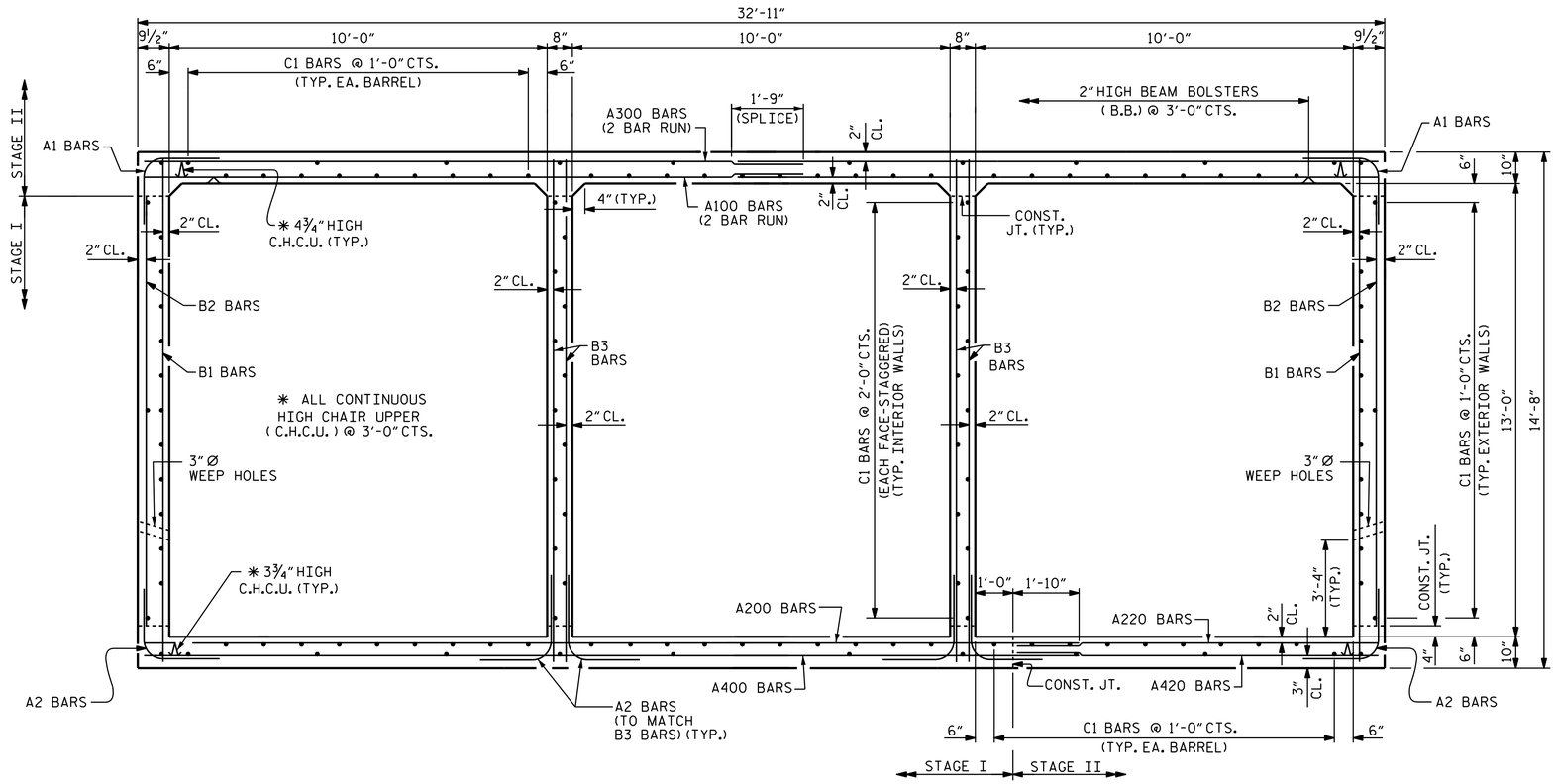
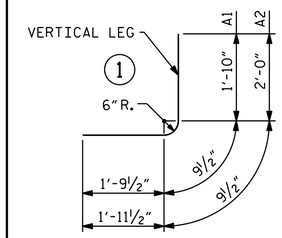


RIGHT ANGLE SECTION OF BARREL

THERE ARE 134 "C" BARS IN SECTION OF BARREL.
(LOOKING DOWNSTREAM)

