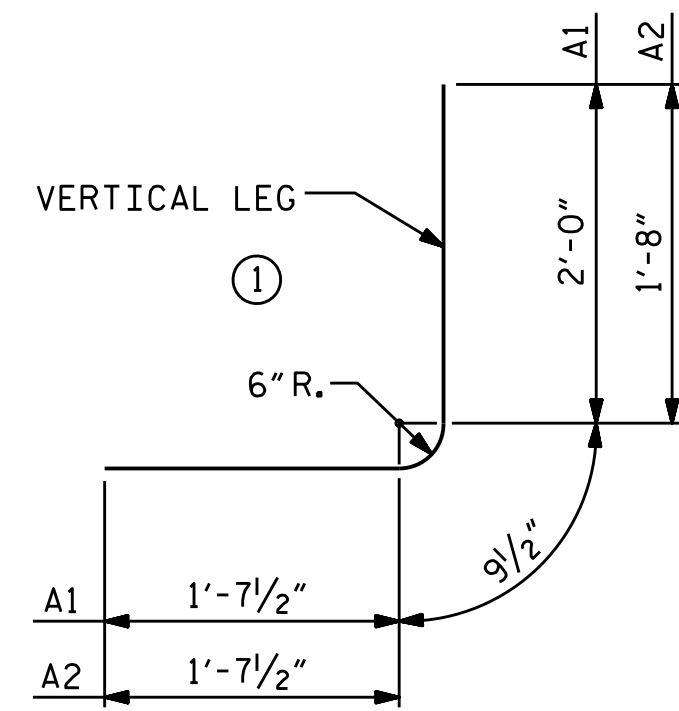


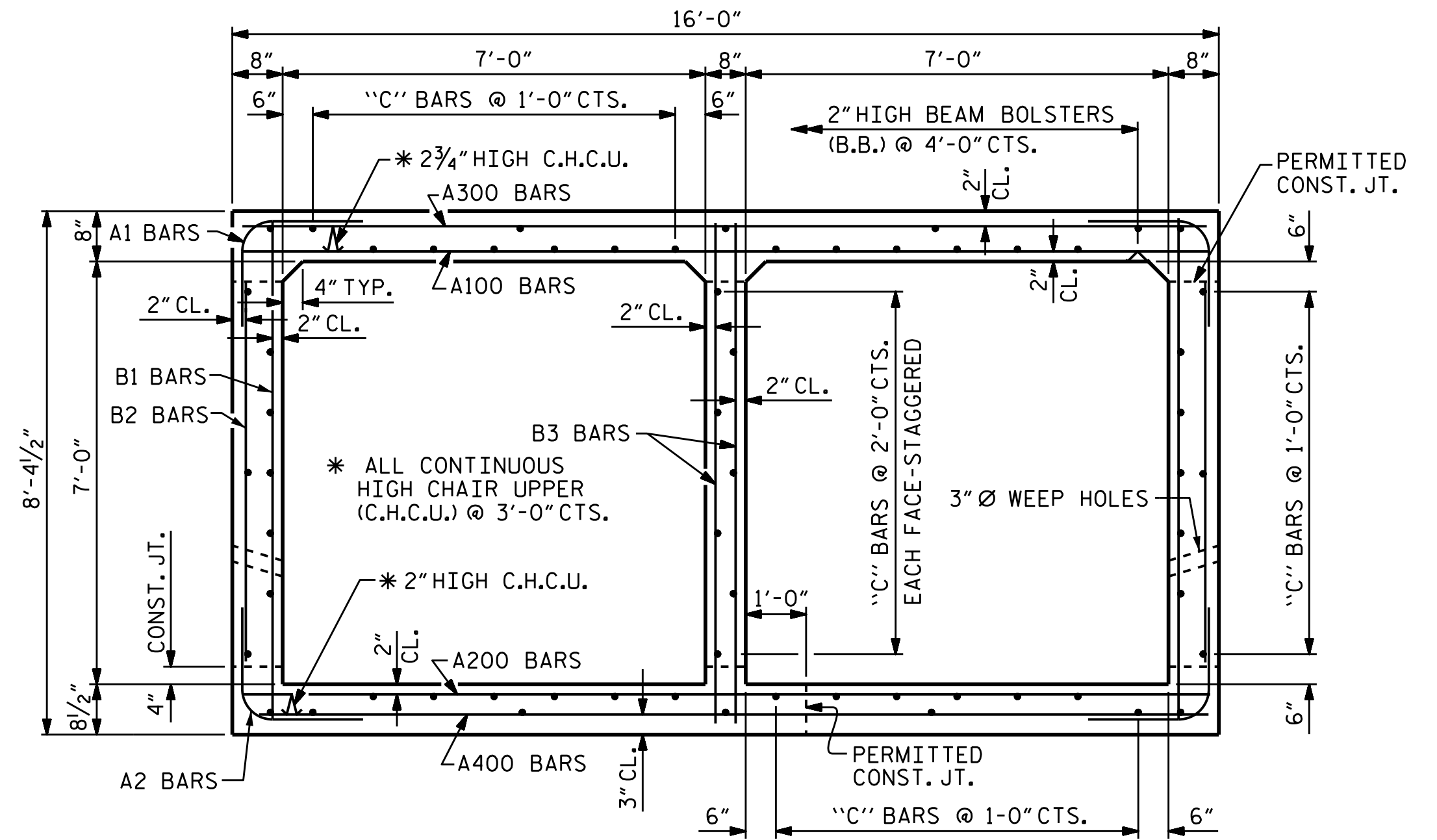
BILL OF MATERIAL											
STAGE I						STAGE II					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	154	#4	1	4'-5"	454	* A1	242	#4	1	4'-5"	714
* A2	232	#5	1	4'-1"	988	* A2	360	#5	1	4'-1"	1533
* A100	98	#4	STR.	15'-7"	1020	* A100	162	#4	STR.	15'-7"	1686
* A101	4	#4	STR.	13'-9"	37	* A101	4	#4	STR.	13'-9"	37
* A102	4	#4	STR.	12'-1"	32	* A102	4	#4	STR.	12'-1"	32
* A103	4	#4	STR.	10'-4"	28	* A103	4	#4	STR.	10'-4"	28
* A104	4	#4	STR.	8'-7"	23	* A104	4	#4	STR.	8'-7"	23
* A105	4	#4	STR.	6'-10"	18	* A105	4	#4	STR.	6'-10"	18
* A106	4	#4	STR.	5'-2"	14	* A106	4	#4	STR.	5'-2"	14
* A107	4	#4	STR.	3'-5"	9	* A107	4	#4	STR.	3'-5"	9
* A200	65	#5	STR.	15'-7"	1056	* A200	109	#5	STR.	15'-7"	1772
* A201	2	#5	STR.	14'-8"	31	* A201	2	#5	STR.	14'-8"	31
* A202	2	#5	STR.	13'-4"	28	* A202	2	#5	STR.	13'-4"	28
* A203	2	#5	STR.	12'-1"	25	* A203	2	#5	STR.	12'-1"	25
