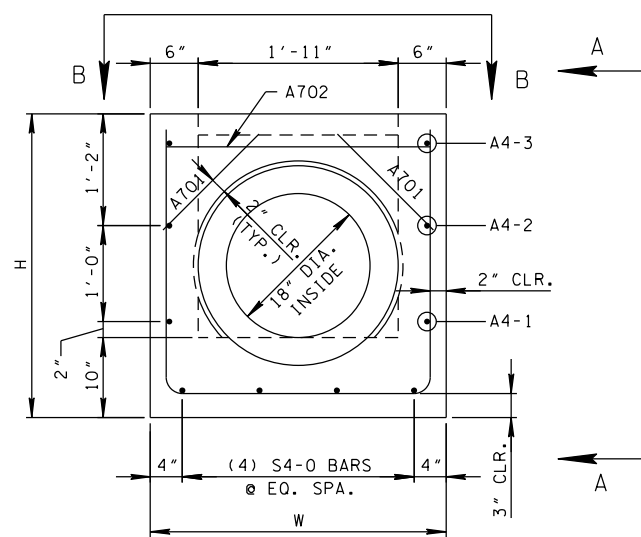


ISOMETRIC VIEW

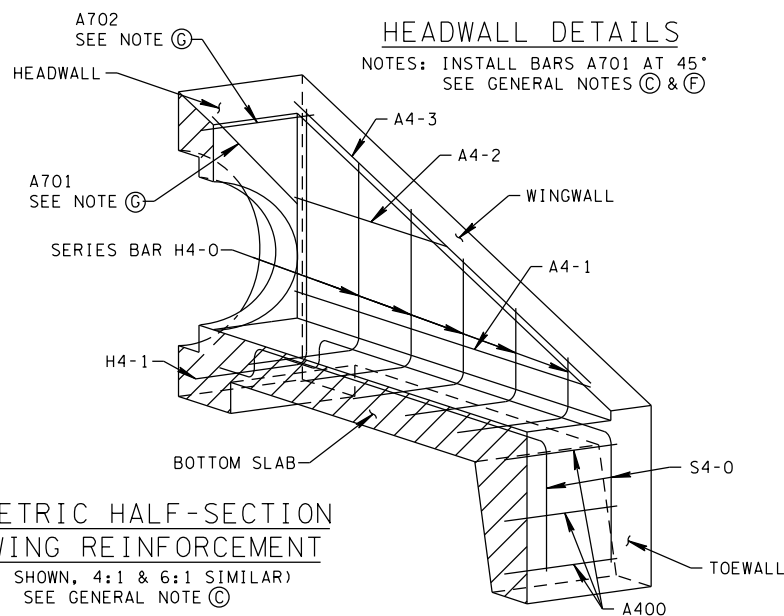
NOTE: 3/4" CHAMFER REQUIRED ON ALL EXPOSED EDGES



ELEVATION

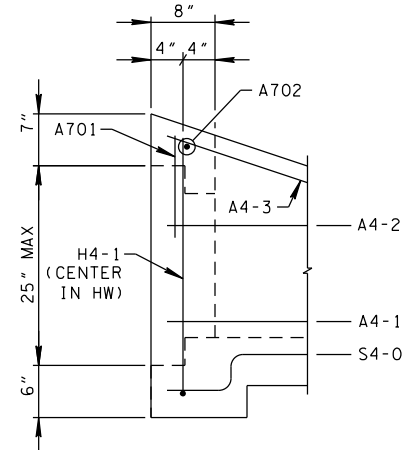
HEADWALL DETAILS

NOTES: INSTALL BARS A701 AT 45°
SEE GENERAL NOTES (C) & (F)

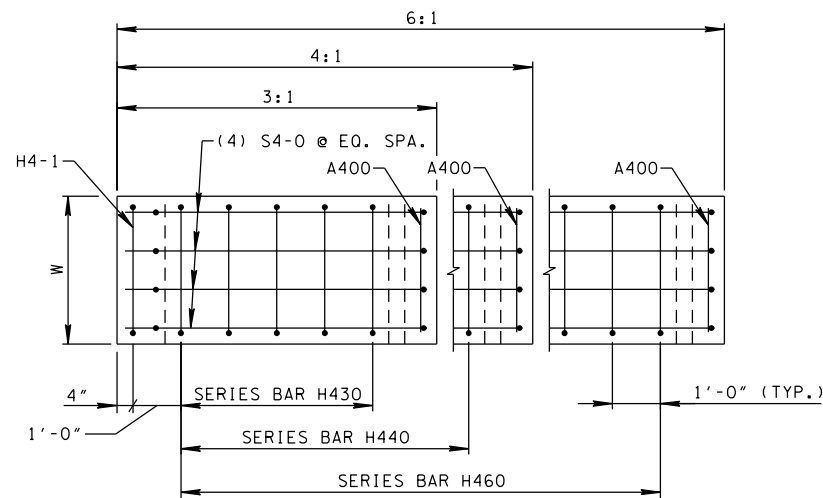


ISOMETRIC HALF-SECTION
SHOWING REINFORCEMENT

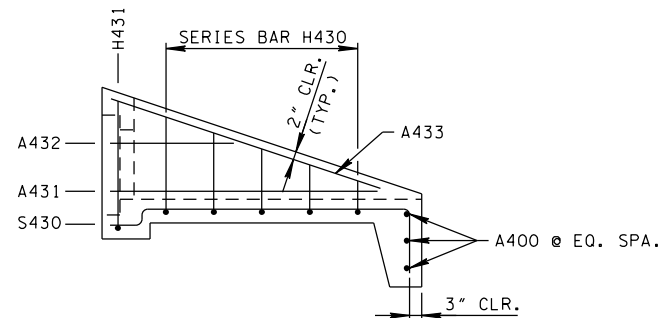
(3:1 SHOWN, 4:1 & 6:1 SIMILAR)
SEE GENERAL NOTE (C)



