STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ABUTMENT # 1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	10	5	14'- 0"	1A501A	STR	14'- 0"											
	10	5	18'- 0"	1A501B	STR	18'- 0"											
	10	5	34'- 6"	1A501C	STR	34'- 6"											
	10	5	19'- 5"	1A501D	STR	19'- 5"											
	10	5	8'- 2"	1A501E	STR	8'- 2"											
	79	5	3'- 11"	1A502	STR	3'- 11"											
	85	5	4'- 7"	1A503	STR	4'- 7"											
▲	20	5	32'- 2"	1A505A	STR	32'- 2"											
▲	16	5	20'- 0"	1A505B	STR	20'- 0"											
▲	20	5	14'- 5"	1A505C	STR	14'- 5"											
▲	10	5	23'- 2"	1A505D	STR	23'- 2"											
	10	5	4'- 7"	1A507	STR	4'- 7"											
+	156	5	7'- 8"	1A510	STR	7'- 8"											
	54	5	7'- 0"	1A504A	17		3'- 11"	3'- 1"									
	22	5	6'- 0"	1A504B	17		3'- 11"	2'- 1"									
	28	5	4'- 10"	1A506A	17		1'- 6"	1'- 10"	1'- 6"								
+	16	5	3'- 10"	1A506B	17		1'- 6"	0'- 10"	1'- 6"								
	6	5	9'- 3"	1A508A	19		2'- 2"	4'- 11"	2'- 2"								
	12	5	10'- 8"	1A508B	19		2'- 2"	6'- 4"	2'- 2"								
	6	5	7'- 10"	1A509A	20		2'- 2"	3'- 6"	2'- 2"								
	12	5	8'- 10"	1A509B	20		2'- 2"	4'- 6"	2'- 2"								
	37	8	3'- 0"	1A801	STR	3'- 0"											
+	30	8	4'- 8"	1A802	19		3'- 0"	1'- 8"									
	44	8	3'- 6"	1A803	STR	3'- 6"											
	44	8	3'- 0"	1A804	STR	3'- 0"											

WINGWALL # 1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	24	5	20'- 10"	1W501A	STR	20'- 10"											
▲	12	5	13'- 8"	1W501B	STR	13'- 8"											
	54	5	3'- 11"	1W502	STR	3'- 11"											
	52	5	5'- 6"	1W503	STR	5'- 6"											
	16	5	17'- 6"	1W505A	STR	17'- 6"											
	18	5	32'- 2"	1W505B	STR	32'- 2"											
	14	5	6'- 0"	1W505C	STR	6'- 0"											
▲	108	5	7'- 3"	1W507	STR	7'- 3"											
+	3	5	5'- 6"	1W510	STR	5'- 6"											
	54	5	7'- 0"	1W504	17		3'- 11"	3'- 1"									
	26	5	3'- 10"	1W506	17		1'- 6"	0'- 10"	1'- 6"								
	7	5	9'- 3"	1W508	19		2'- 2"	4'- 11"	2'- 2"								
	7	5	7'- 10"	1W509	20		2'- 2"	3'- 6"	2'- 2"								
+	15	5	4'- 5"	1W511	19		2'- 3"	2'- 2"					0'- 10"		2'- 1"		
+	8	8	3'- 0"	1W801	STR	3'- 0"											
	26	8	3'- 6"	1W802	STR	3'- 6"											
	26	8	3'- 0"	1W803	STR	3'- 0"											