* A204	2	#5	STR.	10'-9"	22	* A204	2	#5	STR.	10'-9"	22
* A205	2	#5	STR.	9'-6"	20	* A205	2	#5	STR.	9'-6"	20
* A206	2	#5	STR.	8'-2"	17	* A206	2	#5	STR.	8'-2"	17
* A207	2	#5	STR.	6'-10"	14	* A207	2	#5	STR.	6'-10"	14
* A208	2	#5	STR.	5'-7"	12	* A208	2	#5	STR.	5'-7"	12
* A209	2	#5	STR.	4'-3"	9	* A209	2	#5	STR.	4'-3"	9
* A210	2	#5	STR.	3'-0"	6	* A210	2	#5	STR.	3'-0"	6
* A300	65	#4	STR.	15'-7"	677	* A300	109	#4	STR.	15'-7"	1135
* A301	2	#4	STR.	14'-8"	20	* A301	2	#4	STR.	14'-8"	20
* A302	2	#4	STR.	13'-4"	18	* A302	2	#4	STR.	13'-4"	18
* A303	2	#4	STR.	12'-1"	16	* A303	2	#4	STR.	12'-1"	16
* A304	2	#4	STR.	10'-9"	14	* A304	2	#4	STR.	10'-9"	14
* A305	2	#4	STR.	9'-6"	13	* A305	2	#4	STR.	9'-6"	13
* A306	2	#4	STR.	8'-2"	11	* A306	2	#4	STR.	8'-2"	11
* A307	2	#4	STR.	6'-10"	9	* A307	2	#4	STR.	6'-10"	9
* A308	2	#4	STR.	5'-7"	7	* A308	2	#4	STR.	5'-7"	7
* A309	2	#4	STR.	4'-3"	6	* A309	2	#4	STR.	4'-3"	6
* A310	2	#4	STR.	3'-0"	4	* A310	2	#4	STR.	3'-0"	4
* A400	98	#5	STR.	15'-7"	1593	* A400	162	#5	STR.	15'-7"	2633
