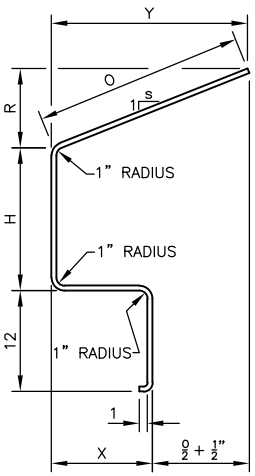
NRCS

Natural Resources Conservation Service
United States Department of Agriculture

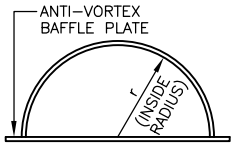
TRASH RACK AND BAFFLE PLATE FOR C.M. PIPE RISERS

(REVISED 6-10)



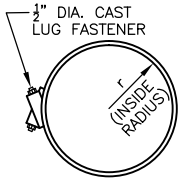
BENDING DIAGRAM FOR ⓐ RODS

NO SCALE



BENDING DIAGRAM FOR ⓑ,ⓒ&ⓓ RODS

NO SCALE



BENDING DIAGRAM FOR ⓔ RODS

NO SCALE

TABLE OF CAPACITIES, DIMENSIONS AND QUANTITIES

36" DIAMETER C.M. PIPE RISER (P = 36")

H	Q	X	L	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		INCHES	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D.	N(INCHES)	M(INCHES)	NO. REQ'D.	LENGTH (INCHES)	NO. REQ'D.	r(INCHES)	LENGTH (INCHES)	NO. REQ'D.	r(INCHES)	LENGTH (INCHES)
6	10.9	6	5'-1"	5½	24½	24½	1	34½	4'-11½"	14	12⅝	9½	4	23⅞	74	2	18	57½	0			2	19¼	129
9	20.3	9	5'-7"	5	27½	22	1¼	35¼	5'-6¼"	14	14¼	9½	4	26⅞	84	2	18	57½	0			2	19¼	129
12	31.6	12	6'-1"	3¾	30½	20¼	1½	36½	6'-1½"	14	15¾	9½	4	28¼	93	2	18	57½	0			2	19¼	129
15	43.9	15	6'-7"	4¼	33½	16¾	2	37½	6'-8½"	18	13	7⅛	4	32⅞	102½	2	18	57½	2	32⅞	102½	2	19¼	129
18	57.6	18	7'-1"	3½	36½	14½	2½	39¼	7'-3½"	18	14⅛	7⅛	4	35⅞	112	2	18	57½	2	35⅞	112	2	19¼	129
21	72.5	21	7'-1"	2	39½	13	3	41½	8'-0½"	18	15⅞	7⅛	4	38⅞	121½	2	18	57½	2	36⅞	121½	2	19¼	129
24	88.6	24	8'-1"	1½	42½	10½	4	43¾	8'-8½"	18	16½	7⅛	4	41⅞	130¾	2	18	57½	2	41⅞	130¾	2	19¼	129

30" DIAMETER C.M. PIPE RISER (P = 30")

H	Q	X	L	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		INCHES	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D.	N(INCHES)	M(INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)
6	9.1	6	4'-7"	2½	21½	21½	1	30¼	4'-7¼"	14	11¼	8	4	20 3/16	64¼	2	15	48	0			2	16¼	111
9	16.8	6	4'-7"	3¾	21½	17¼	1¼	27½	4'-7½"	14	11¼	8	4	20 3/16	64¼	2	15	48	0			2	16¼	111
12	26.0	9	5'-1"	1¾	24½	16¼	1½	29¼	5'-3¼"	14	12⅝	8	4	23 3/16	74	2	15	48	0			2	16¼	111
15	36.4	12	5'-7"	2¼	27½	12¼	2¼	30	5'-10"	14	14 3/16	8	4	26 7/16	83½	2	15	48	2	26 5/16	83½	2	16¼	111
18	47.8	15	6'-1"	2	30½	10	3	32	6'-6"	14	15 11/16	8	4	29 3/16	93	2	15	48	2	29 3/16	93	2	16¼	111
21	60.2	18	6'-7"	1½	33½	7½	4½	34¼	7'-2¼"	18	13	6	4	32 1/16	102½	2	15	48	2	32 5/16	102½	2	16¼	111

24" DIAMETER C.M. PIPE RISER (P = 30")

