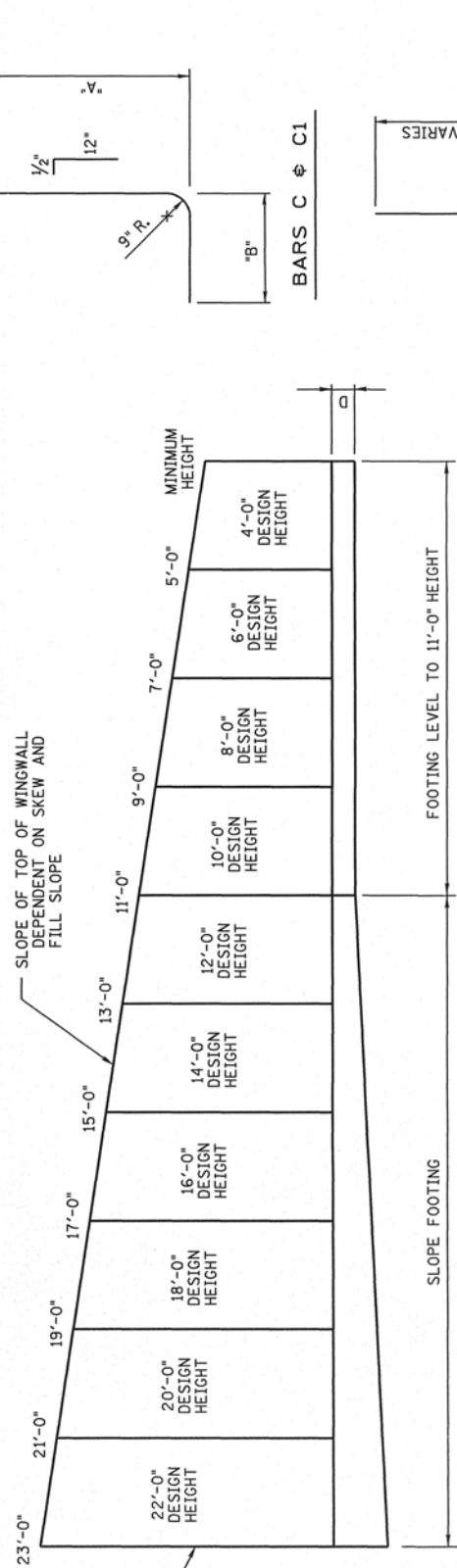


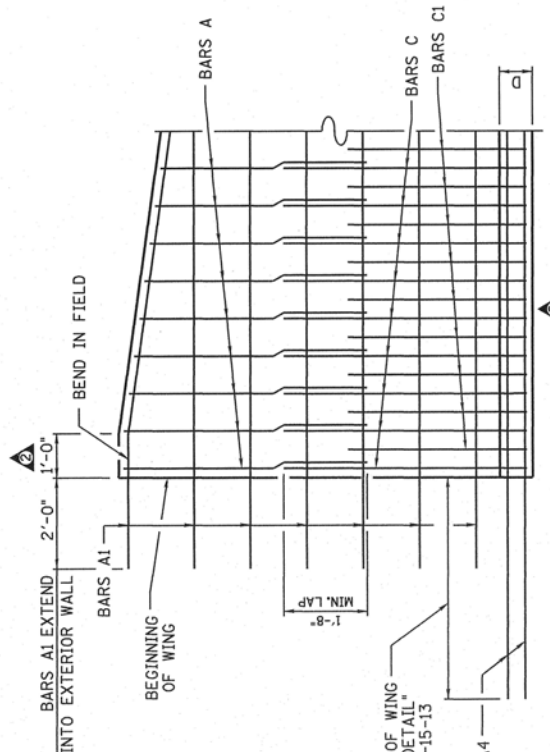
DESIGNED BY: DIANE BUSH
 DRAWN BY: RLH/JWP/MAH
 SUPERVISED BY: RLH/JWP/MAH
 CHECKED BY: _____
 DATE: 12-99
 DATE: 12-99
 DATE: _____

