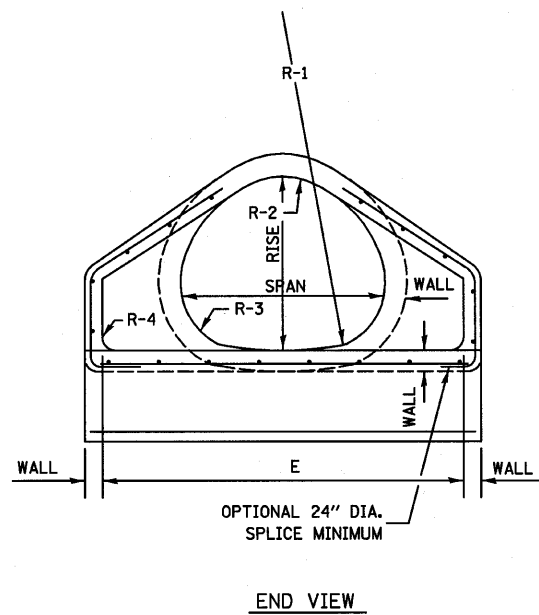
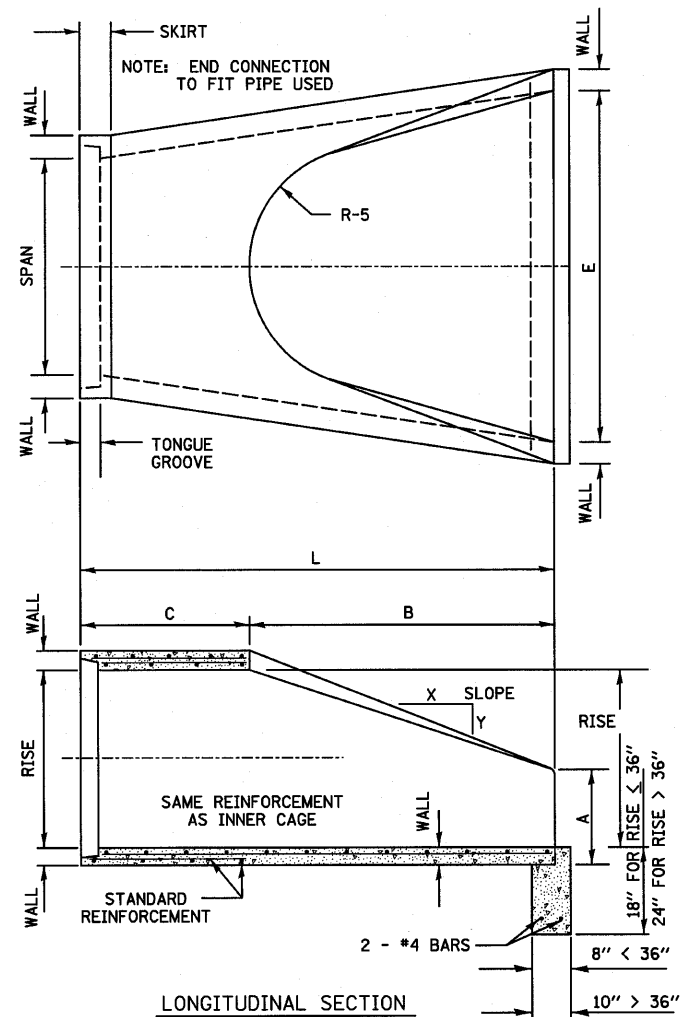


