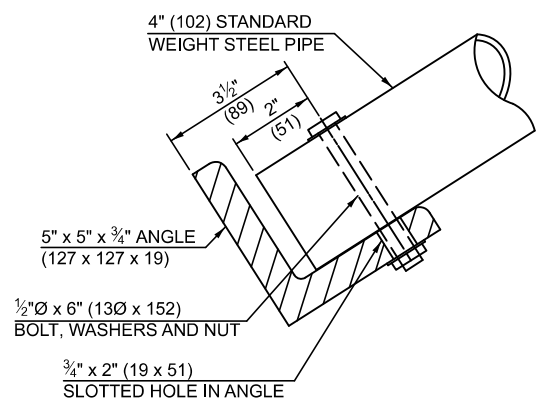
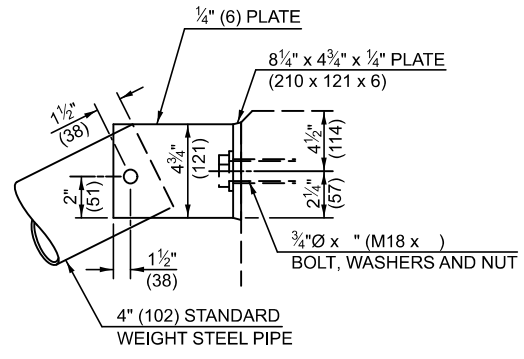


