

SECTION THRU BARREL

SECTION B-B

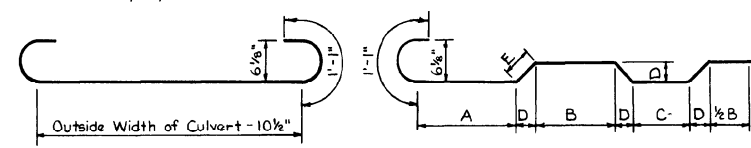
SECTION A-A

GENERAL NOTES:
 Construction Specifications: Latest Approved La. Dept. of Highway Std. Specifications.
 Design Specifications: A.A.S.H.O. 1969.
 Live Load: H 5 20-44 or Military Loading, Whichever is Greater.
 All Concrete to be Class "A".
 All Exposed Corners to have 3/4" Chamfer, unless Otherwise noted.
 Reinforcement shall be Billet-Steel A.S.T.M. A615 or Rail-Steel A.S.T.M. A616 or Axle-Steel A.S.T.M. A617.
 Dimensions Relating to Reinf. Steel are to Bar Centers.
 For Details of Joints See Std. Plan C.M.-49.
 A 1/2" Square of Plastic Filter Cloth (See Qualified Products List) shall be placed in contact with Concrete behind each Weep Hole in addition to approx. 2 Cu. Ft. of Concrete Sand.
 For Detail of Joints, See Std. Plan C.M.-49.

APPROVED BY: *[Signature]*
 CHIEF ENGINEER
 DATE: 1-5-78

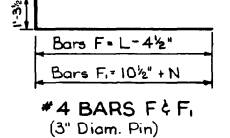
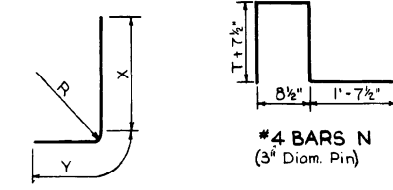
| DIMENSIONS | | BILL OF REINFORCING STEEL FOR 44'-0" CULVERT | | | | | | | | | | | | | | | | | | | | | | | | | | | | QUANTITIES | | | | OPENINGS | | | | | | | | | |
|------------|-----------|--|---------------------|---------|-----------|----------------------------|---|--------|---------------------|----------------------------|-----------|---------|-----------|-------------------------------|-----------|-----------|-----------|--------------|-------|--------------|-------|------|-----|--------|-------|---------------------------|----------|----------------|----------|------------|-----|----|-----|----------|---|------|----|-----|--------|--------|--------|--------|---|
| OPENINGS | MAX. FILL | BARREL REINFORCEMENT | | | | | | | | | | | | WINGS AND CURBS REINFORCEMENT | | | | | | | | | | | | PER LINEAR FOOT OF BARREL | | 44'-0" CULVERT | | | | | | | | | | | | | | | |
| SIZE | NO. | BARS A | BARS A ₁ | BARS B | #4 BARS C | #5 BARS D & D ₁ | #5 BARS D ₂ & D ₃ | BARS E | BARS E ₁ | #4 BARS F & F ₁ | #4 BARS J | BARS O | #4 BARS P | #4 BARS P ₁ | #4 BARS N | #4 BARS M | #6 BARS X | REINF. STEEL | CONC. | REINF. STEEL | CONC. | SIZE | NO. | | | | | | | | | | | | | | | | | | | | |
| Ft. | Sq. Ft. | Size | No. | Length | Spac. | Size | No. | Length | Spac. | Size | No. | Length | Spac. | Size | No. | Length | Spac. | Size | No. | Length | Spac. | Size | No. | Length | Spac. | Lbs. | Cu. Yds. | Lbs. | Cu. Yds. | Ft. | No. | | | | | | | | | | | | |
| 10x7 | 2 140 | #7 | 78 | 23-3/4 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 23-8/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 34-9/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 7-2 | 12 | 46 | 3-0 | 7-2 | 12 | 44 | 5-3 | 4 | 24-1 | 32 | 2-0 | 270.50 | 1.8951 | 1444.8 | 119.84 | 2 |
| | 3 210 | #7 | 78 | 33-11/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 34-9/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 34-9/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 7-2 | 12 | 92 | 3-0 | 7-2 | 12 | 66 | 5-3 | 4 | 34-9 | 32 | 2-0 | 405.93 | 2.7356 | 2080.3 | 159.98 | 3 |
| | 4 280 | #7 | 78 | 47-2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 48-5/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 59-6/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 7-2 | 12 | 138 | 3-0 | 7-2 | 12 | 88 | 5-3 | 4 | 46-1 | 32 | 2-0 | 559.47 | 3.5761 | 2799.7 | 200.13 | 4 |
| | 5 350 | #7 | 78 | 57-10 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 59-6/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 60-0/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 7-2 | 12 | 184 | 3-0 | 7-2 | 12 | 108 | 5-3 | 4 | 57-7 | 32 | 2-0 | 684.90 | 4.4167 | 3434.5 | 240.28 | 5 |
| 10x8 | 2 160 | #7 | 78 | 23-6/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 23-11/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 23-11/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 8-2 | 12 | 46 | 3-0 | 8-2 | 12 | 46 | 5-3 | 4 | 24-4 | 36 | 2-0 | 277.38 | 2.0586 | 1527.7 | 135.07 | 2 |
| | 3 240 | #7 | 78 | 34-3/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 35-1/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 35-1/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 8-2 | 12 | 92 | 3-0 | 8-2 | 12 | 66 | 5-3 | 4 | 35-1 | 36 | 2-0 | 415.11 | 2.9537 | 2173.2 | 177.74 | 3 |
| | 4 320 | #7 | 78 | 47-2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 48-10/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 48-10/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 8-2 | 12 | 138 | 3-0 | 8-2 | 12 | 88 | 5-3 | 4 | 47-4 | 36 | 2-0 | 570.94 | 3.8488 | 2903.2 | 220.41 | 4 |
| | 5 400 | #7 | 78 | 58-4 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 60-0/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 60-0/2 | 14" | #7 | 80 | 47-2 | 92 | 3-0 | 8-2 | 12 | 184 | 3-0 | 8-2 | 12 | 110 | 5-3 | 4 | 58-1 | 36 | 2-0 | 708.67 | 4.7438 | 3549.4 | 263.07 | 5 |
| 10x9 | 2 180 | #7 | 78 | 23-6/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 23-11/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 23-11/2 | 14" | #7 | 80 | 47-2 | 106 | 3-0 | 9-2 | 10 | 53 | 3-0 | 9-2 | 10 | 46 | 5-3 | 4 | 24-4 | 40 | 2-0 | 287.96 | 2.1420 | 1655.4 | 145.88 | 2 |
| | 3 270 | #7 | 78 | 34-3/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 35-1/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 35-1/2 | 14" | #7 | 80 | 47-2 | 106 | 3-0 | 9-2 | 10 | 106 | 3-0 | 9-2 | 10 | 46 | 5-3 | 4 | 35-1 | 40 | 2-0 | 429.21 | 3.0648 | 2317.7 | 189.82 | 3 |
| | 4 360 | #7 | 78 | 47-2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 48-10/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 48-10/2 | 14" | #7 | 80 | 47-2 | 106 | 3-0 | 9-2 | 10 | 159 | 3-0 | 9-2 | 10 | 68 | 5-3 | 4 | 47-4 | 40 | 2-0 | 588.56 | 3.9877 | 3064.5 | 233.76 | 4 |
| | 5 450 | #7 | 78 | 58-4 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 60-0/2 | 14" | #7 | 78 | 7-7 | 14" | #7 | 80 | 60-0/2 | 14" | #7 | 80 | 47-2 | 106 | 3-0 | 9-2 | 10 | 212 | 3-0 | 9-2 | 10 | 110 | 5-3 | 4 | 58-1 | 40 | 2-0 | 729.81 | 4.9105 | 3727.5 | 277.71 | 5 |

