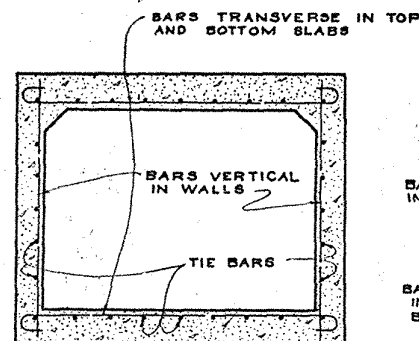
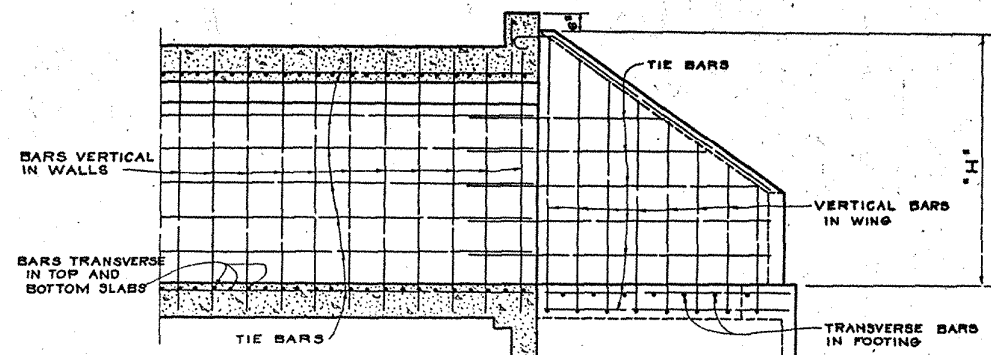


STANDARD BAR REVISIONS REQUIRED IN ORDER TO ELIMINATE $\frac{1}{2}$ " (OBSOLETE)
USED ON R. C. BOX CULVERT - PIPE HEADWALLS AND CATCH BASIN STD'S.



TYPICAL BARREL SECTION
(SINGLE OPENING)



LONGITUDINAL BARREL SECTION
(SHOWING WING)

1. FOR CULVERTS WITH "H" LESS THAN 3 FT.
(a) BARS TRANSVERSE IN TOP AND BOTTOM SLABS USE $\frac{5}{8}$ " BARS WITH SPACING COMPUTED AS FOLLOWS:

$$\text{AREA } \frac{1}{2}" \text{ BARS} = 0.25 \text{ sq in.} \quad \text{AREA } \frac{5}{8}" \text{ BARS} = 0.3068 \text{ sq in.}$$

$$\text{RATIO} = \frac{0.3068}{0.25} = 1.227, \text{ SAY } 1.25$$

MULTIPLY SPACING OF $\frac{1}{2}$ " BAR SHOWN ON PLANS BY 1.25 TO OBTAIN SPACING OF $\frac{5}{8}$ " BAR.

EXAMPLE: IF SPACING OF $\frac{1}{2}$ " BARS = 12"
SPACING OF $\frac{5}{8}$ " BARS = $12 \times 1.25 = 15"$

IF SPACING OF $\frac{1}{2}$ " BARS = $5\frac{1}{2}"$
SPACING OF $\frac{5}{8}$ " BARS = $5\frac{1}{2} \times 1.25 = 6.88"$ USE 7" (NEAREST $\frac{1}{4}"$)

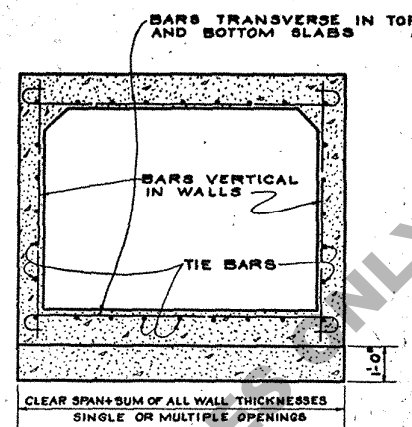
- (b) BARS VERTICAL IN WALLS AND WINGS AND ALL OTHER BARS SUBSTITUTE $\frac{1}{2}$ " BARS AT SPACING SHOWN FOR $\frac{1}{2}"$.