DESIGN SECTION	WALL DIMENSIONS										REINFORCING STEEL SCHEDULE										DESIGN SECTION	DESIGN HEIGHT
	DESIGN HEIGHT	BASE	TOE	W	HEEL	D	BARS C		BARS A		BARS A2		BARS A3		WALL & FOOTING		DESIGN SECTION					
							SIZE	SPACING	SIZE	SPACING	LENGTH	SIZE	LENGTH	LENGTH	CONCRETE (C.Y.)	REINFORCING (LBS.)						
1	4'-0"	2'-9"	1'-3"	11"	7"	9"	4	1'-0"	4'-5"	1'-10"	6'-3"	-	-	2'-5"	22.73	1						
2	6'-0"	3'-9"	1'-6"	1'-0"	1'-3"	9"	4	1'-0"	6'-5"	2'-1"	8'-6"	-	-	3'-4"	27.68	2						
3	8'-0"	4'-7"	1'-8"	1'-1"	1'-10"	9"	4	8"	8'-5"	2'-5"	10'-10"	-	-	4'-3"	37.65	3						
4	10'-0"	5'-7"	1'-11"	1'-2"	2'-6"	9"	5	1'-0"	5'-0"	2'-9"	7'-9"	5	10"	5'-3"	56.82	4						
5	12'-0"	6'-7"	2'-2"	1'-3"	3'-2"	11"	6	1'-0"	6'-6"	3'-1"	9'-5"	6	8"	6'-2"	76.40	5						
6	14'-0"	7'-6"	2'-5"	1'-4"	3'-9"	11"	6	10"	9'-1"	3'-5"	12'-6"	6	7"	7'-1"	97.12	6						
7	16'-0"	8'-6"	2'-8"	1'-5"	4'-5"	11"	6	10"	9'-6"	3'-9"	13'-4"	6	6"	8'-1"	117.65	7						
8	18'-0"	9'-4"	2'-11"	1'-6"	4'-11"	11"	6	9"	12'-3"	4'-1"	16'-4"	6	7"	9'-0"	142.98	8						
9	20'-0"	10'-4"	3'-2"	1'-7"	5'-7"	11"	8	1'-0"	13'-8"	4'-4"	18'-0"	8	6"	9'-11"	186.62	9						
10	22'-0"	11'-8"	3'-5"	1'-8"	6'-7"	11"	8	10"	15'-3"	4'-9"	20'-0"	8	4"	11'-3"	209.21	10						

* QUANTITIES FOR REINFORCING STEEL INCLUDES BARS A1 AND A4 NOT SHOWN IN SCHEDULE. ALL BARS A ARE STRAIGHT BARS.

