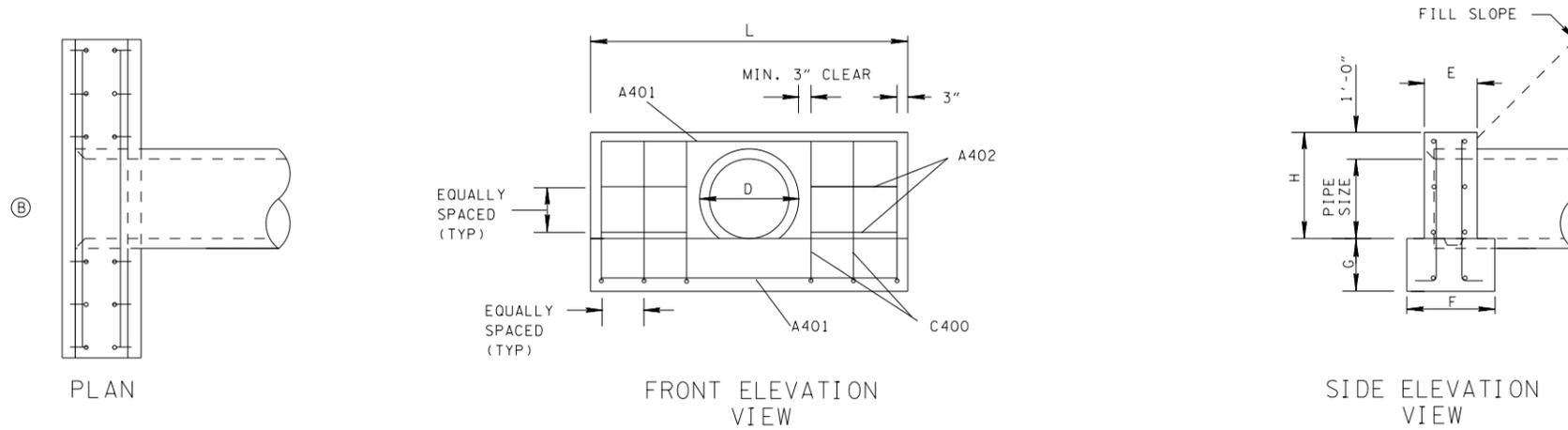
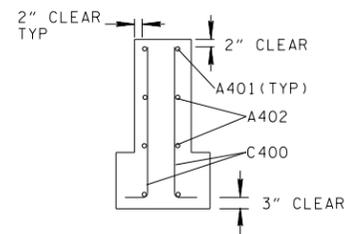


## STRAIGHT TYPE CONCRETE ENDWALL



DIMENSIONS AND ESTIMATED QUANTITIES FOR STRAIGHT CONCRETE ENDWALL								
PIPE SIZE	HOLE SIZE	WALL			FOOTING		CONC. C.Y.	REINF. STEEL LB
		L	H	E	F	G		
18"	25"	6'-0"	2'-6"	1'-3"	2'-1"	1'-3"	1.16	40
24"	30"	8'-0"	3'-0"	1'-4"	2'-2"	1'-4"	1.86	68
30"	37"	10'-0"	3'-6"	1'-6"	2'-4"	1'-6"	2.98	90



REINFORCING STEEL LEGEND		
	A400	
		C400

### REINFORCEMENT DETAILS

BILL OF STEEL													
BAR	18" PIPE				24" PIPE				30" PIPE				
	a	b	LENGTH	NUMBER	a	b	LENGTH	NUMBER	a	b	LENGTH	NUMBER	
A401	66	0	66	4	90	0	90	4	114	0	114	4	
C400	40	6	46	8	47	6	53	12	55	6	61	12	
A402	18.5	0	18.5	8	27	0	27	8	35.5	0	35.5	12	
	TOTAL				TOTAL				TOTAL				
	LB			706 in	LB			1212 in	LB			1614 in	90

- ### GENERAL NOTES
- (A) CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD CONSTRUCTION SPECIFICATIONS, SECTION 611, AND/OR SPECIAL PROVISIONS.
  - (B) ALL STRAIGHT CONCRETE ENDWALLS ON THE INLET END OF PIPE, AND AT 90° SKEW SHALL BE BEVELED AT 3" AT AN 45° ANGLE. BEVEL WILL NOT BE REQUIRED WHEN ENDWALL IS CONSTRUCTED ON THE "BELLED" END OF CONCRETE PIPE.
  - (C) ENDWALL MAY BE MODIFIED TO ACCOMMODATE MULTIPLE PIPES WHEN MORE THAN ONE PIPE IS PROPOSED, THE DISTANCE FROM CENTER TO CENTER OF PIPE SHALL BE D + 1'-0".
  - (D) PAYMENT FOR ENDWALLS WILL BE MADE AS FOLLOWS:  
 ITEM 611-07.01, CLASS "A" CONCRETE (PIPE ENDWALLS)----CUBIC YARD.  
 ITEM 611-07.02, STEEL BAR REINFORCING (PIPE ENDWALLS)----POUND.
  - (E) SEE SECTION 6.04.3.3 IN THE TDOT DESIGN MANUAL FOR RIPRAP APRON REQUIREMENT.
  - (F) PRECASTING IS ALLOWED.
  - (G) PIPE OPENING TO BE BASED ON TYPE "B" WALL THICKNESS (AASHTO M170).
  - (H) PIPE ENDWALLS FOR SLOPES STEEPER THAN 3:1 (PREVIOUSLY TYPE "U") WILL NOW USE TYPE "B" SEE D-PE-9.

- REV. 9-28-83: REDREW AND ADDED TABLE FOR STRAIGHT ENDWALL WHEN PIPE IS SKEWED.
- REV. 2-19-88: ADDED SAFETY ADJUSTMENTS "U" TYPE ENDWALL.
- REV. 1-19-94: REDREW AND REORGANIZED DRAWING. ELIMINATED TYPE "U" ENDWALL FOR 3:1 SLOPE.
- REV. 1-19-97: ADDED UNITS TO HEADING FOR TABLE FOR SKEWED PIPE.
- REV. 6-1-09: ADDED GENERAL NOTE (D).
- REV. 7-19-10: REMOVED GENERAL NOTE (D).
- REV. 1-15-13: ADDED REINFORCEMENT AND CHANGED NOTES. ADDED BILL OF STEEL. REMOVED "U" AND "L" TYPE ENDWALL.
- REV. 12-1-14: REVISED BAR DESIGNATION MINOR EDITING.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

STRAIGHT  
CONCRETE ENDWALL

3-1-94      D-PE-4