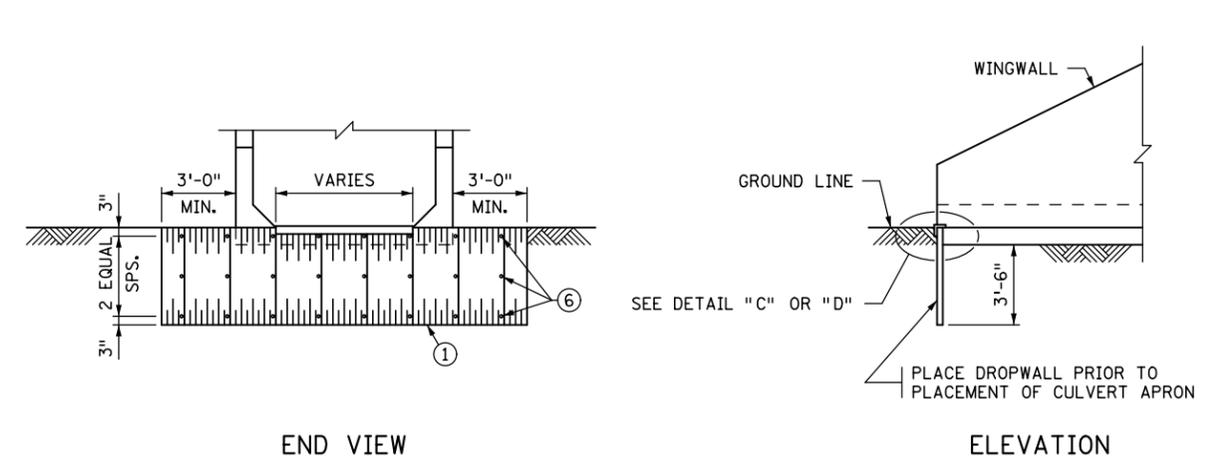


END VIEW

ELEVATION

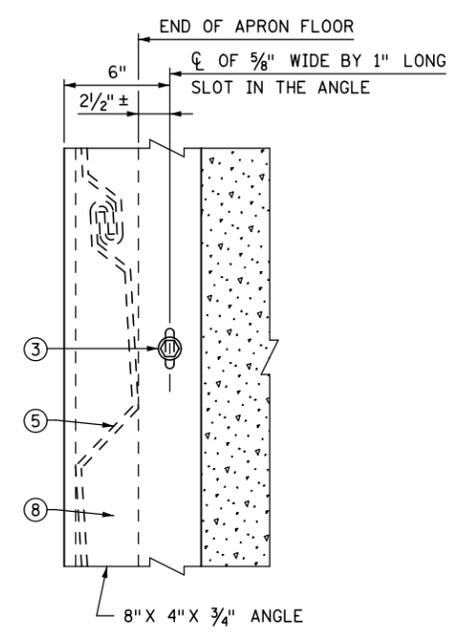
ALTERNATES 1 & 2 (STEEL SHEET PILING)



