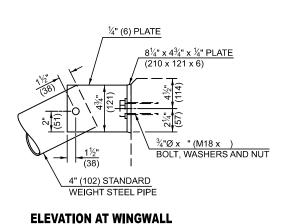
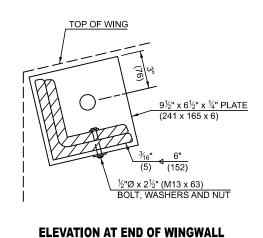


3/16" (5) CONTACT

3/16" (5) CIRCUMFERENCE





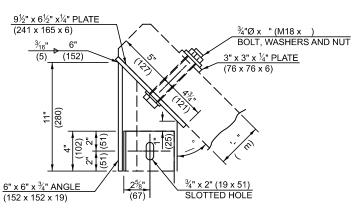
9" x 4¾" x ¼" PLATE (229 x 121 x 6) 8¹/₄" x 4³/₄" x ¹/₄" PLATE (210 x 121 x 6) 3"<u>x 3" x ½" PLATE</u> (76 x 76 x 6) ¾"Ø x " (M18 x) BOLT, WASHERS AND NUT 4" x 4¾" x ¼" PLATES ½"Ø x 6½" (M13 x 165) BOLT, WASHERS AND NUT (121) 4" (102) STANDARD WEIGHT STEEL PIPE

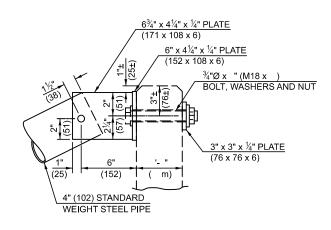
PLAN AT WINGWALL

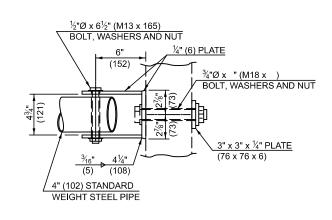
BAR QTY. SIZE

h₃ 20 #4 (#10)

EXPANSION BOLTS, 3/4" (M18)







| QUANTITIES FOR 2 HEADWALLS | | | | | NUMBER OF CENTER SUPPORTS REQUIRED | | | | |
|-------------------------------|------|----------|--------|--|----------------------------------------|-----------------------------------------------------------------------|------------------------|--|--|
| ۱R | QTY. | SIZE | LENGTH | | W.W. SPAN | NUMBER | SPACING | | |
| 13 | 20 | #4 (#10) | | | (TIP-TIP) | REQUIRED | SPACING | | |
| ′ 1 | 12 | #4 (#10) | | | | | | | |
| (PANSION BOLTS, ¾" (M18) EACH | | | | | 0' (0 m) TO 12'-6" (3.8 m) | 0 | - | | |
| | | | | | 12'-6" (3.8 m) TO 18'-0" (5.5 m) | 1 | CENTER OF W.W. SPAN | | |
| | | | | | OVER 18'-0" (5.5 m) | (1 CENTER SUPPORT EVERY ADDITIONAL 6'-0" (1.8 mm) OF W.W. SPAN) | | | |

PLAN AT END OF WINGWALL

³/₄" x 2" (19 x 51) SLOTTED HOLE

(356)

PLAN VIEW OF SUPPORT

(IF SPECIFIED)

6" x 6" x ¾" ANGLE

(25)

ELEVATION AT HEADWALL

6" x 6" x 3/4" ANGLE

(127 x 127 x 19)

5" x 5" <u>x ¾" ANGLE</u>

³/₄" Ø x 3" (M18 x 76)

BOLT, WASHERS AND NUT

½" x 5½" x ¼" PLATE (140 x 140 x 6)

4" (102) STANDARD

WEIGHT STEEL PIPE

(152 x 152 x 19)

PLAN AT HEADWALL

4" (102) STEEL PIPE, STANDARD WEIGHT X 24" (600) LONG TO BE CUT TO FIT IN THE FIELD ½" x 6" (M13 x 152) (5) $9" \times 9" \times \frac{1}{4}"$ PLATE (229 x 229 x 6) CONCRETE FOUNDATION (CLASS X CONC.) 1' x 1' x 3' (300 x 300 x 900) (300)

| _ | | | | | | |
|---------------------|--|--|--|--|--|--|
| | | | | | | |
| END VIEW OF SUPPORT | | | | | | |
| (IF SPECIFIED) | | | | | | |

CENTER SUPPORT FOUNDATION (IF SPECIFIED)

GENERAL NOTES

- 1. BOLTS AND NUTS SHALL CONFORM TO A.S.T.M. A 307. ALL BOLTS SHALL HAVE WASHERS AT EACH END. HOLES SHALL BE $\frac{1}{16}$ " (2 mm) OVERSIZED UNLESS OTHERWISE NOTED EXCEPT IN CONCRETE WHICH SHALL BE 1/8" (4 mm) OVERSIZED.
- 2. ANGLES AND STEEL PLATES SHALL CONFORM TO A.A.S.H.T.O. M 183. STEEL PIPES SHALL CONFORM TO A.S.T.M. A 53, GRADE B OR A.S.T.M. A 501.
- 3. STEEL PIPES, ANGLES AND PLATES SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF A.A.S.H.T.O. M 111.
- 4. BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF A.A.S.H.T.O. M 232.
- 5. THE APPROXIMATE WEIGHT OF THE STEEL IS POUNDS (kg). THIS TOTAL INCLUDES PLATES, ANGLES AND PIPES. BOLTS, NUTS AND WASHERS ARE NOT INCLUDED.
- 6. ALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD. CUTTING OF THE STANDARD WEIGHT PIPE AND ANGLES TO THE EXACT LENGTH AND DRILLING HOLES IS TO BE DONE IN THE FIELD.
- 7. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "GRATING FOR BOX CULVERT" WHICH PRICE SHALL INCLUDE ALL MATERIAL AND LABOR TO COMPLETE THE INSTALLATION AS SHOWN.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown

| | | | | | | DISTRICT 5 | 5 DETAIL NO. X0321560 |
|-------------------------------|------------|---------------------|------------------------------|--------|----------------------------------|--------------|------------------------|
| USER NAME = Bridgette.Pierson | DESIGNED - | REVISED - 11/06 | | | | F.A. SECTIO | N COUNTY SHEETS NO |
| | DRAWN - | REVISED - 01/08 KAG | STATE OF ILLINOIS | | GRATING FOR CONCRETE HEADWALL | IXIE. | SHEETS NO. |
| PLOT SCALE = 0.16666633 '/In. | CHECKED - | REVISED - | DEPARTMENT OF TRANSPORTATION | | | CONTRACT NO. | |
| PLOT DATE = 4/26/2024 | DATE - | REVISED - | | SCALE: | SHEET 1 OF 1 SHEETS STA. TO STA. | ILL | INOIS FED. AID PROJECT |