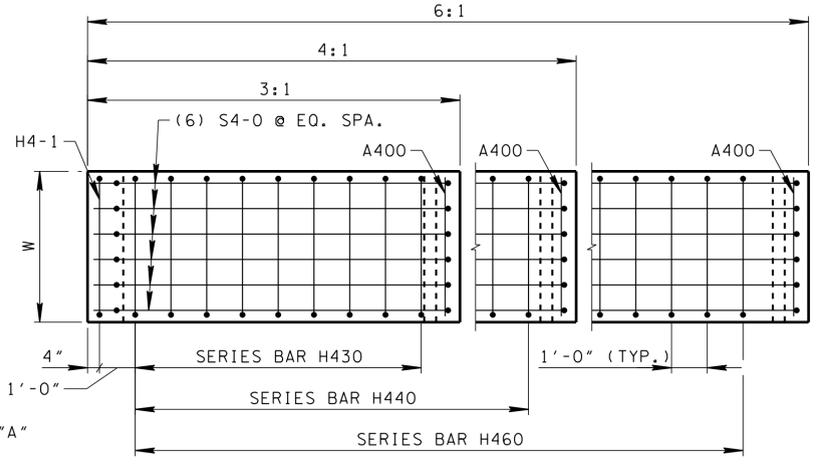


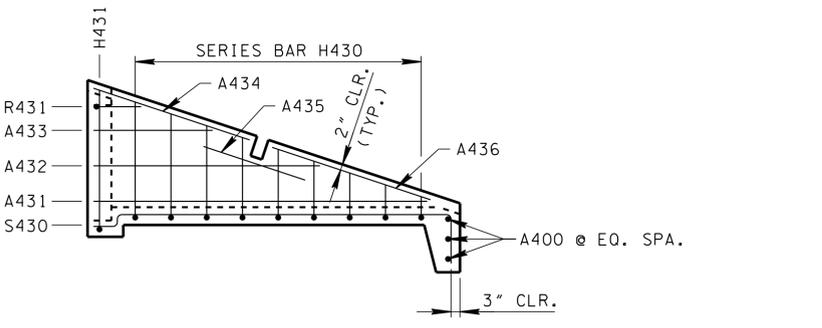
ISOMETRIC VIEW

NOTES: SEE STD. DWG. D-PE-99 FOR STEEL PIPE GRATE DETAILS
 3/4\"/>

ALTERNATE DETAIL "A"