* A401	4	#5	STR.	13'-9"	57	* A401	2	#5	STR.	13'-9"	57
* A402	4	#5	STR.	12'-1"	50	* A402	2	#5	STR.	12'-1"	50
* A403	4	#5	STR.	10'-4"	43	* A403	2	#5	STR.	10'-4"	43
* A404	4	#5	STR.	8'-7"	36	* A404	2	#5	STR.	8'-7"	36
* A405	4	#5	STR.	6'-10"	29	* A405	2	#5	STR.	6'-10"	29
* A406	4	#5	STR.	5'-2"	22	* A406	2	#5	STR.	5'-2"	22
* A407	4	#5	STR.	3'-5"	14	* A407	2	#5	STR.	3'-5"	14
* B1	116	#4	STR.	7'-10"	607	* B1	180	#4	STR.	7'-10"	942
* B2	116	#4	STR.	6'-4"	491	* B2	180	#4	STR.	6'-4"	762
* B3	116	#4	STR.	7'-10"	607	* B3	180	#4	STR.	7'-10"	942
* C1	183	#4	STR.	21'-3"	2598	* C2	244	#4	STR.	23'-11"	3898
* D1	3	#6	STR.	2'-3"	10	* D1	3	#6	STR.	2'-3"	10
* D2	3	#6	STR.	1'-3"	6	* D2	3	#6	STR.	1'-3"	6
* G1	4	#5	STR.	18'-0"	75	* G1	4	#5	STR.	18'-0"	75
* S1	12	#6	STR.	18'-0"	324	* S1	12	#6	STR.	18'-0"	324
* S2	3	#8	STR.	18'-0"	144	* S2	3	#8	STR.	18'-0"	144
* EPOXY COATED REINF. STEEL = 11,364 LBS.						* EPOXY COATED REINF. STEEL = 17,290 LBS.					