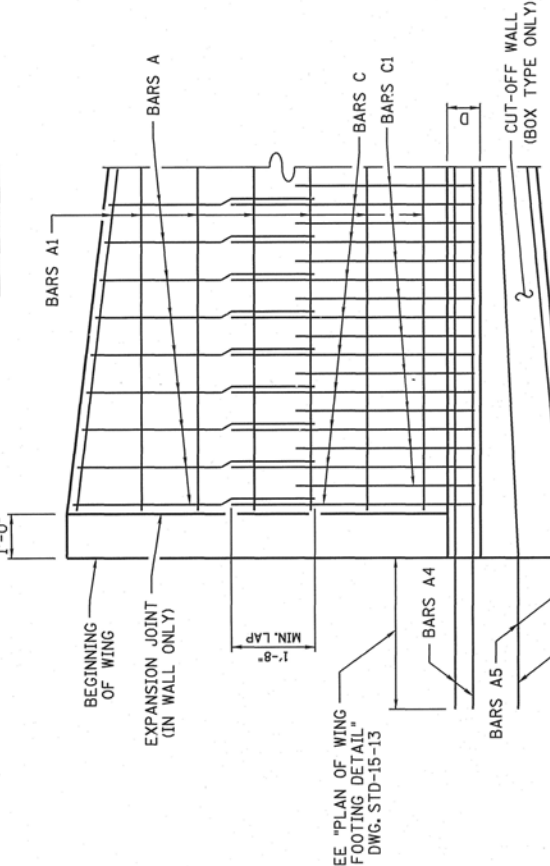


DESIGN SECTIONS



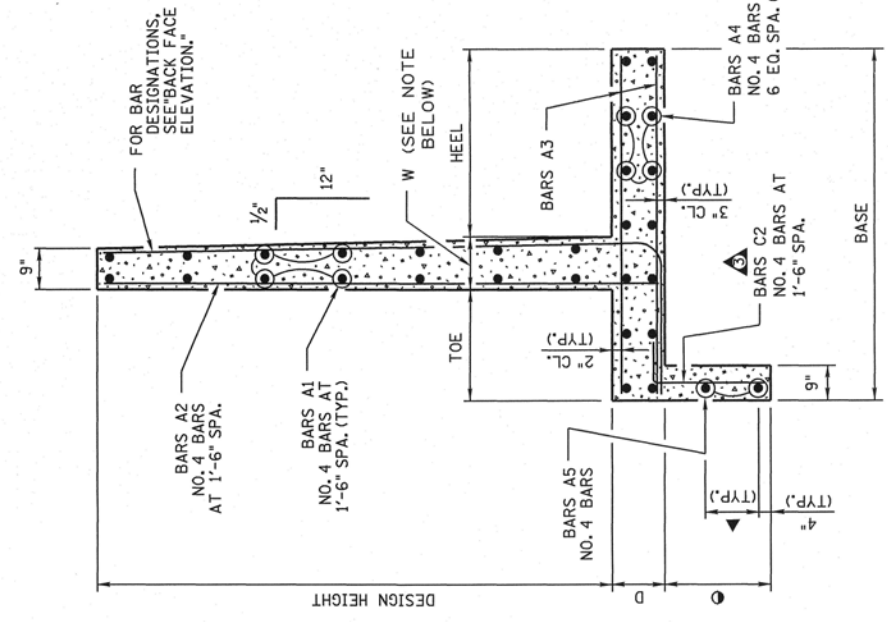
BACK FACE ELEVATION

(SLAB BRIDGES WITH WINGWALLS ≤ 15 FEET IN LENGTH.)



BACK FACE ELEVATION

(ALL BOX BRIDGES, AND SLAB BRIDGES WITH WINGWALLS > 15 FEET IN LENGTH.)

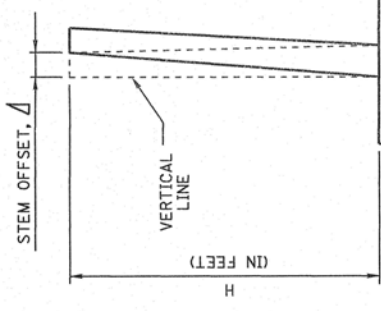


(BOX BRIDGE SHOWN SLAB BRIDGE SIMILAR)

NOTE: W DENOTES WIDTH OF WINGWALL AT TOP OF FOOTING

▲ DENOTES FOR BAR PLACEMENT, SEE ELEVATION OF WING FOOTING FOR CONCRETE BOX BRIDGE ON STD-15-13

● DENOTES CUT-OFF WALL VARIES FROM 0" TO (3'-6" - D) (BOX TYPE ONLY) (INCLUDED IN CUT-OFF WALL QUANTITIES)



STEM OFFSET VALUES

NOTE: CONSTRUCT FORMS TO COMPENSATE FOR STEM OFFSET.

▲ (APPLICABLE TO FREE STANDING WINGWALLS ONLY.)

STEM OFFSET

(Δ IN INCHES)

$$\Delta = \frac{H}{16}, \text{ FOR } H \leq 12'-0"$$

$$\Delta = \frac{H - 6}{8}, 2\frac{1}{2}" \text{ MAX., FOR } H > 12'-0"$$

NOTES

DESIGN ASSUMPTIONS:
 SF SLIDING = 1.5
 SF OVERTURNING = 2.0
 FRICTION ANGLE = 28°
 2.1 MAXIMUM SLOPE

CONCRETE: TO BE CLASS "A" $f'_c = 3000$ PSI
 REINFORCING: TO BE ASTM A615 GRADE 60

CONST. NO.

PROJECT NO.	YEAR	SHEET NO.
2000	2000	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	12-7-01	CMH	REVISED REINFORCING STEEL SCHEDULE, NOTES, AND DRAWING TITLE.
2	2-28-03	JHW	REVISED AND ADDED DRAWINGS.
3	3-28-08	JHW	ADDED BARS TO CUT-OFF WALL.

M/R

M/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
▲ WINGWALL AND SPECIAL RETAINING WALL DESIGN SECTIONS

STANDARD REINFORCED CONCRETE BRIDGE BOX AND SLAB TYPE

2000

CORRECT *Edward F. Wasserman*
 ENGINEER OF STRUCTURES