

SKEW TRIANGLE

PART PLAN

ROOF SLAB

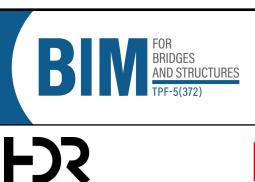
PART PLAN

FLOOR SLAB

NOTES:

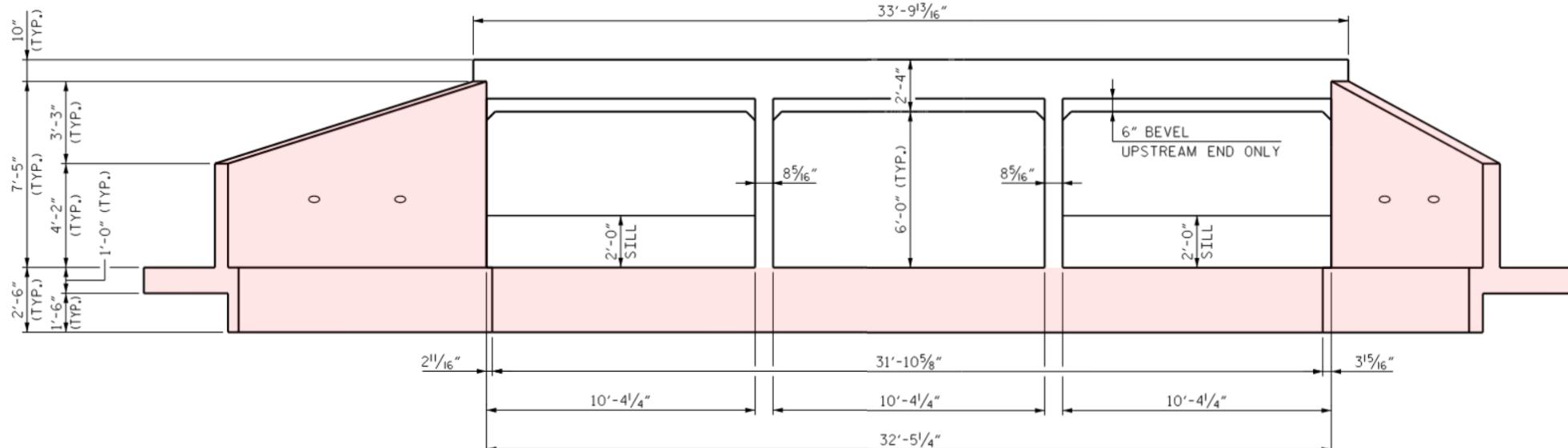
1. For the full plan set and additional structure information, see Br2-Concrete Culvert-NC DOT.pdf.

Unit Test Instruction for the Design-to-Construction Data Exchange		
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1	01/2/24	.
No.	Date	Issue / Revision Notes
Unit Test Description		
Level 1 Retaining Wing Wall 01		
Drawn By DHC	Reviewed By MJY	



L1-Br02-

RetainingWingWall01 / 01



DESIGN DATA:

SPECIFICATIONS	- - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	- - - - -	HL 93
IMPACT ALLOWANCE	- - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	- -	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	- -	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	- -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED - EXTREME FIBER STRESS	- - - - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (MINIMUM)

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

MATERIAL AND WORKMANSHIP:

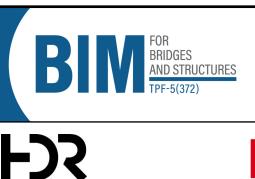
EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

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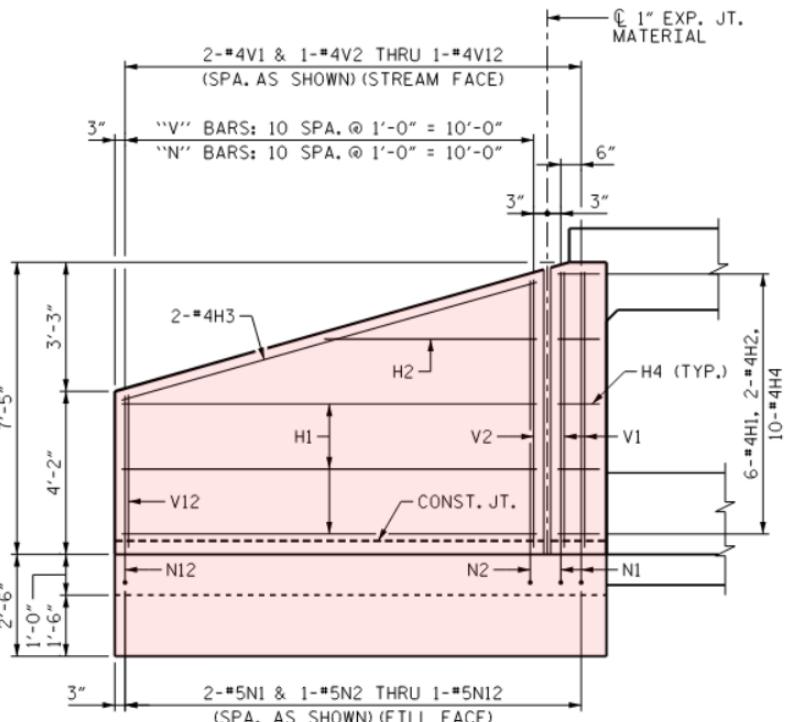
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DHC	MJY	