① #6 Bars "X" to be 3/4" dia Smooth and Greased for 1'-0" of Length.
 ② Includes 1'-1'-6" Lap Splice.
 ③ Includes 1'-2'-7" Lap Splice.



| SIZE | PIN DIAM. | A | B | C | D | E |
|--------|-----------|-----------|-----------|-----------|----|--------|
| 10'x7' | 5/4" | 7'-5 1/2" | 5'-1 1/2" | 4'-5 3/8" | 6" | 8 3/8" |
| 10'x8' | 5/4" | 7'-6 1/2" | 5'-2 3/8" | 4'-5 3/8" | 6" | 8 3/8" |
| 10'x9' | 5/4" | 7'-7 1/2" | 5'-2 3/8" | 4'-5 3/8" | 6" | 8 3/8" |

| SIZE | BAR SIZE | R | X | Y |
|--------|----------|--------|--------|-----------|
| 10'x7' | #4 | 2 1/4" | 2'-7" | 2'-6" |
| 10'x8' | #5 | 2 3/8" | 2'-10" | 2'-7 1/4" |
| 10'x9' | #5 | 2 3/8" | 2'-10" | 2'-9 1/4" |



STANDARD PLAN
 MULTIPLE OPENINGS
REINF. CONCRETE BOX CULVERT
 STRAIGHT HDWLS. 2:1 SPILL SLOPE
 DATED Sept. 7, 1971

10'x7' 10'x8' 10'x9'

STATE OF LOUISIANA
 DEPARTMENT OF HIGHWAYS

| | | |
|--------------|----------------------|----------------------|
| DESIGNED | DETAILED J. D. Bacci | TRACED J. McManus II |
| CHECKED | CHECKED J. J. Ribos | CHECKED J. D. Bacci |
| IN CHARGE OF | | |

| DATE | DESCRIPTION | BY |
|---------|------------------------------|--------|
| 1-5-78 | Rev. Weep Hole Note | W.T.J. |
| 1-28-78 | Rev. Slope Intersect | W.T.J. |
| 6-8-78 | Rev. General Notes for Steel | W.E.M. |

C.C.S.M-10-R-90