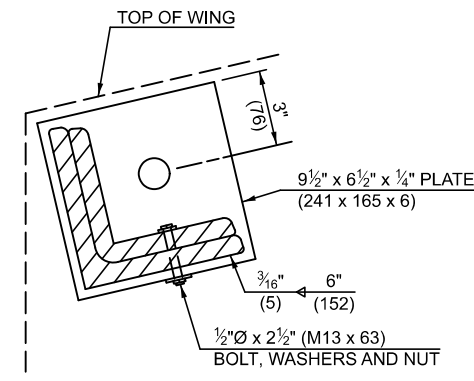
**SIDE VIEW OF WINGWALL**



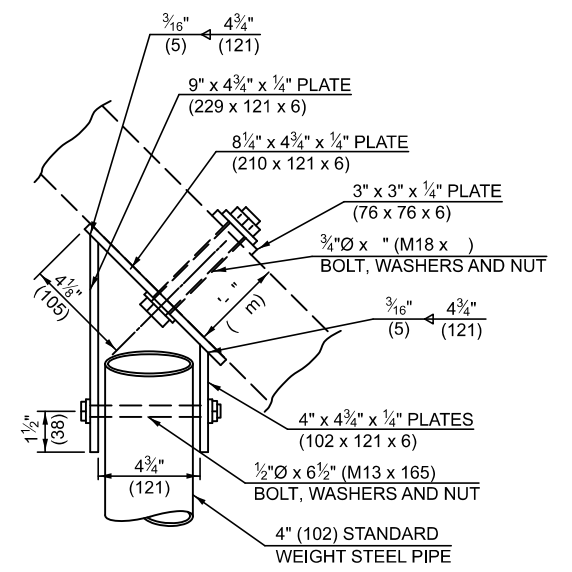
**END VIEW OF WINGWALL**



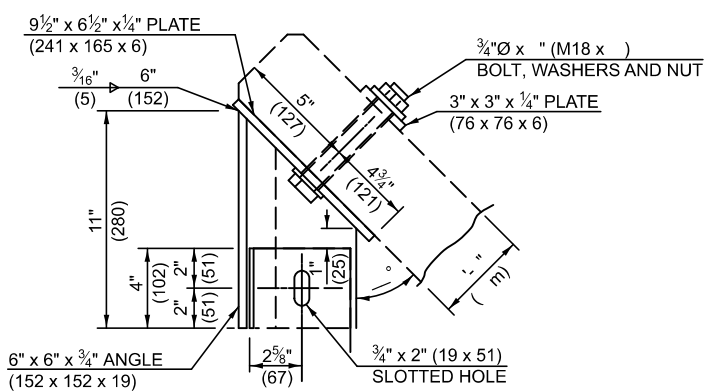
**ELEVATION AT WINGWALL**



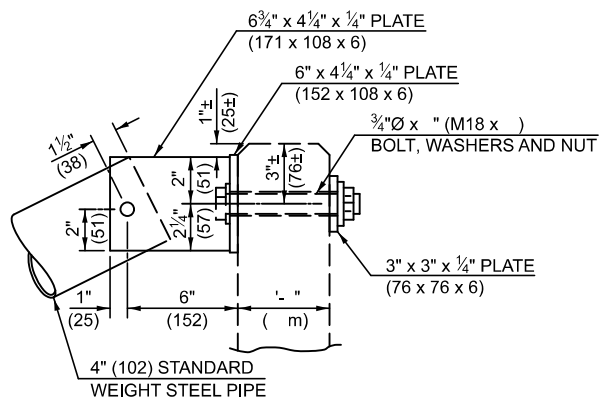
**ELEVATION AT END OF WINGWALL**



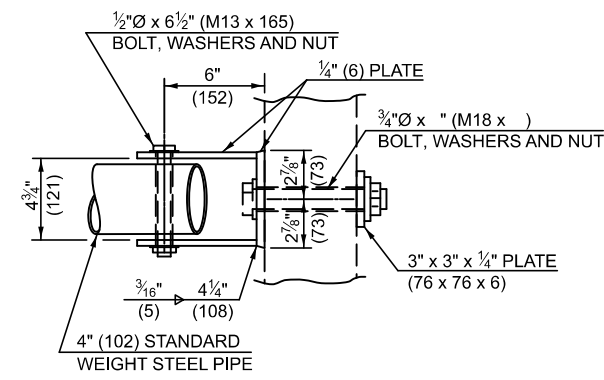
**PLAN AT WINGWALL**



**PLAN AT END OF WINGWALL**



**ELEVATION AT HEADWALL**



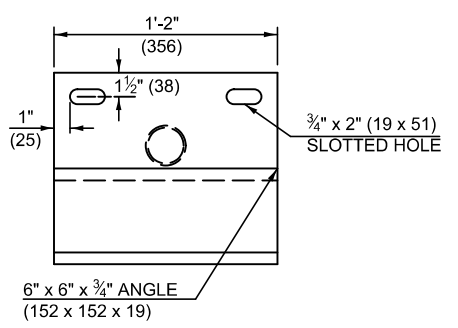
**PLAN AT HEADWALL**

QUANTITIES FOR 2 HEADWALLS			
BAR	QTY.	SIZE	LENGTH
h3	20	#4 (#10)	
v1	12	#4 (#10)	
EXPANSION BOLTS, 3/4" (M18)			EACH

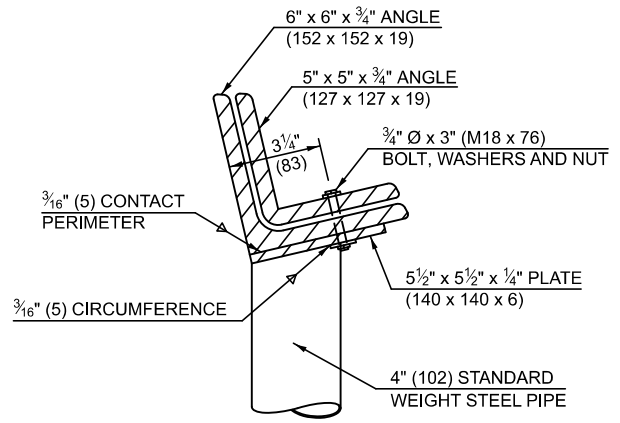
NUMBER OF CENTER SUPPORTS REQUIRED		
W.W. SPAN (TIP-TIP)	NUMBER REQUIRED	SPACING
0' (0 m) TO 12'-6" (3.8 m)	0	-
12'-6" (3.8 m) TO 18'-0" (5.5 m)	1	CENTER OF W.W. SPAN
OVER 18'-0" (5.5 m)	(1 CENTER SUPPORT EVERY ADDITIONAL 6'-0" (1.8 m) OF W.W. SPAN)	

**GENERAL NOTES**

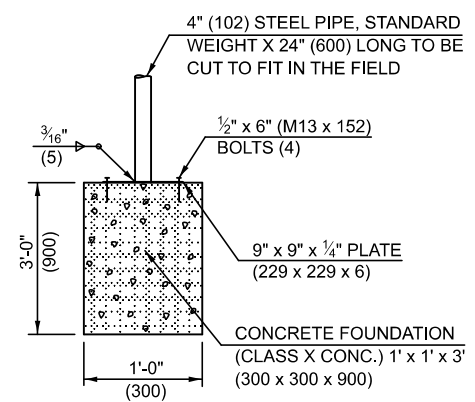
- BOLTS AND NUTS SHALL CONFORM TO A.S.T.M. A 307. ALL BOLTS SHALL HAVE WASHERS AT EACH END. HOLES SHALL BE 1/16" (2 mm) OVERSIZED UNLESS OTHERWISE NOTED EXCEPT IN CONCRETE WHICH SHALL BE 1/8" (4 mm) OVERSIZED.
- ANGLES AND STEEL PLATES SHALL CONFORM TO A.A.S.H.T.O. M 183. STEEL PIPES SHALL CONFORM TO A.S.T.M. A 53, GRADE B OR A.S.T.M. A 501.
- STEEL PIPES, ANGLES AND PLATES SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF A.A.S.H.T.O. M 111.
- BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF A.A.S.H.T.O. M 232.
- THE APPROXIMATE WEIGHT OF THE STEEL IS POUNDS (kg). THIS TOTAL INCLUDES PLATES, ANGLES AND PIPES. BOLTS, NUTS AND WASHERS ARE NOT INCLUDED.
- 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.
- 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.



**PLAN VIEW OF SUPPORT (IF SPECIFIED)**



**END VIEW OF SUPPORT (IF SPECIFIED)**



**CENTER SUPPORT FOUNDATION (IF SPECIFIED)**

MODEL: X0321560  
FILE NAME: c:\pwworking\autocad\cadd\0872377\05\###\Sh-Detail\_X0321560.dwg

USER NAME = Bridgette.Pierson	DESIGNED -	REVISED - 11/06
PLOT SCALE = 0.16666633' / in.	DRAWN -	REVISED - 01/08 KAG
PLOT DATE = 4/26/2024	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GRATING FOR CONCRETE HEADWALL**

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. X0321560				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

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