2. FOR CULVERTS WITH "H" 3 FT. OR MORE

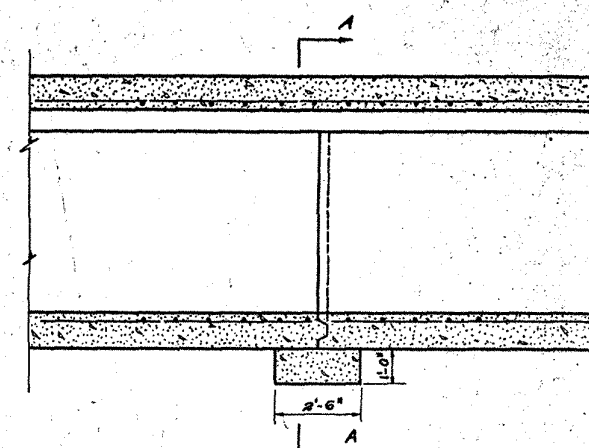
- (a) BARS TRANSVERSE IN TOP AND BOTTOM SLABS COMPUTE SPACING OF $\frac{5}{8}$ " BAR AS UNDER 1(a)
(b) BARS VERTICAL IN WALLS AND WINGS AND TRANSVERSE BARS IN FOOTING COMPUTE SPACING OF $\frac{5}{8}$ " BAR AS UNDER 1(a).
(c) ALL OTHER BARS SUBSTITUTE $\frac{1}{2}$ " BARS AT SPACING SHOWN FOR $\frac{1}{2}"$.

3. FOR CATCH BASINS AND PIPE CULVERT HEADWALLS AND MANHOLES.

- (a) ALL BARS SUBSTITUTE $\frac{1}{2}$ " BARS AT SPACING SHOWN FOR $\frac{1}{2}"$.



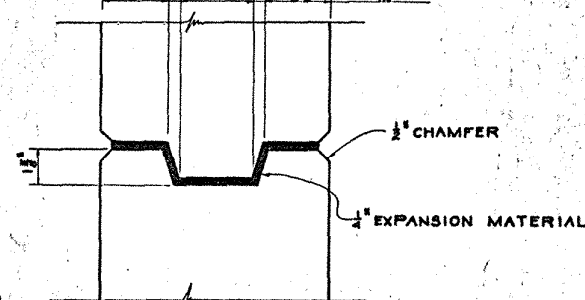
SECTION A-A



LONGITUDINAL BARREL SECTION

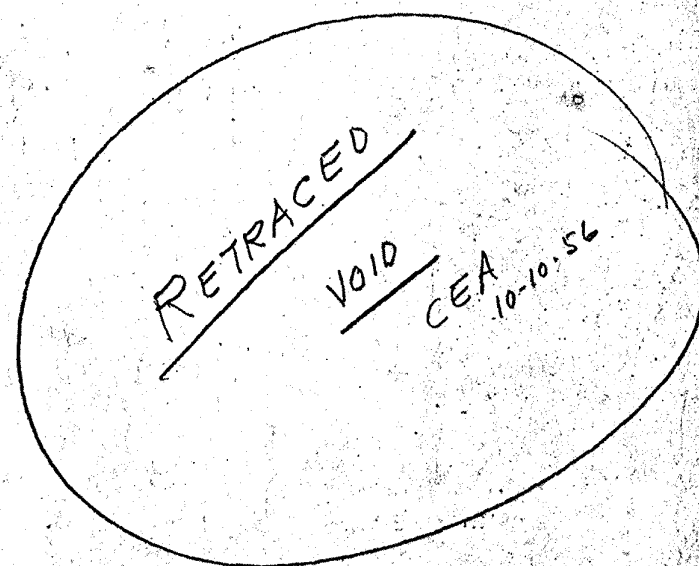
EXPANSION JOINT DETAILS

WALL OR SLAB	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'
1'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
3'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
4'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
5'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
6'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
7'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
8'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
9'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
10'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
11'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'
12'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'



JOINT DETAIL

EXPANSION JOINTS TO BE SPACED SO THAT BARREL SHALL NOT BE CONTINUOUS FOR MORE THAN 60'. NO REINFORCING STEEL SHALL EXTEND THROUGH JOINT. CONCRETE BLOCK TO BE PAID FOR AS CLASS "A" CONCRETE.



STANDARD PLAN
MISC. R.C. CONC. CULVERT DETAILS
1. BAR SUBSTITUTIONS FOR $\frac{1}{2}"$ SIZE
2. TRANSVERSE EXPANSION JOINT
DATED: MARCH, 1946
STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DATE	DESCRIPTION	BY	CHECKED	IN CHARGE OF	DESIGNED	Detailed	Traced
5/30/47	ADDED MANHOLES	CEA					