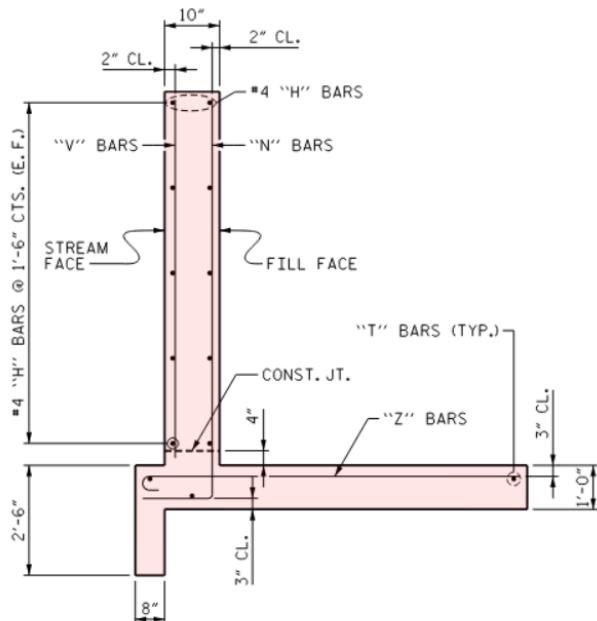
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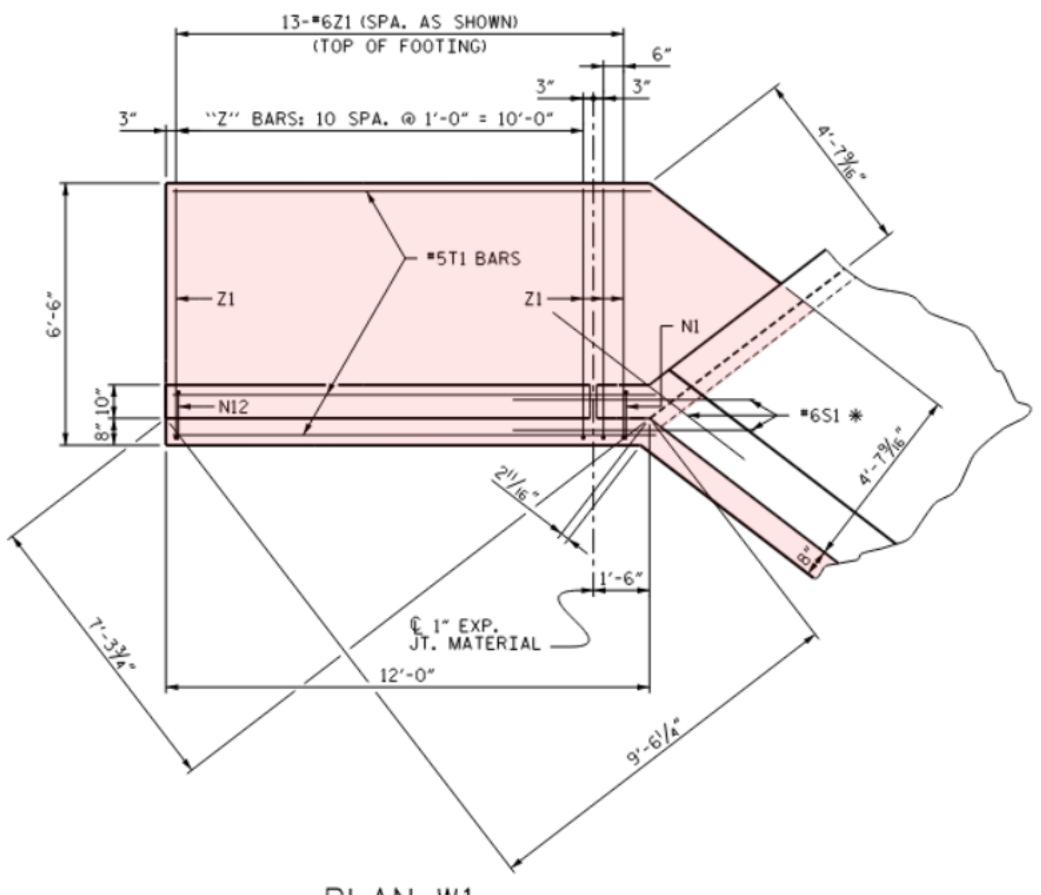
RetainingWingWall01 / 02