BAR TYPE



BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

STAGE I

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	181	#4	1	4'-5"	534
A2	453	#4	1	4'-9"	1437
A200	136	#4	STR	24'-10"	2256
A400	181	#4	STR	24'-10"	3003
B1	125	#4	STR	14'-2"	1183
B2	181	#4	STR	12'-4"	1491
B3	272	#4	STR	14'-2"	2574
C1	204	#4	STR	23'-11"	3259
D1	12	#6	STR	1'-5"	26
REINFORCING STEEL				LBS.	15,763

STAGE II

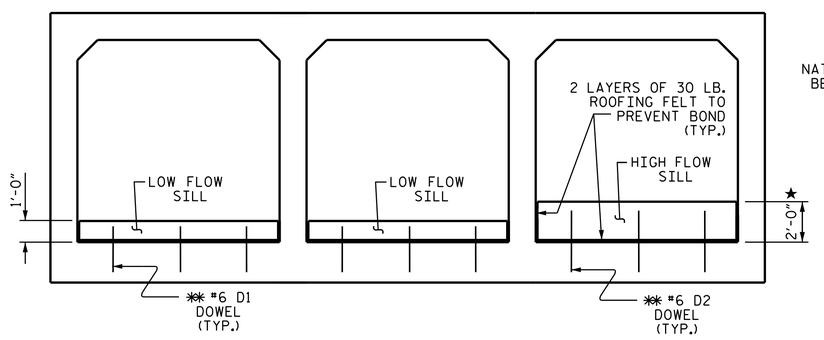
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	181	#4	1	4'-5"	534
A2	181	#4	1	4'-9"	574
A100	296	#4	STR	17'-2"	3394
A220	136	#4	STR	9'-7"	871
A300	362	#4	STR	17'-2"	4151
A420	181	#4	STR	9'-7"	1159
B1	125	#4	STR	14'-2"	1183
B2	181	#4	STR	12'-4"	1491
C1	198	#4	STR	23'-11"	3163
D2	6	#6	STR	2'-5"	22
G1	8	#5	STR	32'-7"	272
REINFORCING STEEL				LBS.	16,814

SPLICE LENGTHS CHART

BAR	SIZE	SPLICE LENGTH
C1	#4	1'-11"
A100	#4	1'-9"
A200, A220	#4	1'-9"
A300	#4	1'-9"
A400, A420	#4	1'-9"

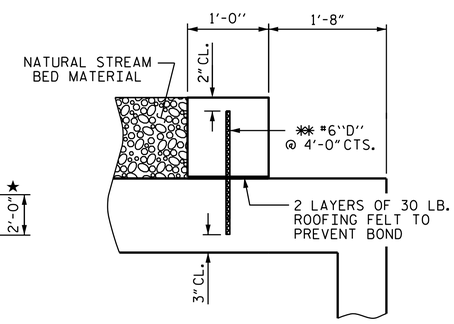
STRUCTURE QUANTITIES

	STAGE I	STAGE II
FOUNDATION CONDITIONING MATERIAL	111 TONS	47 TONS
CLASS A CONCRETE		
BARREL @ 1.711 CY/FT (STAGE I) BARREL @ 1.738 CY/FT (STAGE II)	115.9 C.Y.	117.7 C.Y.
WINGS ETC.	39.7 C.Y.	41.0 C.Y.
SILLS	1.5 C.Y.	1.5 C.Y.
SUB TOTALS	157.1 C.Y.	160.2 C.Y.
REINFORCING STEEL		
BARREL	15,763 LBS.	16,814 LBS.
WINGS ETC.	2,211 LBS.	2,211 LBS.
SUB TOTALS	17,974 LBS.	19,025 LBS.



ELEVATION

(INLET SHOWN, OUTLET SIMILAR)
(LOOKING DOWNSTREAM)



SECTION THROUGH SILL

✱✱ DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER SLAB HAS BEEN FLOAT FINISHED.

CULVERT SILL DETAILS

★ DO NOT SET TOP OF HIGH FLOW SILL ABOVE BANK FULL.

PROJECT NO. B-5150
CATAWBA COUNTY
STATION: 14+73.60 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TRIPLE 10 FT. X 13 FT. CONCRETE BOX CULVERT 95° SKEW

(90° HEADWALLS)

NORTH CAROLINA PROFESSIONAL SEAL 23371 ENGINEER VIPUL A. PATEL

DocuSigned by: Vipul A. Patel 1C157DE15D464AA... 11/18/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-3
1			3			TOTAL SHEETS
2			4			5

DRAWN BY : J. P. MCCARTHA DATE : 7-17-13
CHECKED BY : R. P. PATEL DATE : 7-18-13
DESIGN ENGINEER OF RECORD: H. A. LOCKLEAR DATE : 10-22-14

18-NOV-2014 09:19
R:\Structures\Plans\B5150_SD_CU_01.dgn
vpatel