BAR TYPE

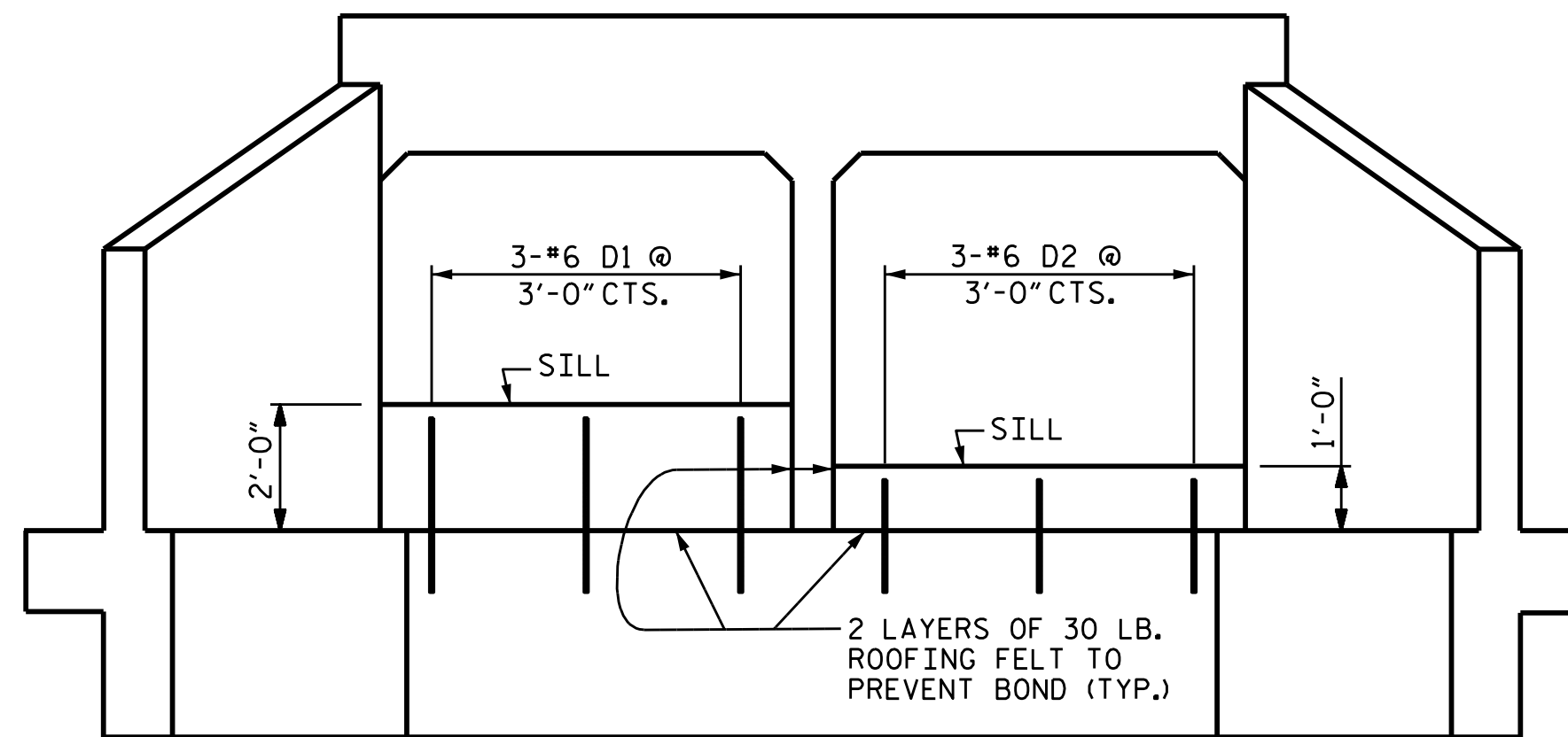
BAR DIMENSIONS ARE OUT TO OUT

SPlice LENGTH CHART		
BAR	SIZE	SPlice LENGTH
B1, B3	#4	1'-5"
C1, C2	#4	1'-11"



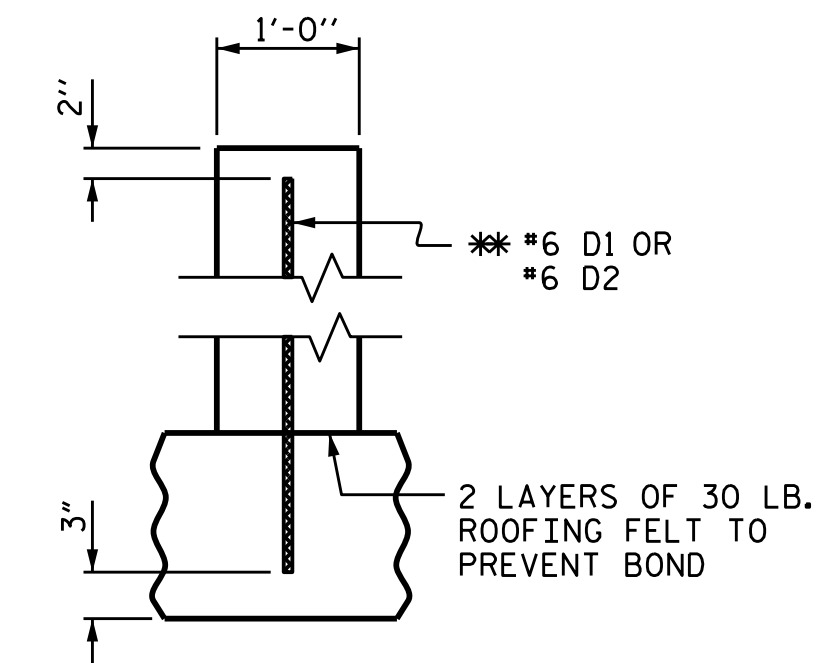
RIGHT ANGLE SECTION OF BARREL

THERE ARE 61 "C" BARS IN SECTION OF BARREL.