WINGWALL # 2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	36	5	23'- 4"	2W501A	STR	23'- 4"											
	18	5	17'- 2"	2W501B	STR	17'- 2"											
	18	5	18'- 0"	2W501C	STR	18'- 0"											
	80	5	3'- 11"	2W502	STR	3'- 11"											
▲	84	5	12'- 1"	2W503	STR	12'- 1"											
▲	80	5	18'- 0"	2W504	STR	18'- 0"											
▲	38	5	23'- 0"	2W505A	STR	23'- 0"											
	36	5	22'- 0"	2W505B	STR	22'- 0"											
	36	5	30'- 0"	2W505C	STR	30'- 0"											
	10	5	10'- 3"	2W507A	STR	10'- 3"											
+	5	5	4'- 6"	2W507B	STR	4'- 6"											
	39	5	4'- 1"	2W506	17		1'- 6"	1'- 1"	1'- 6"								
	11	5	7'- 10"	2W508A	19		2'- 2"	3'- 6"	2'- 2"								
	16	5	12'- 1"	2W508B	19		2'- 2"	7'- 9"	2'- 2"								
	11	5	6'- 10"	2W509A	20		2'- 2"	2'- 6"	2'- 2"								
	16	5	9'- 10"	2W509B	20		2'- 2"	5'- 6"	2'- 2"								
+	37	5	8'- 1"	2W510	19		2'- 2"	5'- 11"					1'- 1"		0'- 11"		
	85	7	11'- 2"	2W701	17		6'- 10"	4'- 4"									
+	85	7	11'- 6"	2W702	17		9'- 10"	1'- 8"									
+	11	8	3'- 0"	2W801	STR	3'- 0"											
	36	8	3'- 6"	2W802	STR	3'- 6"											
	36	8	3'- 0"	2W803	STR	3'- 0"											
+	77	10	10'- 3"	2W1001	STR	10'- 3"											

ABUTMENT # 2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	10	5	16'- 6"	2A501A	STR	16'- 6"											
	23	5	8'- 6"	2A501B	STR	8'- 6"											
	13	5	24'- 6"	2A501C	STR	24'- 6"											
	13	5	19'- 6"	2A501D	STR	19'- 6"											
	13	5	13'- 8"	2A501E	STR	13'- 8"											
	78	5	3'- 11"	2A502	STR	3'- 11"											
	23	5	5'- 6"	2A503A	STR	5'- 6"											
	61	5	6'- 9"	2A503B	STR	6'- 9"											
	155	5	13'- 6"	2A505	STR	13'- 6"											
▲	18	5	32'- 4"	2A507A	STR	32'- 4"											
▲	24	5	27'- 0"	2A507B	STR	27'- 0"											
▲	26	5	21'- 1"	2A507C	STR	21'- 1"											
	4	5	5'- 6"	2A510A	STR	5'- 6"											
+	7	5	6'- 9"	2A510B	STR	6'- 9"											
	23	5	7'- 0"	2A504A	17		3'- 11"	3'- 1"									
	54	5	8'- 0"	2A504B	17		3'- 11"	4'- 1"									
	28	5	4'- 10"	2A506A	17		1'- 6"	1'- 10"	1'- 6"								
	9	5	3'- 10"	2A506B	17		1'- 6"	0'- 10"	1'- 6"								
	3	5	4'- 1"	2A506C	17		1'- 6"	1'- 1"	1'- 6"								
	30	5	9'- 3"	2A508A	19		2'- 2"	4'- 11"	2'- 2"								
	8	5	7'- 10"	2A508B	19		2'- 2"	3'- 6"	2'- 2"								
	30	5	7'- 10"	2A509A	20		2'- 2"	3'- 6"	2'- 2"								
+	9	5	6'- 10"	2A509B	20		2'- 2"	2'- 6"	2'- 2"								
	37	8	3'- 0"	2A801	STR	3'- 0"											
+	29	8	4'- 8"	2A802	19		3'- 0"	1'- 8"									
	36	8	3'- 6"	2A802	STR	3'- 6"											
	36	8	3'- 0"	2A802	STR	3'- 0"											