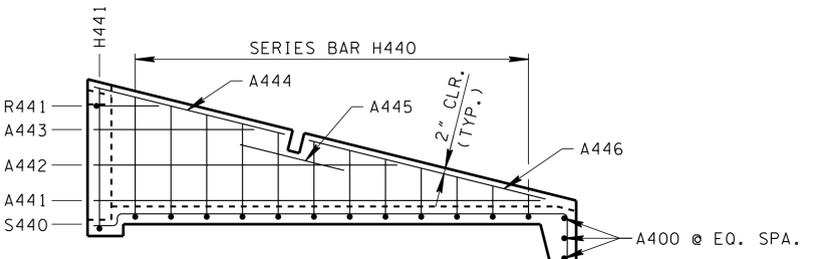


BOTTOM SLAB PLAN



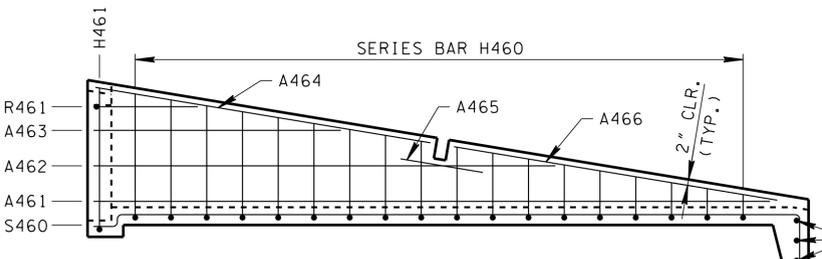
3:1 WINGWALL ELEVATION

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



4:1 WINGWALL ELEVATION

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

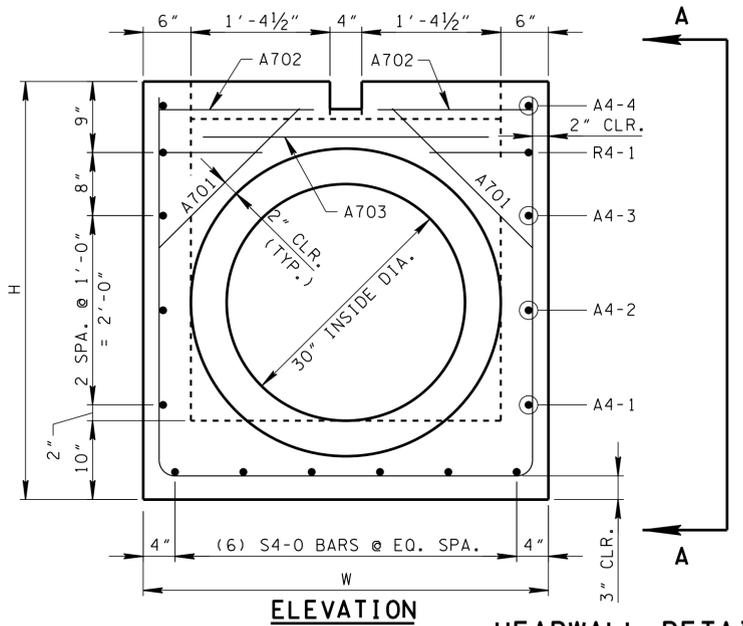


6:1 WINGWALL ELEVATION

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

- GENERAL NOTES**
- (A) DRAWING TO BE USED FOR ALL CAST-IN-PLACE AND ALL PRECAST 30" 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-30B 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) OPTIONAL STEPPED HOLE IS ALLOWED PROVIDED THE AMOUNT OF COVER BETWEEN THE PIPE OPENING AND BARS A701 AND A703 IS THE SAME OR GREATER THAN SHOWN ON THIS DRAWING.
 - (G) PAYMENT WILL BE MADE UNDER:

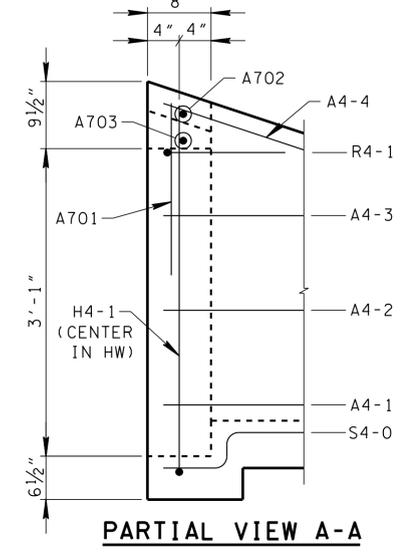
611-07.60	30IN ENDWALL (CROSS DRAIN) 3:1	EACH
611-07.61	30IN ENDWALL (CROSS DRAIN) 4:1	EACH
611-07.62	30IN ENDWALL (CROSS DRAIN) 6:1	EACH
 - (H) THE CONTRACTOR MAY ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN.
 - (I) DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.



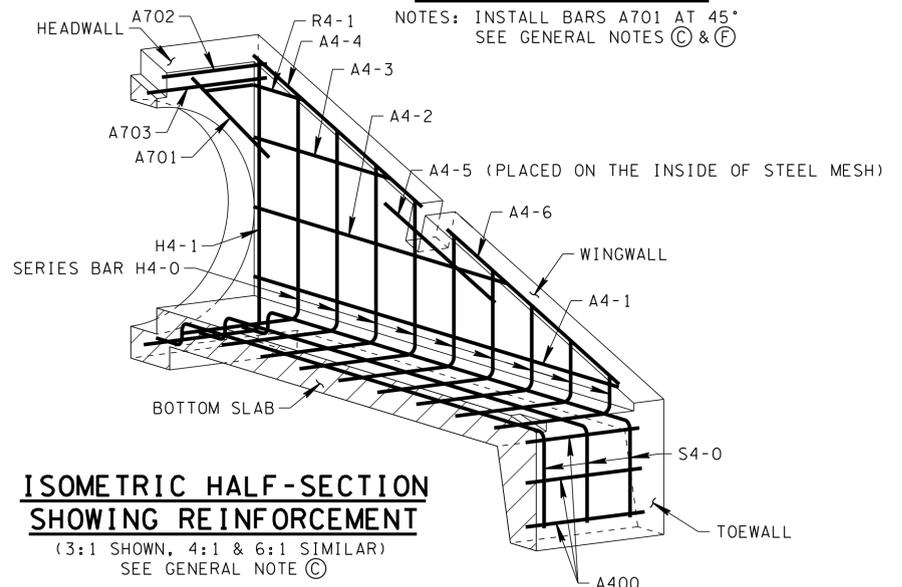
ELEVATION

HEADWALL DETAILS

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



PARTIAL VIEW A-A



ISOMETRIC HALF-SECTION SHOWING REINFORCEMENT
 (3:1 SHOWN, 4:1 & 6:1 SIMILAR)
 SEE GENERAL NOTE (C)

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 30" PIPE										
SLOPE	CONCRETE ENDWALL DIMENSIONS					STRUCTURAL STEEL PIPE DIMENSIONS		ESTIMATED QUANTITIES		
	H	L ₁	L ₂	L ₃	W	LG	WG	CLASS "A" CONC. CU. YD.	STEEL BAR REINF. LB.	STRUCTURAL STEEL LB.
3:1	4' - 5"	10' - 5"	10' - 11 3/4"	5' - 2"	4' - 1"	10' - 10 3/8"	4' - 1"	1.84	174	114
4:1	4' - 5"	13' - 8"	14' - 1"	6' - 1"	4' - 1"	14' - 0 7/8"	4' - 1"	2.32	216	137
6:1	4' - 5"	20' - 2"	20' - 5 3/8"	10' - 1"	4' - 1"	20' - 4 3/4"	4' - 1"	3.29	303	186

NOTE: SEE STD. DWG. D-PE-99 FOR STRUCTURAL STEEL PIPE DIMENSIONS LG & WG.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.