SIZE	WALL	SPAN	RISE	L	B	C	E	A	SLOPE	R-1	R-2	R-3	R-4	R-5
18"	2 1/2"	22"	13 1/2"	72"	27"	45"	36"	7"	2.16:1	27 1/2"	13 3/4"	5 1/4"	2"	12"
24"	3"	28 1/2"	18"	72"	39"	33"	48"	8"	2.29:1	40 1/8"	14 9/16"	4 1/8"	3"	14"
30"	3 1/2"	36 1/4"	22 1/2"	72"	48"	24"	60"	10"	2.34:1	51"	18 3/4"	6 1/8"	3"	15"
36"	4"	43 3/4"	26 5/8"	96"	60"	36"	72"	10 5/8"	2.4:1	62"	22 1/2"	6 1/2"	6"	20"
42"	4 1/2"	51 1/8"	31 3/8"	96"	60"	36"	78"	15 9/16"	2.35:1	73"	26 1/4"	7 3/4"	6"	22"
48"	5"	58 1/2"	36"	96"	60"	36"	84"	21"	2.31:1	84"	30"	8 1/8"	6"	22"
54"	5 1/2"	65"	40"	96"	60"	36"	90"	25 1/2"	2.26:1	92 1/2"	33 3/8"	10"	6"	24"
60"	6"	73"	45"	96"	75"	21"	96"	26"	2.34:1	105"	37 1/2"	11 1/16"	6"	21"
72"	7"	88"	54"	100"	78"	22"	120"	35"	2.29:1	126"	45"	13 5/16"	6"	24"



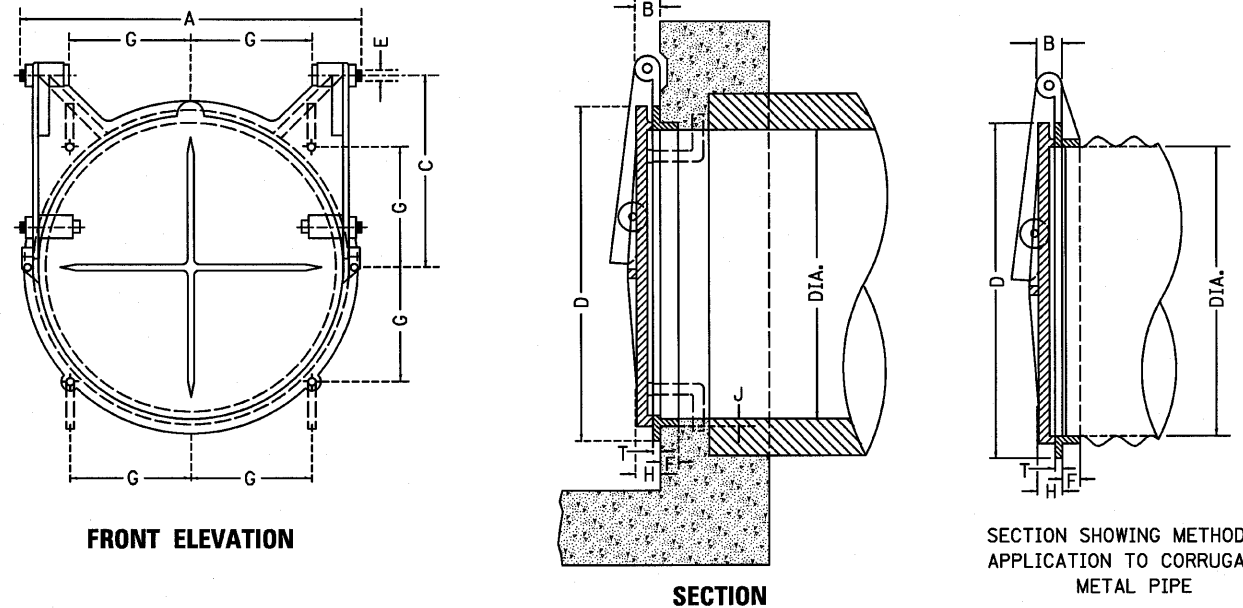
NOTES:

PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENT OF AASHTO M-206.

PRECAST CONCRETE FLARED END SECTION FOR PIPE ARCH DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.

THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS, COST INCLUDED IN THE END SECTION.

