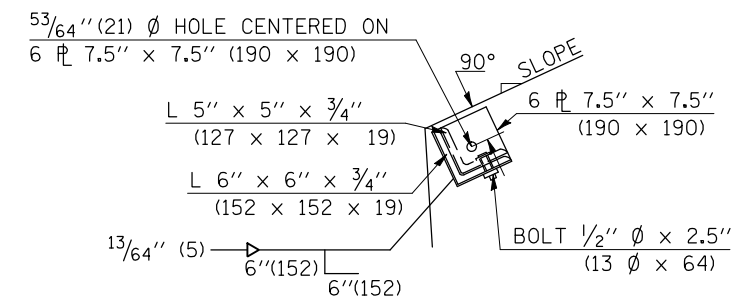
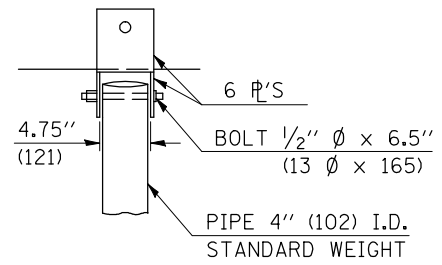


BOX CULVERT SPAN AND RISE	EXT. SPACE C	INT. SPACE D	SLOPE	NO. PIPES REQ'D	PIPE LENGTH E	ANGLE LENGTH F	BOLT LENGTH G	WEIGHT	L	WALL THICK. T
					FT (m)	FT (m)	INCHES (mm)	POUNDS (kg)	INCHES (mm)	INCHES (mm)
3.0x3.0 (0.9x0.9)	18 (450)	N/A	3:1	1	3.74 (1.14)	2.82 (0.86)	5.5 (140)	150 (68)	15 (380)	4 (102)
4.0x3.0 (1.2x0.9)	15 (380)	18 (450)	3:1	2	3.74 (1.14)	3.84 (1.17)	6.5 (165)	227 (103)	16 (405)	5 (127)
4.0x4.0 (1.2x1.2)	15 (380)	18 (450)	2:1	2	4.00 (1.22)	3.84 (1.17)	6.5 (165)	234 (106)	16 (405)	5 (127)
5.0x3.0 (1.5x0.9)	12 (300)	18 (450)	3:1	3	3.74 (1.14)	4.82 (1.47)	7.5 (190)	304 (138)	17 (430)	6 (152)
5.0x4.0 (1.5x1.2)	12 (300)	18 (450)	2:1	3	4.00 (1.22)	4.82 (1.47)	7.5 (190)	313 (142)	17 (430)	6 (152)
5.0x5.0 (1.5x1.5)	12 (300)	18 (450)	2:1	3	4.00 (1.22)	4.82 (1.47)	7.5 (190)	313 (142)	17 (430)	6 (152)
6.0x3.0 (1.8x0.9)	18 (450)	18 (450)	3:1	3	3.74 (1.14)	5.74 (1.78)	8.5 (215)	331 (150)	18 (460)	7 (178)
6.0x4.0 (1.8x1.2)	18 (450)	18 (450)	2:1	3	4.00 (1.22)	5.74 (1.78)	8.5 (215)	337 (153)	18 (460)	7 (178)
6.0x5.0 (1.8x1.5)	18 (450)	18 (450)	2:1	3	4.00 (1.22)	5.74 (1.78)	8.5 (215)	337 (153)	18 (460)	7 (178)
7.0x3.0 (2.1x0.9)	15 (380)	18 (450)	3:1	4	3.74 (1.14)	6.82 (2.08)	9.5 (240)	408 (185)	19 (485)	8 (203)
7.0x4.0 (2.1x1.2)	15 (380)	18 (450)	2:1	4	4.00 (1.22)	6.82 (2.08)	9.5 (240)	419 (190)	19 (485)	8 (203)
7.0x5.0 (2.1x1.5)	15 (380)	18 (450)	2:1	4	4.00 (1.22)	6.82 (2.08)	9.5 (240)	419 (190)	19 (485)	8 (203)
8.0x3.0 (2.4x0.9)	12 (300)	18 (450)	3:1	5	3.74 (1.14)	7.84 (2.39)	9.5 (240)	487 (221)	19 (485)	8 (203)
8.0x4.0 (2.4x1.2)	12 (300)	18 (450)	2:1	5	4.00 (1.22)	7.84 (2.39)	9.5 (240)	500 (227)	19 (485)	8 (203)
8.0x5.0 (2.4x1.5)	12 (300)	18 (450)	2:1	5	4.00 (1.22)	7.84 (2.39)	9.5 (240)	500 (227)	19 (485)	8 (203)
9.0x3.0 (2.7x0.9)	18 (450)	18 (450)	3:1	5	3.74 (1.14)	8.83 (2.69)	10.5 (265)	511 (232)	20 (510)	9 (229)
9.0x4.0 (2.7x1.2)	18 (450)	18 (450)	2:1	5	4.00 (1.22)	8.83 (2.69)	10.5 (265)	527 (239)	20 (510)	9 (229)
9.0x5.0 (2.7x1.5)	18 (450)	18 (450)	2:1	5	4.00 (1.22)	8.83 (2.69)	10.5 (265)	527 (239)	20 (510)	9 (229)
10.0x4.0 (3.0x1.2)	15 (380)	18 (450)	2:1	6	4.00 (1.22)	9.84 (3.00)	11.5 (290)	608 (276)	21 (535)	10 (254)
10.0x5.0 (3.0x1.5)	15 (380)	18 (450)	2:1	6	4.00 (1.22)	9.84 (3.00)	11.5 (290)	608 (276)	21 (535)	10 (254)

