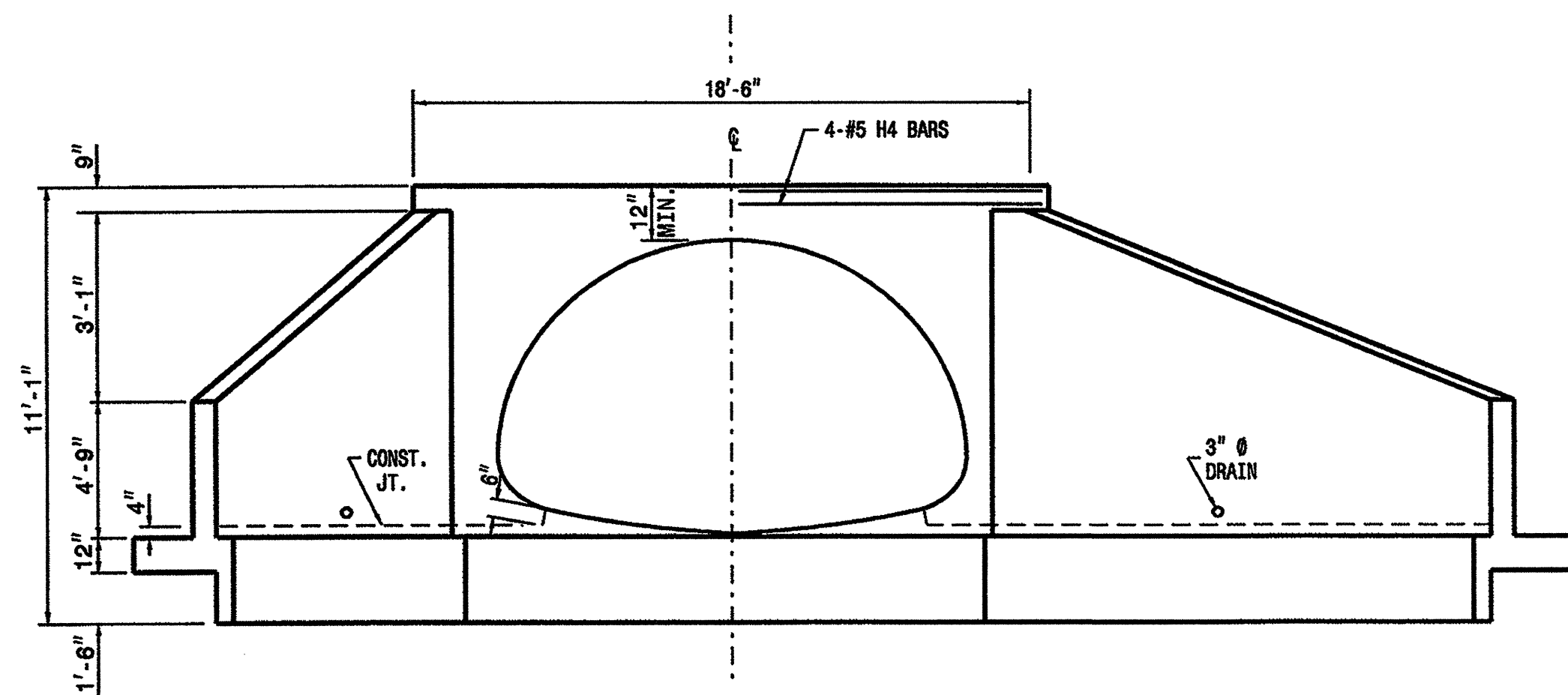
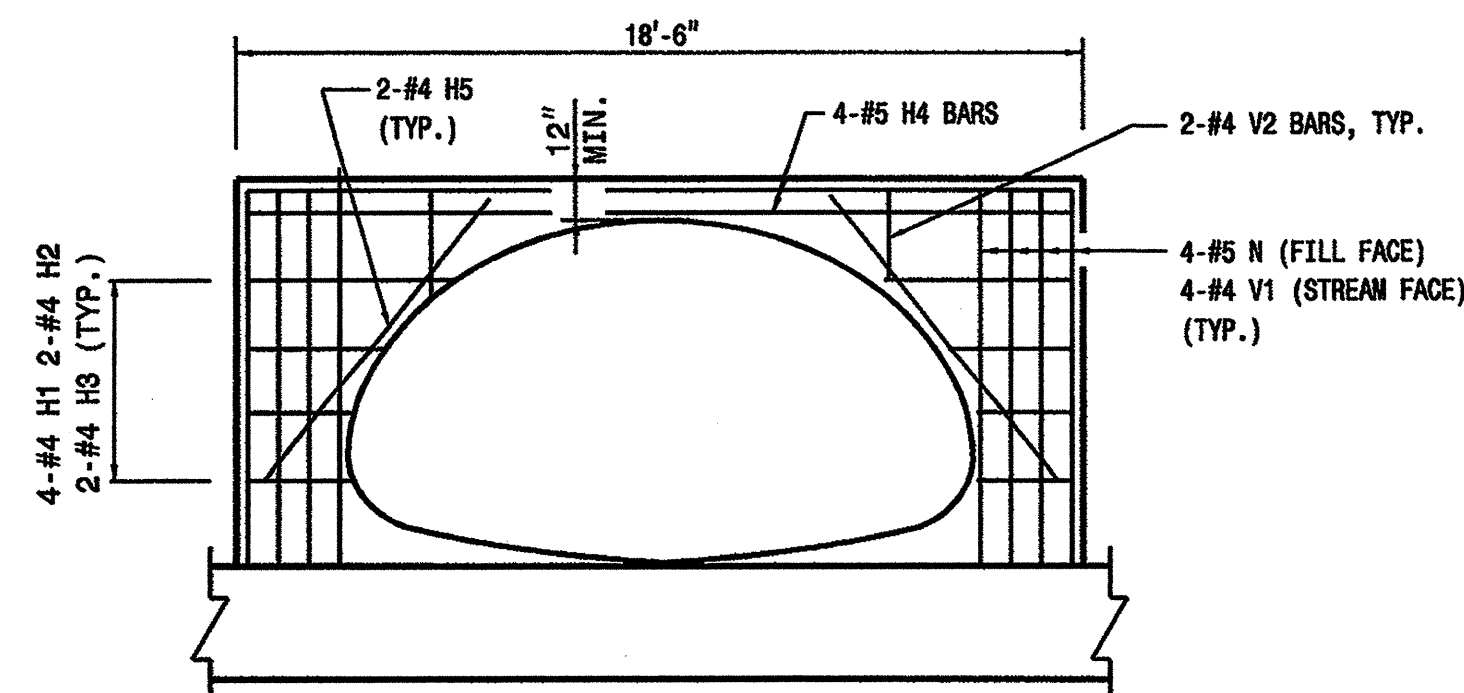


