



NORTHWEST SIDE RAILING ELEVATION
 LOOKING AT TRAFFIC FACE OF RAILING
 FACING NORTHWEST FROM CENTERLINE OF ROAD

BILL OF MATERIAL
 BOTH SIDES OF BRIDGE

Qty	mk	Description	Spec.
228 LF		ITEM 525.33 BRIDGE RAILING, GALVANIZED, 2 RAIL BOX BEAM	
32		BRIDGE RAILING POST W6 x 25 x 2'-2.375" OAH WITH 1 x 10 x 14 BASE PLATE (GLV)	A709 gr 50
6		SPLICE TUBE (FOR 8X4 RAIL) HSS 7 x 3 x 3/8 x 1'-8.000" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	A500 gr B
6		SPLICE TUBE (FOR 4X4 RAIL) HSS 3 x 3 x 5/16 x 1'-8.000" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	A500 gr B
4		EXP SPLICE (FOR 8X4 RAIL) HSS 7 x 3 x 3/8 x 1'-11.750" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	
4		EXP SPLICE (FOR 4X4 RAIL) HSS 3 x 3 x 5/16 x 1'-11.750" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	
2	L1	UPPER RAIL TUBE 8 x 4 x 5/16 16'-8.000" OAL (GLV) exp slots both ends	A500 gr B
2	L2	UPPER RAIL TUBE 8 x 4 x 5/16 20'-3.750" OAL (GLV) 1 end slots, 1 end holes	A500 gr B
4	L3	UPPER RAIL TUBE 8 x 4 x 5/16 23'-11.500" OAL (GLV) splice holes both ends	A500 gr B
2	L4	UPPER RAIL TUBE 8 x 4 x 5/16 15'-3.750" OAL (GLV) 1 end slots, 1 end holes	A500 gr B
2	L5	UPPER RAIL TUBE 8 x 4 x 5/16 13'-2.000" OAL (GLV) exp slots both ends	A500 gr B
2	L1	LOWER RAIL TUBE 4 x 4 x 1/4 16'-8.000" OAL (GLV) exp slots both ends	A500 gr B
2	L2	LOWER RAIL TUBE 4 x 4 x 1/4 20'-3.750" OAL (GLV) 1 end slots, 1 end holes	A500 gr B
4	L3	LOWER RAIL TUBE 4 x 4 x 1/4 23'-11.500" OAL (GLV) splice holes both ends	A500 gr B
2	L4	LOWER RAIL TUBE 4 x 4 x 1/4 15'-3.750" OAL (GLV) 1 end slots, 1 end holes	A500 gr B
2	L5	LOWER RAIL TUBE 4 x 4 x 1/4 13'-2.000" OAL (GLV) exp slots both ends	A500 gr B
anchors on bridge			
20		ANCHOR SPACER PLATE PL 0.375 x 13.000 x 9.375	A709 gr 36
80		ANCHOR STUD DBL END PART THREAD - 1" DIA x 12.000 w/ 2.250" THD EACH END (GLV)	A449
160		HEAVY HEX NUT 1" (GLV)	A563 DH
80		ROUND WASHER (SAE) - 1" DIA SMALL (GLV)	F436
80		JAM NUT 1" (GALV)	A563 DH
anchors on wingwall			
12		ANCHOR STUD DBL END PART THREAD - 1" DIA x 12.000 w/ 2.250" THD EACH END (GLV)	A449
24		HEAVY HEX NUT 1" (GLV)	A563 DH
12		ROUND WASHER (SAE) - 1" DIA SMALL (GLV)	F436
128		ROUND HEAD POST BOLT slot or wrench head - no shoulder 3/4" DIA x 6" LG. FULL BODY (GLV)	A449 / A325
128		LOCK NUT 3/4" (GLV)	A563 DH
128		ROUND WASHER (SAE) 3/4" (GLV)	F436
80		HEX HEAD BOLT 5/8" DIA x 1.75" LG. (GLV)	A325
80		ROUND WASHER (SAE) 5/8" (GLV)	F436
32		SPACER PIPE - GALVANIZED 3/4" SCH. 40 x 1/2" LONG (GLV)	A53 gr B
32		BEARING PAD 0.125" THICK x 10.000 x 14.000 (NEOPRENE 80 duro +/-10)	aashto M251

Vermont Agency of Transportation
RECEIVED
 CK'D BY CLD OK'D BY TAS
 December 29, 2016
 RESUBMIT No Approved AsNoted
 BY T Sumner DATE 01/03/2016

No.	Remarks	Date
A	corrected submittal	12-29-16
0	initial submittal	10-26-16

REVISIONS - APPLIES TO SET

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
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 603-966-8222

Job Number: 15-0223
 Reviewed by: NDC
 Date: 1/3/2017

HIGHWAY SAFETY CORP
 GLASTONBURY, CT
 860-633-9445

ITEM 525.33 BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM (S-360A)
 ITEM 621.72 GUARDRAIL APPROACH, GALV 2 RAIL BOX BEAM (S-360B)

TOWN OF LUDLOW, VERMONT
 VT ROUTE 100 - (MINOR ARTERIAL) BRIDGE #99
 WINDSOR COUNTY STP DECK (39)

GENERAL CONTRACTOR: LAFAYETTE

NSC JOB NO. 2141
 SHEET NO. 1 of 4

DRAWN: PAR CHECKED: [Signature] DATE: 10-20-16 SCALE: NONE SIZE: D