PARTIAL VIEW A-A

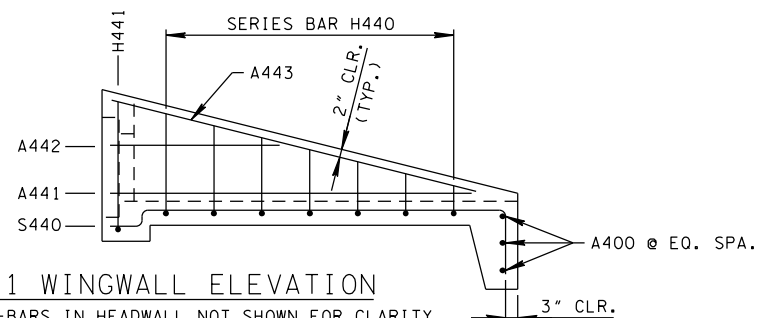


BOTTOM SLAB PLAN



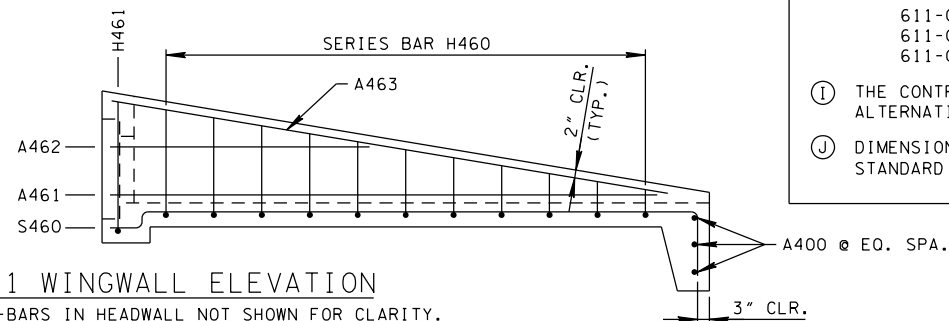
3:1 WINGWALL ELEVATION

NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.



4:1 WINGWALL ELEVATION

NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.



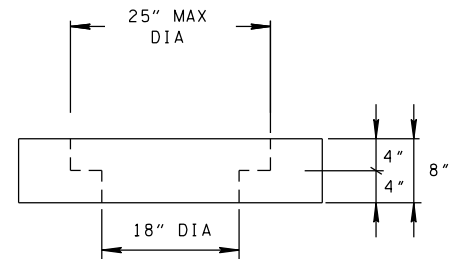
6:1 WINGWALL ELEVATION

NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.

REV. 6-14-13: REVISED NOTEG.
ADDED NOTE H AND I.

REV. 1-6-15: ADDED STEPPED
HOLE DETAIL

STEPPED HOLE DETAIL



PARTIAL VIEW B-B

SEE NOTE (F)

GENERAL NOTES

- (A) DRAWING TO BE USED FOR ALL CAST-IN-PLACE AND ALL PRECAST 18" CONCRETE ENDWALLS (TYPE "U") FOR CROSS DRAINS ONLY. "U" ENDWALL TO BE PLACED AT 90° SKEW TO CENTERLINE. SEE STD. DWG. D-PE-99 FOR SKEWED CONNECTION DETAIL WHEN CROSS DRAIN IS NOT PERPENDICULAR TO CENTERLINE. CAST-IN-PLACE CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 611 AND/OR SPECIAL PROVISIONS.
- (B) SEE STD. DWG. D-PE-18B FOR BILL OF STEEL & PRECAST NOTES.
- (C) "-" IN BAR DESIGNATION REPRESENTS 3, 4 OR 6 FOR 3:1, 4:1 OR 6:1 SLOPES, RESPECTIVELY.
- (D) SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
- (E) TOEWALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.
- (F) 90° STEPS ARE SHOWN ON THE STEPPED HOLE DETAIL, HOWEVER MINOR VARIATIONS OF THE TAPER ARE ACCEPTABLE.
- (G) OPTIONAL STEPPED HOLE OR HOLE FORMERS ARE ALLOWED PROVIDED THE AMOUNT OF COVER BETWEEN THE PIPE OPENING AND BARS A701 AND A702 IS THE SAME OR GREATER THAN SHOWN ON THIS DRAWING.
- (H) PAYMENT WILL BE MADE UNDER:
- 611-07.54, 18" ENDWALL (CROSS DRAIN) 3:1 EACH
611-07.55, 18" ENDWALL (CROSS DRAIN) 4:1 EACH
611-07.56, 18" ENDWALL (CROSS DRAIN) 6:1 EACH
- (I) THE CONTRACTOR MAY BE ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN.
- (J) DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE 9SOP) 5-3.

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 18" PIPE

SLOPE	CONCRETE ENDWALL DIMENSIONS				ESTIMATED QUANTITIES	
					CLASS "A" CONC. CU. YD.	STEEL BAR REINF. LB.
3:1	3' - 2"	6' - 8"	7' - 0 1/8"	2' - 11"	0.87	79
4:1		8' - 8"	8' - 11 1/4"		1.08	98
6:1		12' - 8"	12' - 10 1/4"		1.49	137

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

18"
CONCRETE ENDWALL
CROSS DRAIN
(FOR 3:1, 4:1 & 6:1 SLOPES)

NOT TO SCALE

3-Q1-12

D-PE-18A