 1/4" RAIL @ 28'-10" W/ END PLATES & 366' CONVEX R.	A500 Gr. B / A572 Gr. 50
2S	1	TBD	4" X 3" X 1/4" RAIL @ 28'-10" W/ END PLATES & 394' CONCAVE R.	A500 Gr. B / A572 Gr. 50
3N	1	TBD	2" X 2" X 1/8" RAIL @ 28'-10" W/ END PLATES & 366' CONVEX R.	A500 Gr. B / A572 Gr. 50
3S	1	TBD	2" X 2" X 1/8" RAIL @ 28'-10" W/ END PLATES & 394' CONCAVE R.	A500 Gr. B / A572 Gr. 50
4	16	0033.00295	3/8" X 2 1/4" X 7 3/8" ANCHOR PLATES	A36
5	34*	0042.05813	ø 5/8" X 13" ANCHOR STUDS	A449
6	66*	0080.15901	ø 5/8" HEAVY HEX NUTS	A563
7	32	0080.15911	ø 5/8" FLAT WASHERS	F436
8	32	0080.15920	ø 5/8" LOCK WASHERS	ASME B18.21
9	8	0080.05565	ø 5/8" X 7 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563, F436, & ASME B18.21
10	8	0080.06410	ø 3/4" X 8 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563, F436, & ASME B18.21
11	8	0033.00053	1/8" ELASTOMERIC PAD	D2240
12	8	0080.05760	ø 5/8" X 13" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
13	16	0080.07710	ø 7/8" X 14" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563 DH, F436, & ASME D18.21.1
14	6	-	DELINEATORS (SUPPLIED BY F.R. LaFAYETTE)	ALUMINUM
15	2	TBD	APPROACH, END WALL CONNECTORS	PER BOM
16	2	TBD	TRAILING, END WALL CONNECTORS	PER BOM

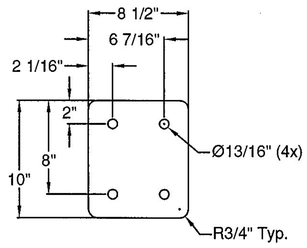
*-2 EXTRA FOR VOAT TESTING





POST DETAIL





1/8" ELASTOMERIC PAD

HARDWARE NOTES	
ITEM #	FUNCTION
9	BOLT BOTTOM RAIL TO POST (ITEM #1)
10	BOLT TOP RAIL TO POST (ITEM #1)
12	BOLT LOWER RAIL TO CONCRETE
13	BOLT TOP RAIL TO CONCRETE

NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
3. ALL POSTS SHALL BE SET NORMAL TO GRADE.
4. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
5. HOLES IN RAILS FOR TUBE ATTACHMENT WILL BE SHOP-DRILLED AND MAY BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
6. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
7. RAIL TUBES SHALL BE ATTACHED USING FULL DIAMETER BODY ASTM A449 (TYPE I) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE.
8. SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
9. AESTHETIC TREATMENT TYPE SHALL BE APPLIED AS SPECIFIED IN THE CONTRACT PLANS. IF NONE IS SPECIFIED IT SHALL NOT BE USED. AESTHETIC TREATMENT DETAILED ON THIS SHEET MAY ALSO BE APPLIED ON THE FASCIA SIDE OF THE RAIL, IF SPECIFIED IN THE CONTRACT PLANS.
10. BRIDGE RAILING SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH SECTION 501.
11. HOLES FOR MOUNTING DELINEATORS TO BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
12. ALL EXPOSED GALVANIZED STEEL COMPONENTS TO BE POWDER COATED BLACK 27038 PER FEDERAL STANDARD NO 595, & PER ASTM D7803

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 1 OF 2

BRIDGE RAIL DETAILS SHEET

VT. ROUTE 2B (URBAN MINOR ARTERIAL) BRIDGE #6
TOWN OF ST. JOHNSBURY, CALEDONIA COUNTY, VT.

R E V	NO.	DATE	DESCRIPTION	BY

R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
email: dlong@elderlee.com / epesk@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

CERTIFIED FABRICATOR
ORTHOGRAPHIC PROJECTION

DRAWN	E.P.	2/15/17
CHECKED	D.L.	2/15/17
APPROVED	.	.
SCALE	SCHEMATIC	
DRAWING NO.	FRL-ST. JOHNSBURY (20)	