**PLAN**

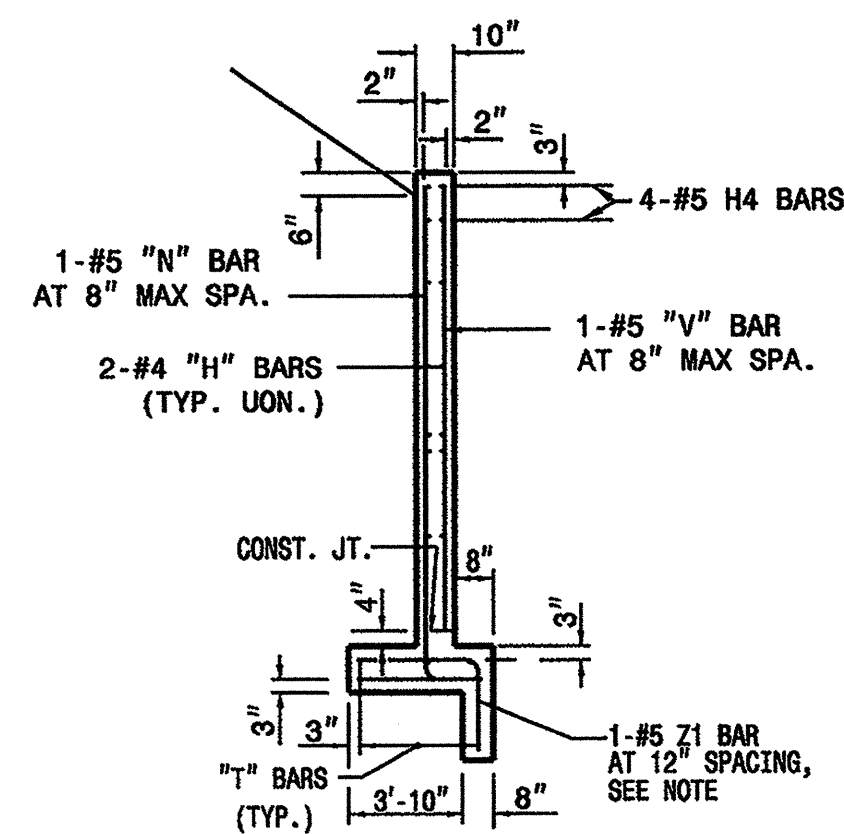


**END ELEVATION**



**ENDWALL REINFORCEMENT**

WING WALLS NOT SHOWN FOR CLARITY  
FOR WING WALL REINFORCEMENT SEE SHEET



**SECTION A-A  
FOR ENDWALLS**

NOTE: AT EACH END OF EACH ENDWALL,  
THE FIRST TWO (2) BARS SHALL  
BE TYPE Z2.

**GENERAL NOTES**

ALL CONCRETE TO BE CLASS "A".

ALL REINFORCING STEEL SHALL BE ASTM A615-GRADE 60.

ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE  
SPlicing OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE  
LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO  
REINFORCEMENT ARE TO CENTERS OF BARS.

THE FOOTING, CURTAIN WALL AND 4" OF WALL ARE TO BE  
POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL  
SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL  
SHALL THEN BE POURED IN ONE OPERATION.

ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".

