STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

OUTLET HEADWALL FOR CULVERT STA 40+42

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	14	7	9'- 0"	1H701	STR												
	12	7	13'- 4"	1H702	STR												
▲	11	7	9'- 0"	1H703	STR												
▲	11	7	9'- 6"	1H704	STR												
▲	11	7	3'- 11"	1H709	STR												
✳	15	7	7'- 0"	1H710	STR												
▲	20	7	12'- 5"	1H705	22		4'- 9"	8'- 6"					3'- 4"		3'- 4"		
	10	7	3'- 9"	1H706	17		1'- 4"	1'- 1"	1'- 4"								
	4	7	11'- 3"	1H707	14	2'- 3"	2'- 3"	2'- 3"	2'- 3"	2'- 3"			1'- 7"		1'- 7"		
▲	20	7	8'- 1"	1H708	19		3'- 6"	4'- 7"									
▲	12	7	8'- 4"	1H711	17		3'- 1"	5'- 3"									

WINGWALL #1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	7	7	9'- 0"	1W701	STR												
	12	7	9'- 0"	1W702	STR												
▲	7	7	9'- 0"	1W703	STR												
▲	2	7	7'- 10"	1W704	STR												
▲	18	7	7'- 4"	1W705	STR												
▲	7	7	3'- 11"	1W709	STR												
	10	7	7'- 0"	1W710	STR												
	7	7	3'- 9"	1W706	17		1'- 4"	1'- 1"	1'- 4"								
	7	7	8'- 4"	1W711	17		3'- 1"	5'- 3"									

WINGWALL #2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	7	7	9'- 0"	2W701	STR												
	12	7	9'- 0"	2W702	STR												
▲	7	7	9'- 0"	2W703	STR												
▲	2	7	7'- 10"	2W704	STR												
▲	18	7	7'- 4"	2W705	STR												
▲	7	7	3'- 11"	2W709	STR												
	10	7	7'- 0"	2W710	STR												
	7	7	3'- 9"	2W706	17		1'- 4"	1'- 1"	1'- 4"								
	7	7	8'- 4"	2W711	17		3'- 1"	5'- 3"									

INLET HEADWALL FOR CULVERT STA 40+42

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	14	7	7'- 6"	2H701	STR												
	12	7	13'- 4"	2H702	STR												
▲	11	7	7'- 6"	2H703	STR												
▲	8	7	9'- 6"	2H704	STR												
▲	11	7	3'- 11"	2H709	STR												
	14	7	7'- 0"	2H710	STR												
▲	16	7	12'- 5"	2H705	22		4'- 9"	8'- 6"					3'- 4"		3'- 4"		
▲	10	7	3'- 9"	2H706	17		1'- 4"	1'- 1"	1'- 4"								
	4	7	11'- 3"	2H707	14	2'- 3"	2'- 3"	2'- 3"	2'- 3"	2'- 3"			1'- 7"		1'- 7"		
▲	16	7	8'- 1"	2H708	19		3'- 6"	4'- 7"									
▲	12	7	8'- 4"	2H711	17		3'- 1"	5'- 3"									

WINGWALL #3

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	7'- 6"	3W701	STR												
	12	7	12'- 0"	3W702	STR												
▲	10	7	7'- 6"	3W703	STR												
▲	2	7	10'- 6"	3W704	STR												
▲	14	7	10'- 4"	3W705	STR												
▲	10	7	3'- 11"	3W709	STR												
	13	7	7'- 0"	3W710	STR												
	10	7	3'- 1"	3W706	17		1'- 0"	1'- 1"	1'- 0"								
	10	7	8'- 4"	3W711	17		3'- 1"	5'- 3"									

WINGWALL #4

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	7'- 6"	4W701	STR												
	12	7	12'- 0"	4W702	STR												
▲	10	7	7'- 6"	4W703	STR												
▲	2	7	10'- 6"	4W704	STR												
▲	14	7	10'- 4"	4W705	STR												
▲	10	7	3'- 11"	4W709	STR												
	13	7	7'- 0"	4W710	STR												
	10	7	3'- 1"	4W706	17		1'- 0"	1'- 1"	1'- 0"								
	10	7	8'- 4"	4W711	17		3'- 1"	5'- 3"									