WINGWALL # 3

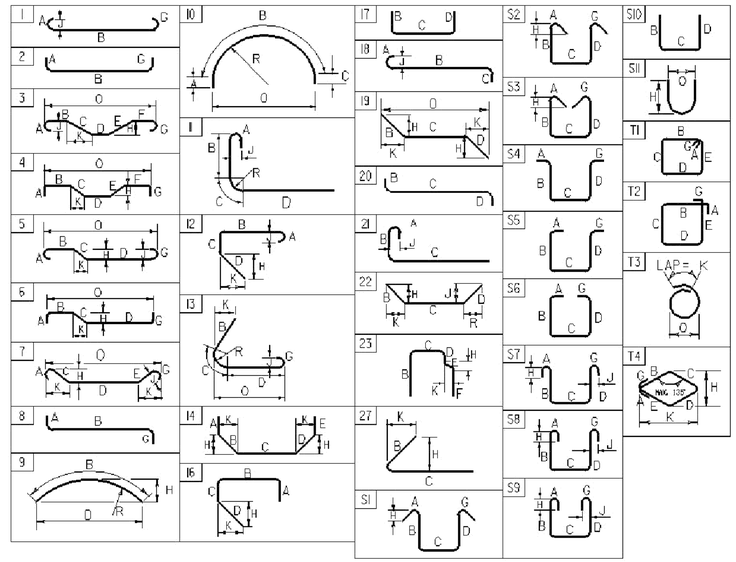
ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	11	5	7'- 4"	3W501A	STR	7'- 4"											
	11	5	27'- 8"	3W501B	STR	27'- 8"											
	11	5	11'- 6"	3W501C	STR	11'- 6"											
	22	5	16'- 6"	3W501D	STR	16'- 6"											
	77	5	3'- 11"	3W502	STR	3'- 11"											
	75	5	5'- 6"	3W503	STR	5'- 6"											
	8	5	6'- 9"	3W505A	STR	6'- 9"											
	8	5	10'- 10"	3W505B	STR	10'- 10"											
	32	5	32'- 2"	3W505C	STR	32'- 2"											
	156	5	7'- 9"	3W507	STR	7'- 9"											
	8	5	5'- 6"	3W510	STR	5'- 6"											
	79	5	7'- 0"	3W504	17		3'- 1"	3'- 11"									
	39	5	3'- 10"	3W506	17		1'- 6"	0'- 10"	1'- 6"								
	7	5	9'- 3"	3W508A	19		2'- 2"	4'- 11"	2'- 2"								
	21	5	7'- 10"	3W508B	19		2'- 2"	3'- 6"	2'- 2"								
	7	5	7'- 10"	3W509A	20		2'- 2"	3'- 6"	2'- 2"								
	21	5	6'- 10"	3W509B	20		2'- 2"	2'- 6"	2'- 2"								
+	9	5	5'- 10"	3W511	19		2'- 2"	3'- 8"					1'- 1"		1'- 10"		
+	7	8	3'- 0"	3W801	STR	3'- 0"											
+	40	8	3'- 6"	3W802	STR	3'- 6"											
+	40	8	3'- 0"	3W803	STR	3'- 0"											

WINGWALL # 4

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	18	5	4'- 5"	4W501A	STR	4'- 5"											
	36	5	33'- 6"	4W501B	STR	33'- 6"											
	18	5	20'- 6"	4W501C	STR	20'- 6"											
	87	5	3'- 11"	4W502	STR	3'- 11"											
▲	87	5	10'- 7"	4W503	STR	10'- 7"											
▲	88	5	16'- 1"	4W504	STR	16'- 1"											
▲	34	5	32'- 2"	4W505A	STR	32'- 2"											
▲	32	5	27'- 2"	4W505B	STR	27'- 2"											
▲	32	5	23'- 10"	4W505C	STR	23'- 10"											
	6	5	10'- 3"	4W507	STR	10'- 3"											
	42	5	4'- 1"	4W506	17		1'- 6"	1'- 1"	1'- 6"								
	12	5	10'- 8"	4W508A	19		2'- 2"	6'- 4"	2'- 2"								
	12	5	7'- 10"	4W508B	19		2'- 2"	3'- 6"	2'- 2"								
	12	5	8'- 10"	4W509A	20		2'- 2"	4'- 6"	2'- 2"								
	12	5	6'- 10"	4W509B	20		2'- 2"	2'- 6"	2'- 2"								
+	29	5	14'- 6"	4W510	19		10'- 6"	4'- 0"					5'- 3"		9'- 1"		
	88	7	11'- 2"	4W701	17		6'- 10"	4'- 4"									
+	88	7	11'- 6"	4W702	17		9'- 10"	1'- 8"									
+	18	8	3'- 0"	4W801	STR	3'- 0"											
+	44	8	3'- 6"	4W802	STR	3'- 6"											
+	44	8	3'- 0"	4W803	STR	3'- 0"											
+	89	10	10'- 3"	4W1001	STR	10'- 3"											

~ NOTES ~

1. 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-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. 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".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. + DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES ^{2}	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

PROJECT NAME: Williamstown
PROJECT NUMBER: BRS 0204(4)

FILE NAME: engreinf_New.xls
PROJECT MANAGER: M. Evans-Mongeon
DESIGNED BY: M. Evans-Mongeon
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 3/3/2008
DRAWN BY: M. Evans-Mongec
CHECKED BY: L. Russell
SHEET OF