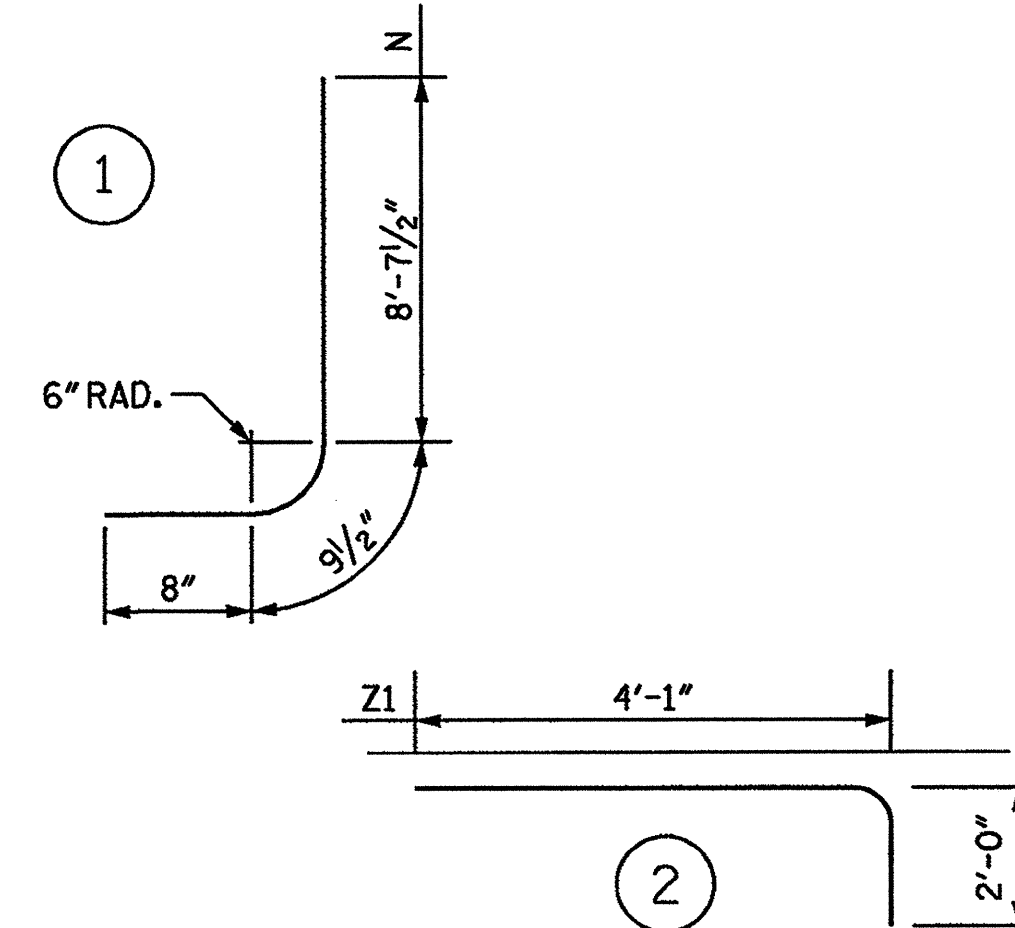
3" DIAMETER DRAINS SHALL BE PLACED IN WALL AS SHOWN  
AND BE 6" ABOVE NORMAL FLOW LINE.

ALL MATERIAL AND WORKMANSHIP AS PER SPECIFICATIONS  
OF THE N.C. DEPARTMENT OF TRANSPORTATION.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT  
BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY  
TAKE CARE OF THE FILL.

**BAR TYPES**

ALL BAR DIMENSIONS ARE OUT TO OUT.



**BILL OF MATERIAL**

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	16	#4	STR	2'-0"	22
H2	8	#4	STR	6'-8"	37
H3	8	#4	STR	4'-5"	24
H4	8	#5	STR	18'-2"	152
H5	8	#4	STR	8'-0"	43
N	16	#5	1	10'-1"	169
T	12	#4	STR	23'-0"	185
V1	16	#4	STR	8'-1"	87
V2	8	#4	STR	2'-2"	12
Z1	30	#5	2	6'-1"	191
Z2	58	#5	STR	4'-1"	247
Z3	12	#5	STR	3'-4"	42