GENERAL NOTES

- BOLTS AND NUTS SHALL CONFORM TO A. S. T. M. A307, AND SHALL BE GALVANIZED IN ACCORDANCE WITH A. A. S. H. T. O. M232. ALL BOLTS SHALL HAVE WASHERS AT EACH END. HOLES SHALL BE 5/64" (2 mm) OVERSIZE UNLESS OTHERWISE NOTED EXCEPT IN CONCRETE WHICH SHALL BE 1/8" (3 mm) OVERSIZE.
- ANGLES AND STEEL PLATES SHALL CONFORM TO A. A. S. H. T. O. M183. STEEL PIPES SHALL CONFORM TO A. S. T. M. A53 GRADE B.
- STEEL PIPES, ANGLES AND PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH A. A. S. H. T. O. M-111.
- THE APPROXIMATE WEIGHT OF STEEL IS LISTED IN THE CHART. THIS TOTAL INCLUDES PLATES, ANGLES AND PIPES. BOLTS, NUTS AND WASHERS ARE NOT INCLUDED.
- THE CONTRACTOR SHALL VERIFY THE PIPE LENGTHS AND HOLE LOCATIONS PRIOR TO CUTTING THE PIPES TO LENGTH OR DRILLING HOLES.
- GRATING FOR THE PRECAST END SECTION WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "GRATING FOR PRECAST CONCRETE BOX CULVERT END SECTION (SPECIAL)" OF THE SIZE SPECIFIED WHICH PRICE SHALL INCLUDE FABRICATION, GALVANIZING AND INSTALLATION OF THE GRATING AS DETAILED.



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

DISTRICT 5 DETAIL NO. X0323237

FILE NAME =	USER NAME = craigre	DESIGNED -	REVISED - 12/06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GRATING FOR PRECAST BOX CULVERT END SECTION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
et\pwork\pwidot\CRAIGRE\d0101509\X0323237.dgn	DRAWN -	REVISED -	SCALE:			SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO.		
PLOT SCALE = 40.000' / IN.	CHECKED -	REVISED -	FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT						
PLOT DATE = 1/7/2010	DATE -	REVISED -										