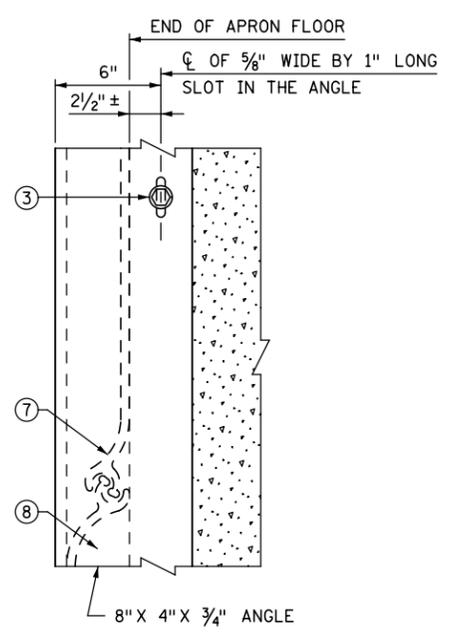
END VIEW

ELEVATION

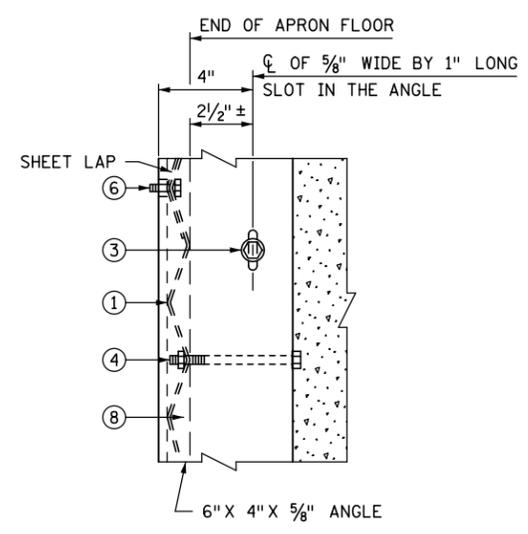
ALTERNATES 3 & 4 (GALVANIZED STEEL SHEETS)



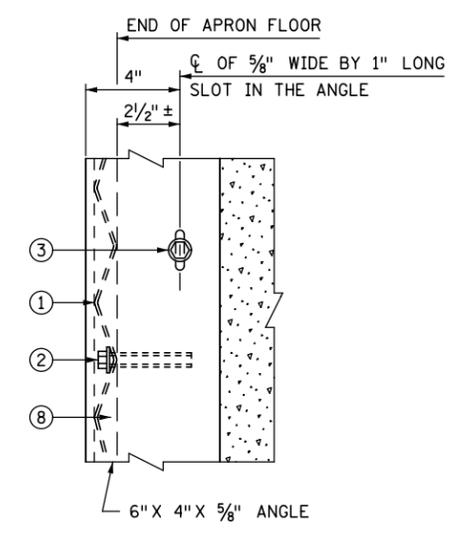
PLAN



PLAN

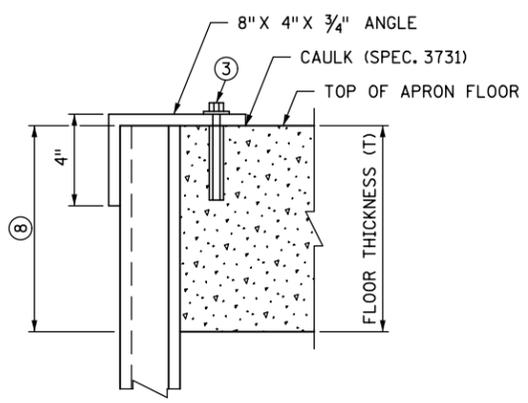


PLAN



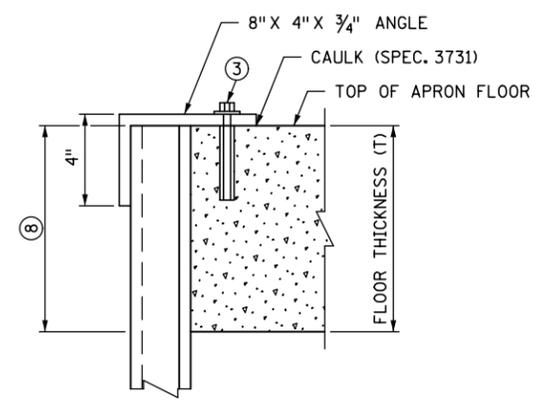
PLAN

DESIGNER NOTE
 (REMOVE PRIOR TO PLOTTING FINAL PLAN):
 BEFORE CULVERT PLANS ARE PREPARED, TAKE
 SAMPLES FROM THE DRAINAGE AREA
 FOR PH DETERMINATION. THE SOIL AND WATER SHOULD
 HAVE A PH OF 6.5 OR MORE IF SHEET STEEL IS USED.