REINFORCING STEEL 1298 LBS  
FOR 2 ENDWALLS

CLASS A CONCRETE FOR  
4 WINGS AND 2 ENDWALLS 32 CY

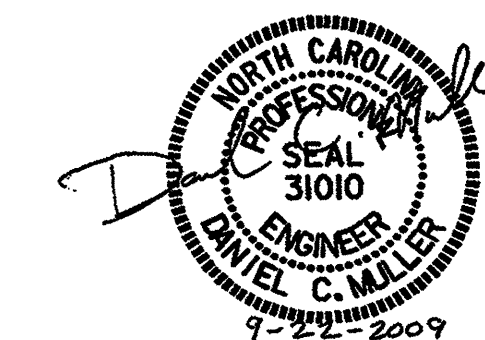
PROJECT NO. 30000.14.3

COUNTY

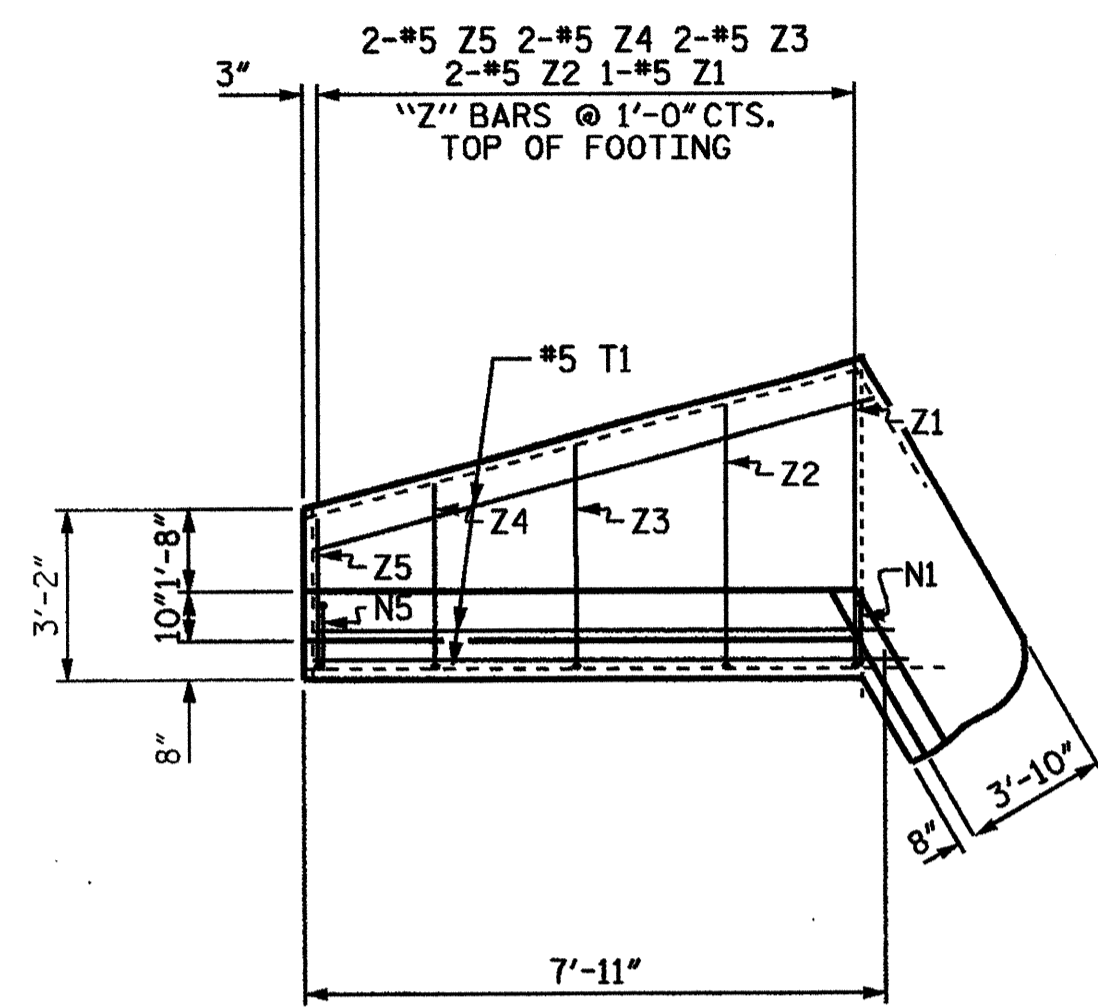
STATION:

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

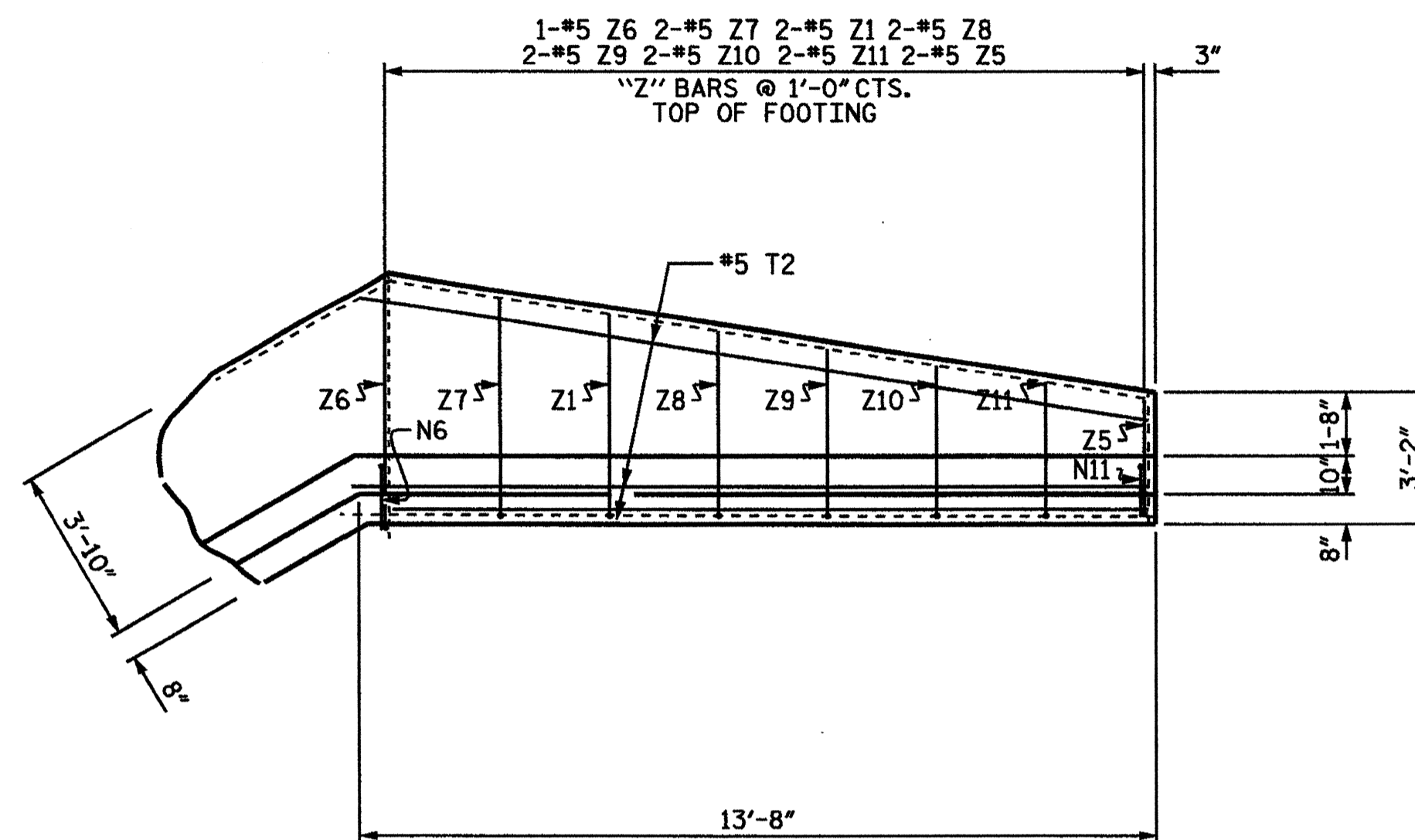
REINFORCED CONCRETE  
ENDWALL FOR 142" X 91"  
PIPE ARCH  
60° OR 120° SKEW



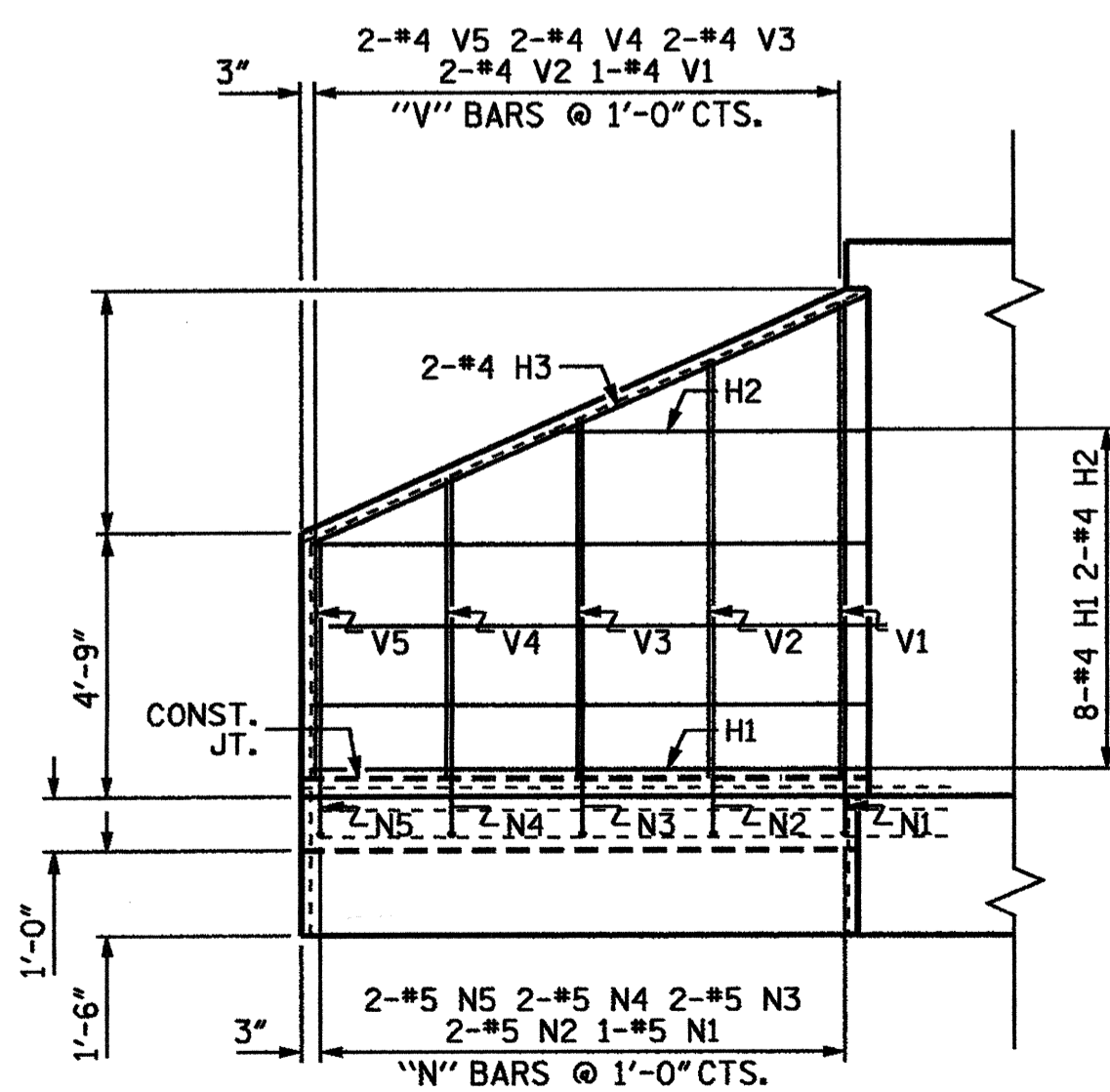
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-1	
2			4				