H	Q	X	L	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		INCHES	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D	N(INCHES)	M(INCHES)	NO. REQ'D	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)
6	7.3	6	4'-1"	5½	18½	18½	1	26¼	4'-3¼"	14	9½	6⅜	4	17 7/16	55¼	2	12	38¾	0			2	13¼	91½
9	13.5	6	4'-1"	2½	18½	18½	1	26¼	4'-6¼"	14	9½	6⅜	4	17 7/16	55¼	2	12	38¾	0			2	13¼	91½
12	20.8	9	4'-7"	3⅞	21½	14¾	1½	25⅞	4'-7⅞"	14	11¼	6⅜	4	20 3/16	64¼	2	12	38¾	0			2	13¼	91½
15	29.2	12	5'-1"	2¾	24½	12¼	2	27⅞	5'-7⅞"	14	12⅝	6⅜	4	23 3/16	74	2	12	38¾	2	23 5/16	74	2	13¼	91½
18	30.5	12	5'-1"	2¼	24½	9¾	2½	26⅞	5'-9⅞"	14	12⅝	6⅜	4	25 7/16	74	2	12	38¾	2	23 5/16	74	2	13¼	91½

18" DIAMETER C.M. PIPE RISER (P = AS INDICATED)

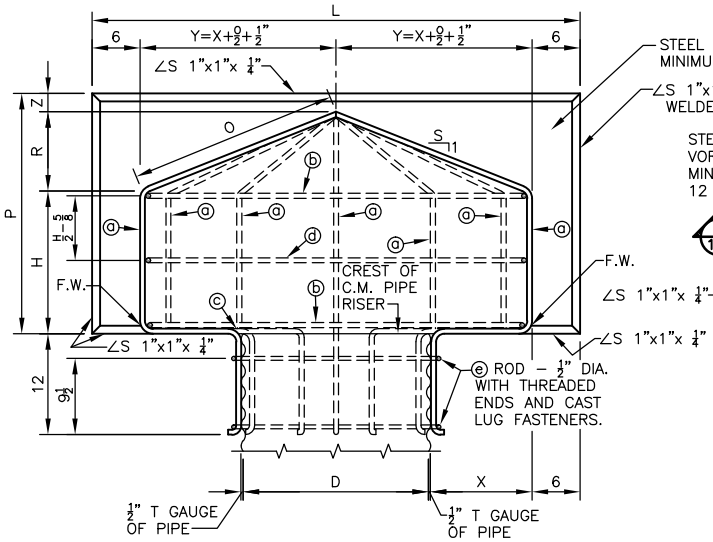
H	Q	X	L	P	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		IN.	IN.	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D	N(INCHES)	M(INCHES)	NO. REQ'D	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)
6	5.5	6	3'-7"	24	2½	15½	15½	1	22	3'-11"	12	9½	5¾	4	14 3/16	46	2	9	29¼	0			2	10¼	73
9	10.2	6	3'-7"	27	2½	15½	15½	1	22	4'-2"	12	9½	5¾	4	14 3/16	46	2	9	29¼	0			2	10¼	73
12	15.6	6	3'-7"	30	2½	15½	15½	1	22	4'-5"	12	9½	5¾	4	14 3/16	46	2	9	29¼	0			2	10¼	73
15	21.9	9	4'-1"	30	2¾	18½	12⅜	1½	22¼	4'-11½"	12	10⅛	5¾	4	17 3/16	55⅝	2	9	29¼	2	17 5/16	55⅝	2	10¼	73
18	28.9	9	4'-1"	30	2¾	18½	9¼	2	20⅞	5'-0⅞"	12	10⅛	5¾	4	17 3/16	55⅝	2	9	29¼	2	17 5/16	55⅝	2	10¼	73

15" DIAMETER C.M. PIPE RISER (P = AS INDICATED)

H	Q	X	L	P	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		IN.	IN.	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D	N(INCHES)	M(INCHES)	NO. REQ'D	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)
6	4.4	6	3'-4"	26	6	14	14	1	19¾	3'-8¾"	12	8⅝	5	4	12 1/16	41¼	2	7½	24½	0			2	8 3/16	63
9	8.0	6	3'-4"	27	4	14	14	1	19¾	3'-11¾"	12	8⅝	5	4	12 1/16	41¼	2	7½	24½	0			2	8 3/16	63
12	12.3	6	3'-4"	30	4	14	14	1	19¾	4'-2¾"	12	8⅝	5	4	12 1/16	41¼	2	7½	24½	2	12 13/16	41¼	2	8 3/16	63
15	19.3	6	3'-4"	30	4	14	11	1¼	17¾	4'-3¾"	12	8⅝	5	4	12 1/16	41¼	2	7½	24½	2	12 13/16	41¼	2	8 3/16	63
18	22.7	6	3'-4"	30	2¾	14	9¼	1½	16¾	4'-5¾"	12	8⅝	5	4	12 1/16	41¼	2	7½	24½	2	12 13/16	41¼	2	8 3/16	63