ELEVATION-W1



TYPICAL WING SECTION



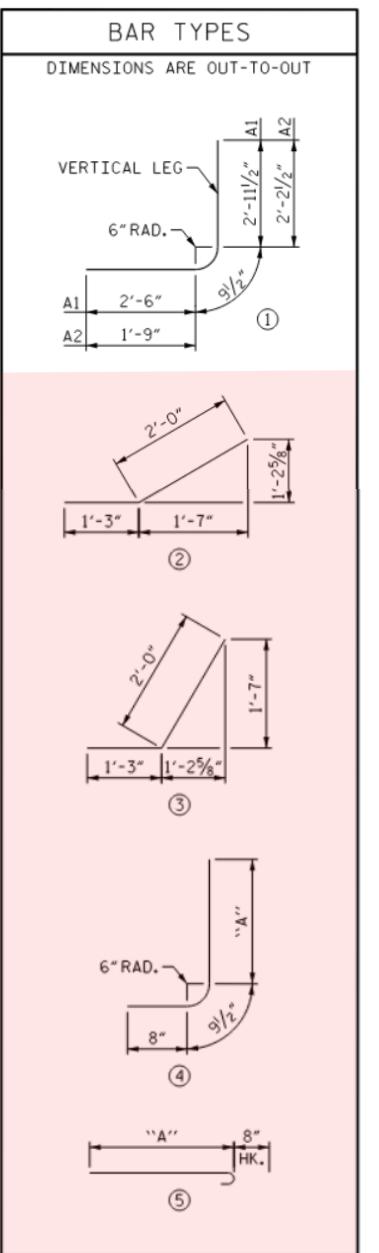
* BOTTOM OF FLOOR SLAB & FOOTING

NOTES

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FULL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

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CULVERT WING WALL						
REINFORCING STEEL BAR SCHEDULE						
BAR	NO.	SIZE	TYPE	LENGTH	DIM. A	WEIGHT
H1		#4	STR.	10'-2"		
H2		#4	STR.	6'-7"		
H3		#4	STR.	10'-6"		
H4		2	2	3'-3"		
H5		#4	STR.	7'-2"		
H6		#4	STR.	4'-6"		
H7		#4	STR.	7'-7"		
H8		#4	3	3'-3"		
N1		#5	4	8'-8"	7'-2½"	
N2		#5	4	8'-6"	7'-0½"	
N3		#5	4	8'-3"	6'-9½"	
N4		#5	4	7'-11"	6'-5½"	
N5		#5	4	7'-8"	6'-2½"	
N6		#5	4	7'-5"	5'-11½"	
N7		#5	4	7'-1"	5'-7½"	
N8		#5	4	6'-10"	5'-4½"	
N9		#5	4	6'-7"	5'-1½"	
N10		#5	4	6'-3"	4'-9½"	
N11		#5	4	6'-0"	4'-6½"	
N12		#5	4	5'-9"	4'-3½"	
N13		#5	4	8'-6"	7'-0½"	
N14		#5	4	8'-4"	6'-10½"	
N15		#5	4	8'-0"	6'-6½"	
N16		#5	4	7'-7"	6'-1½"	
N17		#5	4	7'-3"	5'-9½"	
N18		#5	4	6'-10"	5'-4½"	
N19		#5	4	6'-6"	5'-0½"	
N20		#5	4	6'-1"	4'-7½"	
N21		#5	4	5'-9"	4'-3½"	
S1		#6	STR.	6'-0"		
T1		#5	STR.	12'-0"		
T2		#5	STR.	9'-0"		
V1		#4	STR.	6'-7"		
V2		#4	STR.	6'-6"		
V3		#4	STR.	6'-2"		
V4		#4	STR.	5'-11"		
V5		#4	STR.	5'-8"		
V6		#4	STR.	5'-4"		
V7		#4	STR.	5'-1"		
V8		#4	STR.	4'-10"		
V9		#4	STR.	4'-6"		
V10		#4	STR.	4'-3"		
V11		#4	STR.	4'-0"		
V12		#4	STR.	3'-8"		
V13		#4	STR.	6'-6"		
V14		#4	STR.	6'-3"		
V15		#4	STR.	5'-11"		
V16		#4	STR.	5'-7"		
V17		#4	STR.	5'-2"		
V18		#4	STR.	4'-10"		
V19		#4	STR.	4'-5"		
V20		#4	STR.	4'-1"		
V21		#4	STR.	3'-8"		
Z1		#6	5	6'-10"	6'-2"	
Z2		#6	5	6'-1"	5'-5"	
REINFORCING STEEL FOR 4 WINGS						
CLASS A CONCRETE						
4 WINGS				19.8 CY		
2 HEADWALLS				3.8 CY		
4 CULVERT SILLS				3.1 CY		
2 END CURTAIN WALLS				3.9 CY		
TOTAL: 30.6 CY						



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