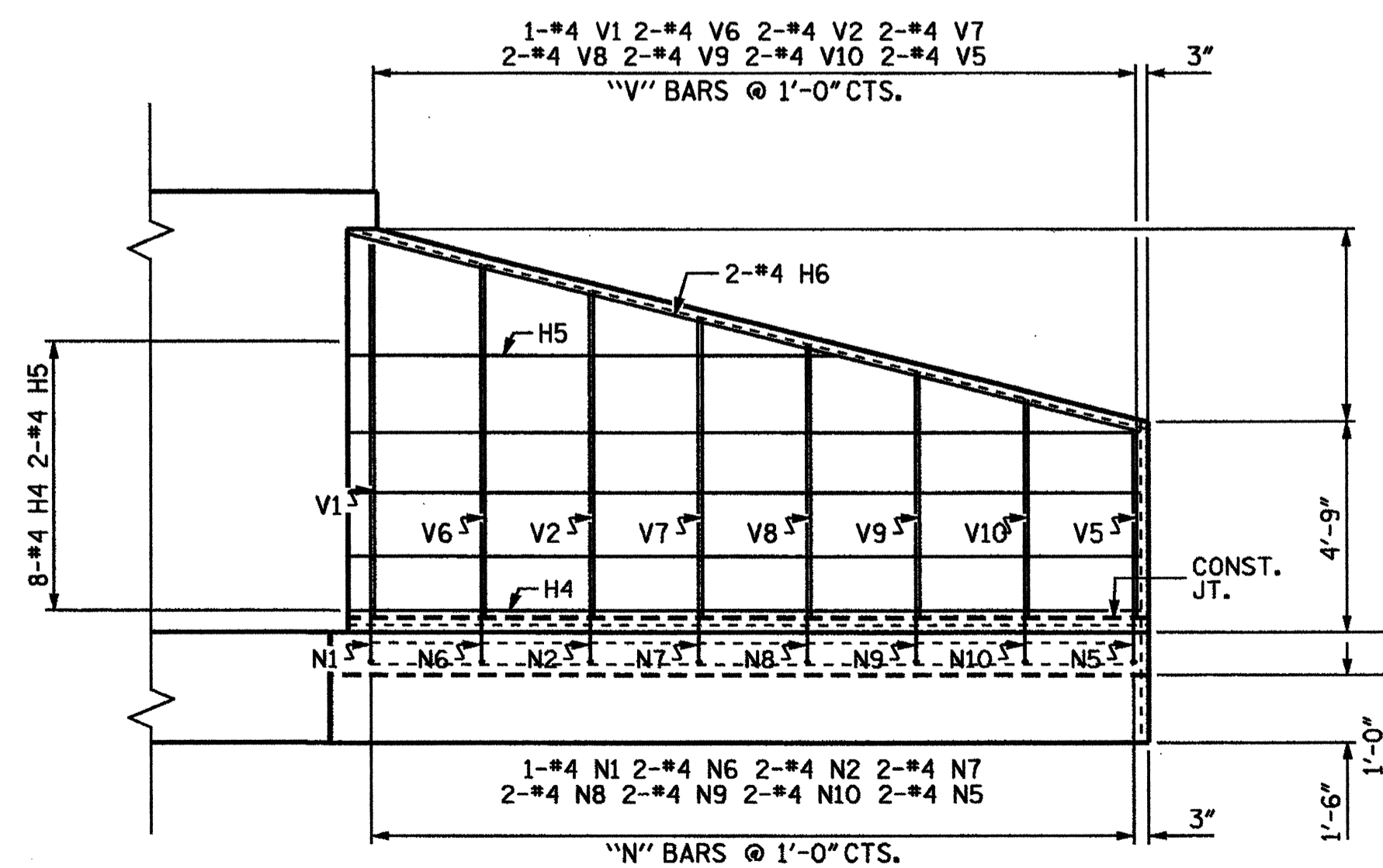
PLAN W2



PLAN W1



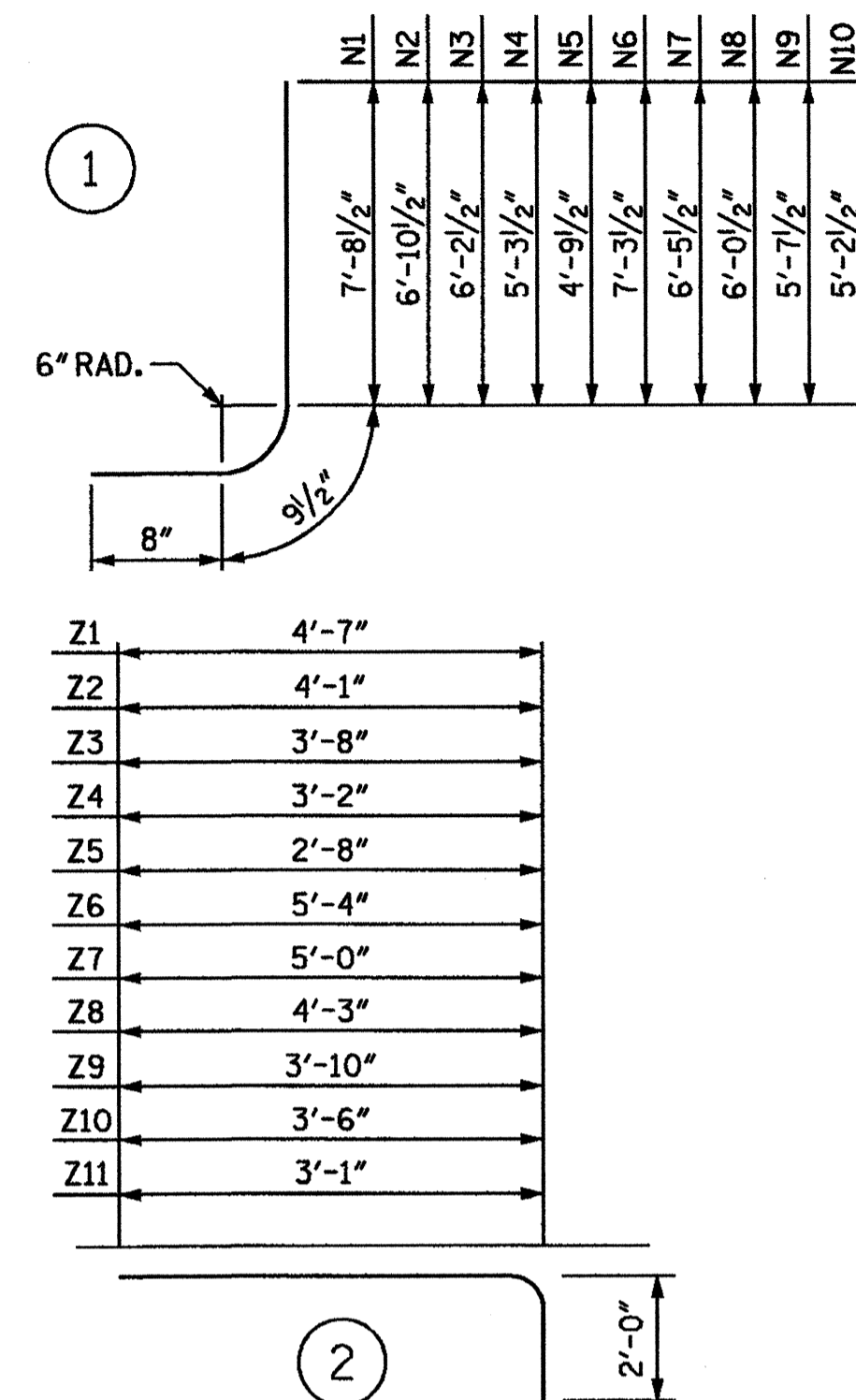
ELEVATION W2



ELEVATION W1

BAR TYPES

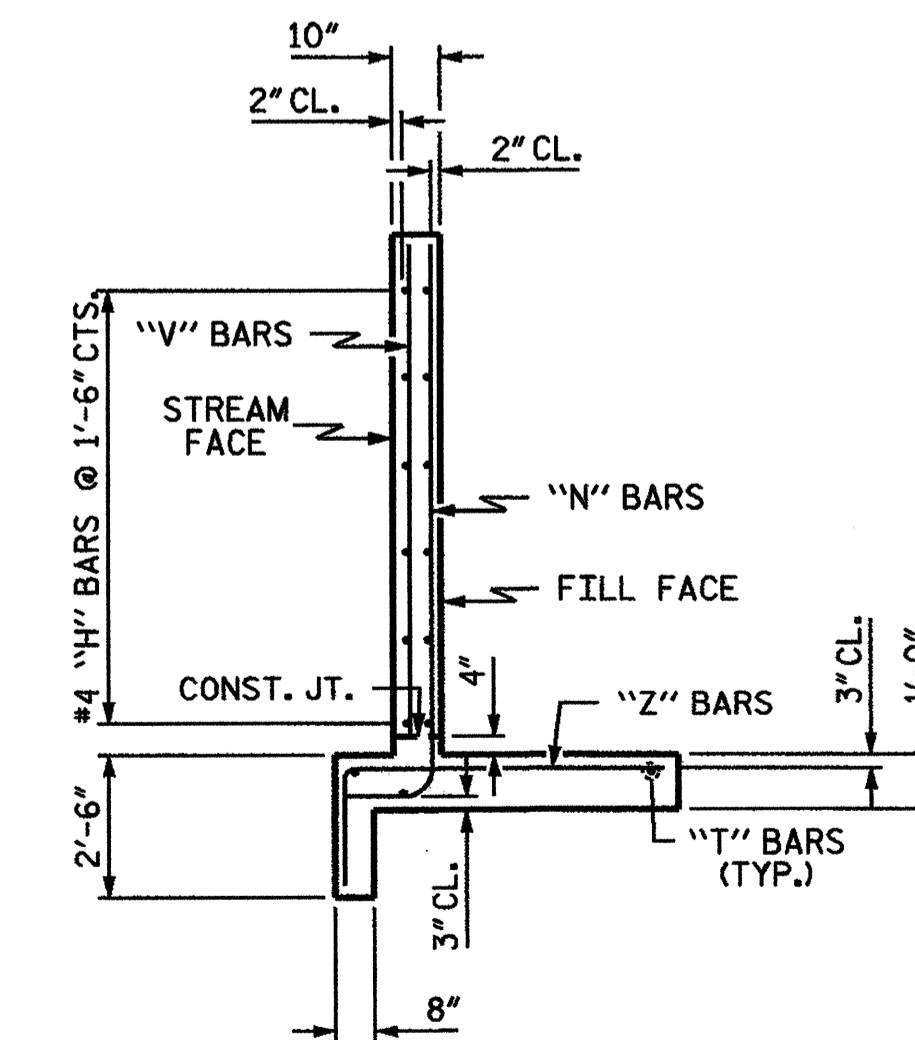
ALL BAR DIMENSIONS ARE OUT TO OUT.



BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	16	#4	STR	7'-5"	60
H2	4	#4	STR	3'-8"	10
H3	4	#4	STR	7'-11"	21
H4	16	#4	STR	13'-2"	141
H5	4	#4	STR	6'-6"	17
H6	4	#4	STR	13'-6"	36
N1	4	#5	1	9'-2"	38
N2	8	#5	1	8'-4"	70
N3	4	#5	1	7'-8"	32
N4	4	#5	1	6'-11"	29
N5	8	#5	1	6'-3"	52