OUTLET HEADWALL FOR CULVERT STA 93+58

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	14	7	9'- 6"	3H701	STR												
	12	7	13'- 4"	3H702	STR												
▲	11	7	9'- 6"	3H703	STR												
▲	10	7	9'- 6"	3H704	STR												
▲	11	7	3'- 11"	3H709	STR												
	14	7	7'- 0"	3H710	STR												
▲	20	7	12'- 5"	3H705	22		4'- 9"	8'- 6"					3'- 4"		3'- 4"		
	10	7	3'- 9"	3H706	17		1'- 4"	1'- 1"	1'- 4"								
	4	7	12'- 6"	3H707	14	2'- 6"	2'- 6"	2'- 6"	2'- 6"	2'- 6"			1'- 9"		1'- 9"		
▲	20	7	8'- 1"	3H708	19		3'- 6"	4'- 7"									
▲	12	7	8'- 4"	3H711	17		3'- 1"	5'- 3"									

WINGWALL #1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	9'- 6"	5W701	STR												
	12	7	12'- 0"	5W702	STR												
▲	10	7	9'- 6"	5W703	STR												
▲	2	7	10'- 6"	5W704	STR												
▲	18	7	10'- 4"	5W705	STR												
▲	10	7	3'- 11"	5W709	STR												
	13	7	7'- 0"	5W710	STR												
	10	7	3'- 9"	5W706	17		1'- 4"	1'- 1"	1'- 4"								
	10	7	8'- 4"	5W711	17		3'- 1"	5'- 3"									

WINGWALL #2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	9'- 6"	6W701	STR												
	12	7	9'- 0"	6W702	STR												
▲	10	7	9'- 0"	6W703	STR												
▲	2	7	10'- 6"	6W704	STR												
▲	18	7	10'- 4"	6W705	STR												
▲	10	7	3'- 11"	6W709	STR												
	13	7	7'- 0"	6W710	STR												
	10	7	3'- 9"	6W706	17		1'- 4"	1'- 1"	1'- 4"								
	10	7	8'- 4"	6W711	17		3'- 1"	5'- 3"									

INLET HEADWALL FOR CULVERT STA 93+58

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	14	7	7'- 6"	4H701	STR												
	12	7	13'- 4"	4H702	STR												
▲	11	7	7'- 6"	4H703	STR												
▲	8	7	9'- 6"	4H704	STR												
▲	11	7	3'- 11"	4H709	STR												
	14	7	7'- 0"	4H710	STR												
▲	16	7	12'- 5"	4H705	22		4'- 9"	8'- 6"							3'- 4"		
▲	10	7	3'- 1"	4H706	17		1'- 0"	1'- 1"	1'- 0"								
	4	7	12'- 6"	4H707	14	2'- 6"	2'- 6"	2'- 6"	2'- 6"	2'- 6"					1'- 9"		
▲	16	7	8'- 1"	4H708	19		3'- 6"	4'- 7"									
▲	12	7	8'- 4"	4H711	17		3'- 1"	5'- 3"									

WINGWALL #3

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	7'- 6"	7W701	STR												
	12	7	12'- 0"	7W702	STR												
▲	10	7	7'- 6"	7W703	STR												
▲	2	7	10'- 6"	7W704	STR												
▲	10	7	3'- 11"	7W709	STR												
▲	14	7	10'- 4"	7W705	STR												
	13	7	7'- 0"	7W710	STR												
	10	7	3'- 1"	7W706	17		1'- 0"	1'- 1"	1'- 0"								
	10	7	8'- 4"	7W711	17		3'- 1"	5'- 3"									