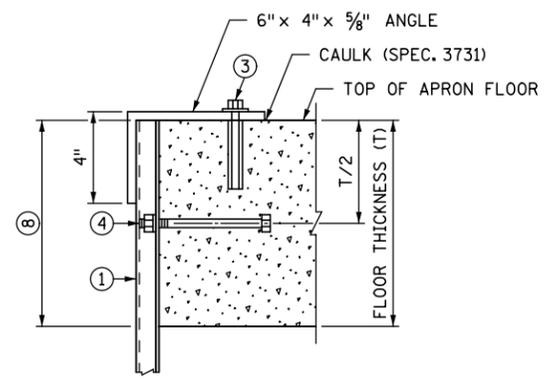
ELEVATION

DETAIL "A" - ALTERNATE 1
 STEEL SHEET PILING SHOWN



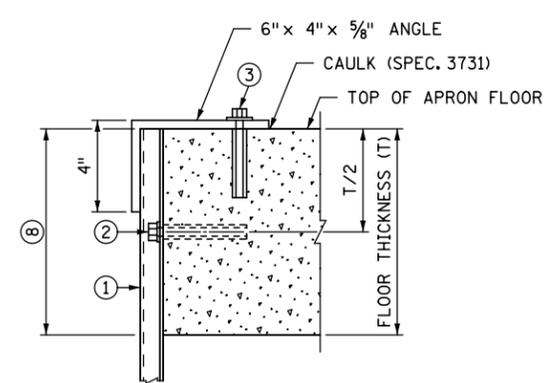
ELEVATION

DETAIL "B" - ALTERNATE 2
 STEEL SHEET PILING SHOWN



ELEVATION

DETAIL "C" - ALTERNATE 3
 ON NEW CONSTRUCTION ONLY



ELEVATION

DETAIL "D" - ALTERNATE 4
 ON NEW OR OLD CONSTRUCTION

CONSTRUCTION NOTES

- GALVANIZE ALL FASTENERS AND ANCHORS PER SPEC. 3392.
- GALVANIZE STEEL ANGLES PER 3394.
- ① 2 1/2" x 1/2" OR 2 2/3" x 1/2" CORRUGATED (12 GAGE) OR HEAVIER GALVANIZED STEEL SHEETS.
- ② FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" DIAMETER BY 4" LONG BOLTS AND APPROVED ANCHORAGES (10" ± CENTER TO CENTER, TO THE NEAREST VALLEY).
- ③ FASTEN THE 8" x 4" x 3/4" OR 6" x 4" x 5/8" ANGLE WITH 3/8" DIAMETER 4" LONG BOLTS, 1" O.D. WASHER AND AN APPROVED ANCHORAGE (2'-0" SPACING).
- ④ FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" DIAMETER 5" LONG BOLTS, NUT AND LOCK WASHER (10" ± CENTER TO CENTER, TO THE NEAREST VALLEY).
- ⑤ (12 GAGE) GALVANIZED CORRUGATED STEEL SHEET PILING, INTERLOCKING TYPE A.
- ⑥ 3/8" DIA. x 1" LONG BOLT WITH NUT, TO LAP STEEL SHEETS.
- ⑦ STEEL SHEET PILING, SECTION NO. MP-112 OR EQUAL.
- ⑧ FILL THE VOIDS AS SHOWN, WITH CONCRETE OR CONCRETE GROUT, AS APPROVED BY THE ENGINEER.

REVISION: 10-09-2015
 APPROVED: MARCH 24, 2011
 Nancy Subenberger
 STATE BRIDGE ENGINEER

STATE PROJ. NO		- (T.H.) STA. +		FIG. 5-395.111	
CERTIFIED BY	DATE	TITLE:	DES:	DR:	APPROVED:
NAME:	LIC. NO.	ALTERNATE DROPWALLS FOR BOX CULVERTS	CHK:	CHK:	BRIDGE NO.
			SHEET NO. OF SHEETS		