N6	4	#5	1	8'-9"	37
N7	4	#5	1	7'-11"	33
N8	4	#5	1	7'-6"	32
N9	4	#5	1	7'-1"	30
N10	4	#5	1	6'-8"	28
T1	6	#5	STR	9'-10"	62
T2	6	#5	STR	13'-9"	86
V1	4	#4	STR	7'-2"	19
V2	8	#4	STR	6'-4"	34
V3	4	#4	STR	5'-8"	15
V4	4	#4	STR	4'-11"	13
V5	8	#4	STR	4'-3"	23
V6	4	#4	STR	6'-9"	18
V7	4	#4	STR	5'-11"	16
V8	4	#4	STR	5'-6"	15
V9	4	#4	STR	5'-1"	14
V10	4	#4	STR	4'-8"	13
Z1	6	#5	2	6'-7"	41
Z2	4	#5	2	6'-1"	25
Z3	4	#5	2	5'-8"	23
Z4	4	#5	2	5'-2"	22
Z5	8	#5	2	4'-8"	39
Z6	2	#5	2	7'-4"	15
Z7	4	#5	2	7'-0"	29
Z8	4	#5	2	6'-3"	26
Z9	4	#5	2	5'-10"	25
Z10	4	#5	2	5'-6"	23
Z11	4	#5	2	5'-1"	21

REINFORCING STEEL 1283 LBS  
 FOR 4 WINGS



TYPICAL WING SECTION

PROJECT NO. 30000.14.3

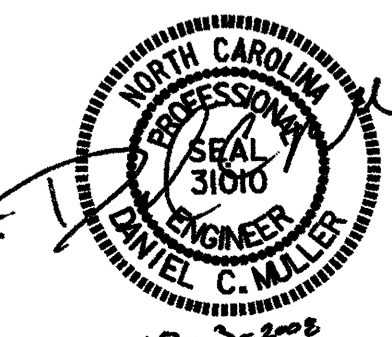
COUNTY

STATION:

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

WINGS FOR  
 CMP ARCH CULVERT

H = 7'-10" SLOPE = 2:1  
 60° OR 120° SKEW



ASSEMBLED BY: DATE:  
 CHECKED BY: DATE:  
 DRAWN BY: DCM 08/08  
 CHECKED BY: TMS 08/08

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