WINGWALL #4

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	10	7	7'- 6"	8W701	STR												
	12	7	12'- 0"	8W702	STR												
▲	10	7	7'- 6"	8W703	STR												
▲	2	7	10'- 6"	8W704	STR												
▲	14	7	10'- 4"	8W705	STR												
▲	10	7	3'- 11"	8W709	STR												
	13	7	7'- 0"	8W710	STR												
	10	7	3'- 1"	8W706	17		1'- 0"	1'- 1"	1'- 0"								
	10	7	8'- 4"	8W711	17		3'- 1"	5'- 3"									

STA 149+10

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	24	5	11'- 6"	5H501	STR												
✳ ▲	27	5	6'- 3"	5H502	STR												
	25	5	4'- 0"	5H503	STR												
▲	13	5	3'- 11"	5H504	STR												
▲	13	5	7'- 4"	5H505	17		3'- 11"	3'- 5"	---								
	4	5	7'- 6"	5H506	14	1'- 6"	1'- 6"	1'- 6"	1'- 6"	1'- 6"					1'- 1"		1'- 1"
▲	13	5	4'- 7"	5H507	S10		2'- 0"	0'- 7"	2'- 0"								

STA 156+52

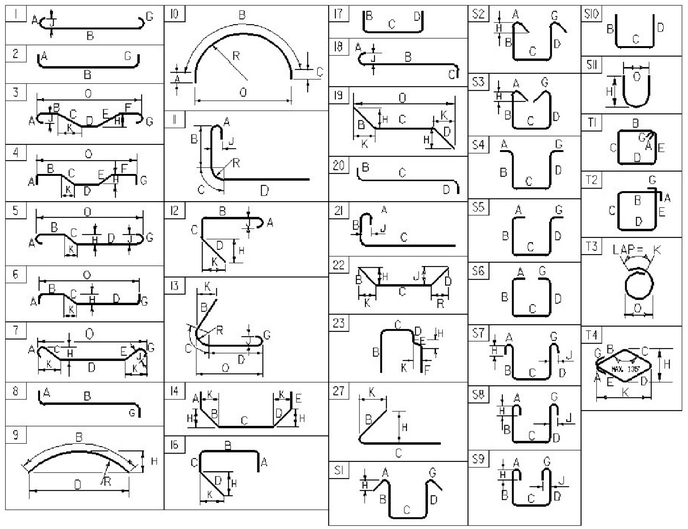
ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	24	5	11'- 6"	6H501	STR												
▲	26	5	6'- 3"	6H502	STR												
	25	5	4'- 0"	6H503	STR												
▲	13	5	3'- 11"	6H504	STR												
▲	13	5	7'- 4"	6H505	17		3'- 11"	3'- 5"	---								
	4	5	7'- 6"	6H506	14	1'- 6"	1'- 6"	1'- 6"	1'- 6"	1'- 6"					1'- 1"		1'- 1"
▲	13	5	4'- 7"	6H507	S10		2'- 0"	0'- 7"	2'- 0"								

STA 160+84

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	28	5	15'- 6"	7H501	STR												
▲	34	5	6'- 9"	7H502	STR												
	33	5	4'- 6"	7H503	STR												
▲	17	5	3'- 11"	7H504	STR												
▲	17	5	7'- 10"	7H505	17		3'- 11"	3'- 11"	---								
	4	5	10'- 0"	7H506	14	2'- 0"	2'- 0"	2'- 0"	2'- 0"	2'- 0"					1'- 5"		1'- 5"
▲	17	5	4'- 7"	7H507	S10		2'- 0"	0'- 7"	2'- 0"								

~ 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 INCHES²	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: CHARLOTTE
PROJECT NUMBER: F EGC 019-4(20)

FILE NAME: d78d062_frm.dgn
PROJECT LEADER: K. UPMAL
DESIGNED BY: A. KEMPTON
REINFORCING STEEL SCHEDULE SHEET

PLOT DATE: 15-MAR-2016
DRAWN BY: A. KEMPTON
CHECKED BY: C. LEACH
SHEET 270 OF 499