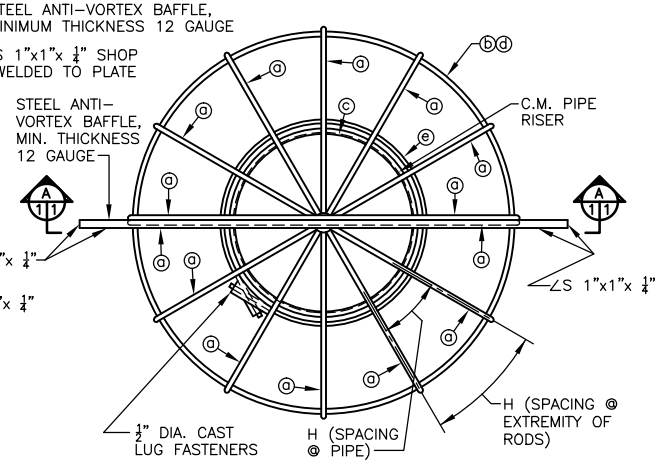
12" DIAMETER C.M. PIPE RISER (P = AS INDICATED)

H	Q	X	L	P	Z	ⓐ RODS – 5/8" DIAMETER							ⓑ RODS – 5/8" DIAMETER		ⓒ RODS – 5/8" DIAMETER		ⓓ RODS – 5/8" DIAMETER		ⓔ RODS – 1/2" DIAMETER	
INCHES	WEIR FLOW (C.F.S.)	INCHES		IN.	IN.	Y(INCHES)	R(INCHES)	S	O(INCHES)	TOTAL LENGTH	NO. REQ'D	N(INCHES)	M(INCHES)	NO. REQ'D	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)	NO. REQ'D.	R(INCHES)	LENGTH (INCHES)
6	3.7	6	3'-1"	22	3½	12½	12½	1	17⅞	3'-6⅞"	12	7¾	4⅛	4	11 3/16	36½	2	6	19⅞	0			2	7 3/16	53
9	6.8	6	3'-1"	25	3½	12½	12½	1	17⅞	3'-9¼"	12	7¾	4⅛	4	11 3/16	36½	2	6	19⅞	0			2	7 3/16	53
12	10.5	6	3'-1"	28	3½	12½	12½	1	17⅞	4'-0¾"	12	7¾	4⅛	4	11 3/16	36½	2	6	19⅞	2	11 5/16	36½	2	7 3/16	53
15	14.6	6	3'-1"	30	2½	12½	12½	1	17⅞	4'-3⅞"	12	7¾	4⅛	4	11 3/16	36½	2	6	19⅞	2	11 5/16	36½	2	7 3/16	53



SECTIONAL ELEVATION A–A

NO SCALE



PLAN

NO SCALE

NOTES

1. WELD ⓑ,ⓒ and ⓓ RODS TO ⓐ RODS AND WELD ⓐ RODS TOGETHER AT TOP ON EACH SIDE OF ANTI-VORTEX BAFFLE PLATE.
2. THE TRASH RACK AND ANTI-VOTEX BAFFLE MAY BE FABRICATED AS A UNIT, OR TRASH RACK MAY BE FABRICATED IN IDENTICAL HALVES AND ATTACHED TO BAFFLE PLATE WITH 1/2" DIA. U BOLTS SPACED APPROXIMATELY 12" C–C ALONG THE VERTICAL AND INCLINED SECTIONS OF THE ⓐ RODS NEXT TO THE PLATE.
3. Q IN TABLE IS BASED ON WEIR FLOW FOR INDICATED DEPTH OF FLOW (H), USING A WEIR COEFFICIENT OF 3.33.
4. TRASH RACK SHOWN ON THIS PLAN IS FOR D=24" AND H=18".

		Date
Designed	HLG, GRS, WRE	6-58
Drawn	DDD	6-10
Checked		
Approved	J.E. ANDREWS S.C.E.	6-10

File Name

Drawing Name CO-SSP-60

Sheet 1 of 1