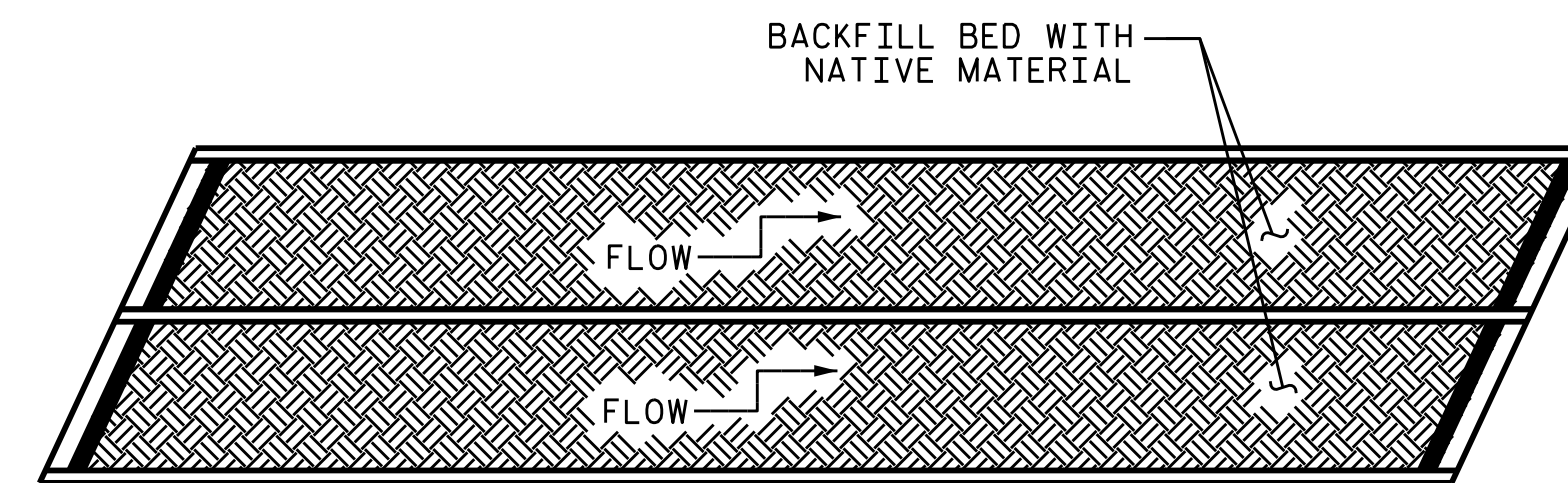
ELEVATION

ONE SILL AT INLET AND OUTLET FACE (LOOKING DOWNSTREAM)



SECTION THROUGH SILL

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



PLAN

SILL DETAILS

NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. ONLY MATERIAL THAT IS EXCAVATED FROM THE STREAM BED MAY BE USED TO LINE THE LOW FLOW CULVERT BARREL. RIP RAP MAY BE USED TO SUPPLEMENT THE NATIVE MATERIAL IN THE HIGH FLOW CULVERT BARREL. IF RIP RAP IS USED TO LINE THE HIGH FLOW CULVERT BARREL, NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FILL VOIDS AND PROVIDE A FLAT SURFACE FOR ANIMAL PASSAGE. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.



DocuSigned by:
P. Corey Newton
#FFFE201518407
1/21/2019

PROJECT NO. R-5021
BRUNSWICK COUNTY
STATION: 316+72.00 -L-

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**DOUBLE 7 FT. X 7 FT.
CONCRETE BOX CULVERT
60° SKEW**

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

C4-3
TOTAL SHEETS
5

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: O. T. NGUYEN DATE: 8/18
CHECKED BY: P. K. NEWTON DATE: 12/11/18
DESIGN ENGINEER OF RECORD: Z. MALIK DATE: 12/14/18