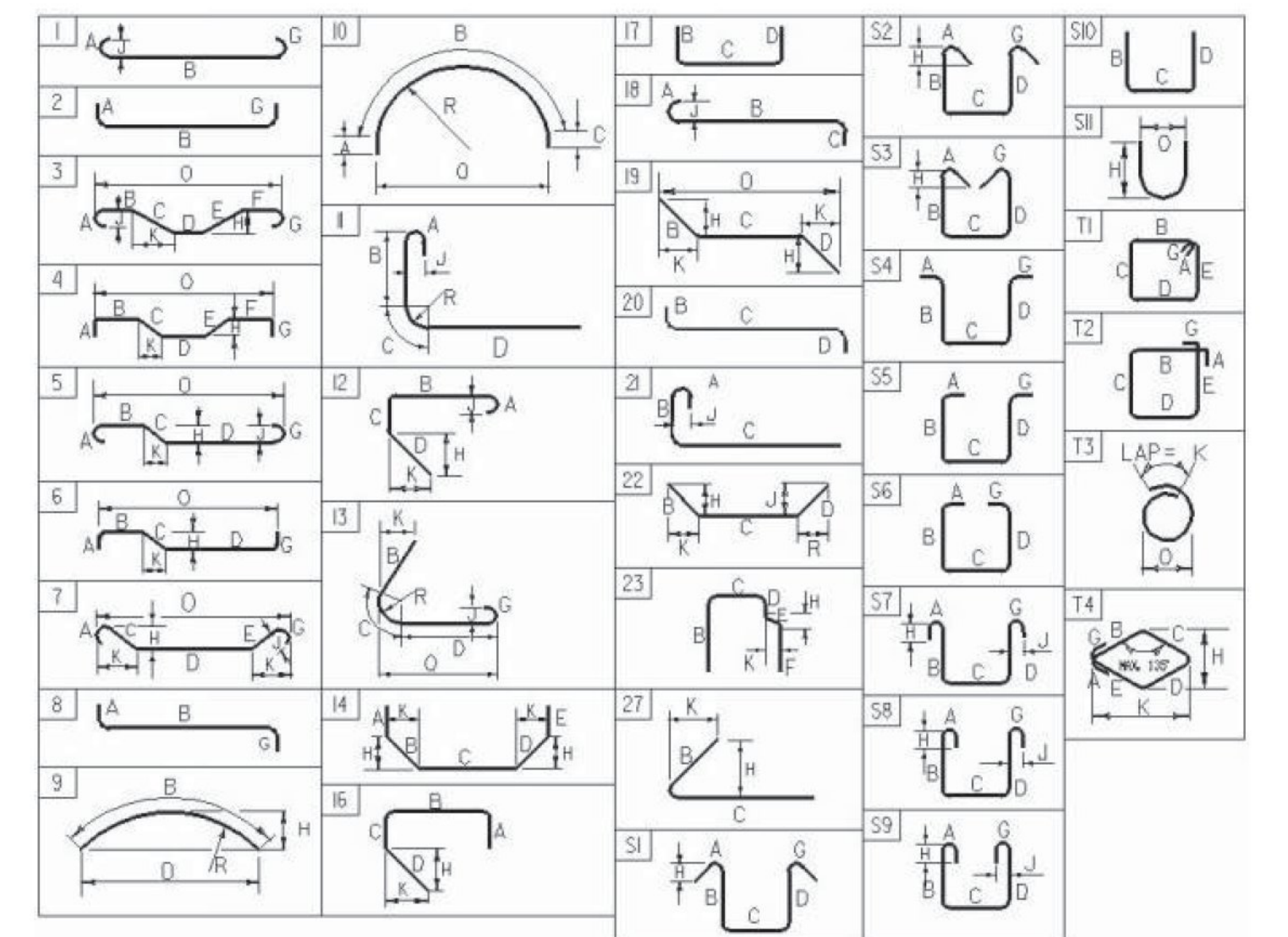


# REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O		
<b>WINGWALL NO. 1</b>																																					
52	5	7'-4"	1W501.3	17		2'-2"	3'-0"	2'-2"																													
2	5	7'-7"	1W502.3	17		2'-2"	3'-3"	2'-2"																													
2	5	7'-11"	1W503.3	17		2'-2"	3'-7"	2'-2"																													
6	5	6'-8"	1W504.3	22		1'-6"	3'-7"	1'-6"					1'-3"	1'-3"	0'-10"	0'-10"																					
*▲	30	5	5'-0"	1W505.3	STR																																
▲	11	5	14'-3"	1W506.3	STR																																
▲	7	5	14'-6"	1W507.3	STR		4'-5"	10'-1"	--				1'-0"		4'-4"		14'-4"																				
▲	27	7	5'-0"	1W701.3	STR																																
▲	11	8	12'-0"	1W801.3	STR																																
▲	12	5	2'-6 1/2"	1P501.3	T1	0'-2"	0'-8"	0'-8"	0'-8"	0'-8"	0'-2"																										
<b>WINGWALL NO. 2</b>																																					
▲	46	5	7'-4"	2W501.3	17		2'-2"	3'-0"	2'-2"																												
2	5	7'-7"	2W502.3	17		2'-2"	3'-3"	2'-2"																													
2	5	7'-11"	2W503.3	17		2'-2"	3'-7"	2'-2"																													
6	5	6'-7"	2W504.3	22		1'-6"	3'-7"	1'-6"					1'-3"	1'-3"	0'-10"	0'-10"																					
▲	23	5	5'-1"	2W505.3	STR																																
▲	12	5	11'-0"	2W506.3	STR																																
▲	7	5	14'-3"	2W507.3	STR		3'-5"	10'-10"	--				1'-5"		3'-1"		14'-3"																				
*▲	30	7	5'-1"	2W701.3	STR																																
▲	11	8	13'-4"	2W801.3	STR																																
▲	12	5	2'-6 1/2"	2P501.3	T1	0'-2"	0'-8"	0'-8"	0'-8"	0'-8"	0'-2"																										
<b>WINGWALL NO. 3</b>																																					
48	5	7'-4"	3W501.3	17		2'-2"	3'-0"	2'-2"																													
2	5	7'-7"	3W502.3	17		2'-2"	3'-3"	2'-2"																													
2	5	7'-11"	3W503.3	17		2'-2"	3'-7"	2'-2"																													
6	5	6'-7"	3W504.3	22		1'-6"	3'-7"	1'-6"					1'-3"	1'-3"	0'-10"	0'-10"																					
*▲	23	5	5'-1"	3W505.3	STR																																
▲	11	5	11'-0"	3W506.3	STR																																
▲	7	5	13'-5"	3W507.3	STR		3'-6"	9'-11"	--				0'-8"		3'-5"		13'-5"																				
*▲	30	7	5'-1"	3W701.3	STR																																
▲	11	8	13'-4"	3W801.3	STR																																
▲	12	5	2'-6 1/2"	3P501.3	T1	0'-2"	0'-8"	0'-8"	0'-8"	0'-8"	0'-2"																										
<b>WINGWALL NO. 4</b>																																					
50	5	7'-4"	4W501.3	17		2'-2"	3'-0"	2'-2"																													
2	5	7'-7"	4W502.3	17		2'-2"	3'-3"	2'-2"																													
2	5	7'-11"	4W503.3	17		2'-2"	3'-7"	2'-2"																													
6	5	6'-8"	4W504.3	22		1'-6"	3'-7"	1'-6"					1'-3"	1'-3"	0'-10"	0'-10"																					
▲	30	5	5'-0"	4W505.3	STR																																
▲	12	5	14'-3"	4W506.3	STR																																
▲	7	5	14'-6"	4W507.3	STR		4'-4"	10'-2"	--				1'-2"		4'-1"		14'-3"																				
*▲	27	7	5'-0"	4W701.3	STR																																
▲	11	8	12'-0"	4W801.3	STR																																
▲	12	5	8'-2 1/2"	4P501.3	T1	0'-2"	0'-8"	0'-8"	0'-8"	0'-8"	0'-2"																										
<b>SIDEWALK</b>																																					
*332	4	8'-0"	SW401.3	S5		1'-6"	2'-0"	0'-7"	2'-5"				1'-6"																								
42	5	40'-0"	SW501.3	STR																																	

- ~ NOTES ~
- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
  - FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
  - BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
  - ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
  - "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
  - "H" DIMENSION ON STRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
  - WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
  - ▲ DENOTES BARS TO BE CUT IN FIELD.
  - \* DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
  - △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
  - E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



BAR SIZE DESIGNATION	WEIGHT PER FOOT	DIAMETER INCHES	AREA INCHES <sup>2</sup>	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

**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  FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO 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 HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

**vhb** 40 IXD Drive  
Building 100, Suite 200  
South Burlington, VT 05403  
802.497.6100

Job Number: BRF 025-1(42)  
Reviewed By: E.F. LAWES  
Date: MARCH 9, 2017

PROJECT NAME: LUDLOW  
PROJECT NUMBER: BRF 025-1(42)  
FILE NAME:

Vermont Agency of Transportation  
**RECEIVED**  
CK'D BY VHB OK'D BY TAS  
March 7, 2017  
RESUBMIT NO APPROVED AS NOTED  
BY T Sumner DATE 3/9/17

CALDERWOOD ENGINEERING, ETC.  
STRUCTURAL ENGINEERING • DETAILING SERVICES  
222 RIVER RD, RICHMOND, ME 04857 PH: (207) 752-2007 FAX: (207) 752-2008  
PREPARED FOR:  
**COLD RIVER BRIDGES, LLC**  
CEE 16-16-COLD RIVER BRIDGES

DESIGN-DRAWN	DATE
CHECKED-REVIEWED	BY
REVISIONS 1	DATE
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

**VE SUPER DESIGN**  
**LUDLOW VT. BRF**