**PRECAST REINFORCED CONCRETE
ARCH DIAMETER FLARED END SECTION**



IT IS INTENDED THAT THE AUTOMATIC FLAP GATES SHALL BE A COMMERCIAL PRODUCT PRODUCED BY A RELIABLE MANUFACTURER. THE GATE MAY BE MADE OF CAST IRON, CAST STEEL OR OTHER SUITABLE MATERIALS. THE DESIGN MAY DIFFER FROM THE DRAWING IF IT WILL WORK IN A SATISFACTORY, TROUBLE FREE MANNER AND WILL WITHSTAND THE WATER PRESSURE AT THE INSTALLATION LOCATION. THE GATE SHALL BE APPROVED BY THE ENGINEER.

THE SIZE OF AUTOMATIC FLAP GATES SHALL REFER TO THE DIAMETER OF THE OUTLET PIPE OR OPENING.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR FLAP GATES OF THE SIZE SPECIFIED AND SHALL INCLUDE ALL MATERIALS AND COMPLETE INSTALLATION.

TABLE OF DIMENSIONS

DIAM	A	B	C	D	E	F	G	H	J	T
8"	10 3/4"	1 3/8"	5 1/16"	10"	1/2"	1 1/8"	3 9/16"	1 1/4"	3/8"	3/8"
10"	12 3/4"	1 3/8"	7 1/8"	12 1/4"	1/2"	1 1/8"	4 3/8"	1 1/2"	1/2"	1/16"
12"	14 3/4"	1 3/8"	8 1/2"	14 1/2"	1/2"	1 1/8"	5 1/8"	1 1/2"	1/2"	1/2"
14"	17 1/4"	1 3/8"	9 7/8"	16 3/4"	1/2"	1 1/4"	5 15/16"	1 1/2"	1/2"	9/16"
15"	17 3/4"	1 3/8"	10 5/8"	17 3/4"	1/2"	1 1/4"	6 1/4"	1 1/2"	1/2"	9/16"
16"	19 1/4"	1 3/8"	11 1/4"	18 3/4"	1/2"	1 1/4"	6 5/8"	1 1/2"	1/2"	9/16"
18"	22 1/4"	2"	12 5/8"	21"	3/4"	1 9/16"	7 1/16"	1 3/4"	9/16"	9/16"
20"	24 3/4"	2"	14 1/8"	23 3/4"	3/4"	1 3/8"	8 1/4"	1 3/4"	5/8"	5/8"
21"	25 1/4"	2"	14 1/8"	24 1/4"	3/4"	1 3/8"	8 9/16"	1 3/4"	5/8"	5/8"
24"	28 1/4"	2"	17"	27 1/2"	3/4"	1 1/2"	9 3/4"	1 3/4"	5/8"	5/8"
30"	35 1/4"	2 1/2"	20 1/2"	34"	1"	1 9/16"	12"	2"	1 1/16"	5/8"
36"	41 1/2"	2 1/2"	25"	40 7/8"	1"	2 1/16"	14 7/16"	2 1/4"	1 1/8"	1/16"
42"	47 1/2"	2 1/2"	29 3/4"	47"	1"	2 5/16"	16 5/8"	2 1/4"	1 1/8"	3/4"
48"	53 1/2"	2 1/2"	34"	54"	1"	2 3/4"	19 1/16"	2 1/4"	1 3/8"	3/4"
54"	60 3/4"	2 1/2"	38"	62 1/4"	1 1/4"	2 3/4"	22"	3"	1 1/2"	7/8"
60"	67"	2 1/2"	42"	68 1/2"	1 1/4"	42"	24 1/4"	3"	1 1/2"	15/16"
66"	73 3/8"	2 1/2"	47"	75"	1 1/4"	2 1/8"	26 1/2"	3"	1 1/2"	1"
72"	79"	2 1/2"	51"	82"	1 1/4"	3"	29"	3"	1 1/2"	1"
78"	86"	2 1/2"	55 1/4"	88 3/4"	1 1/4"	3 1/2"	31 3/8"	3"	1 5/8"	1 1/8"
84"	92 1/2"	3 1/2"	59 1/2"	95 1/2"	1 1/2"	3 1/2"	33 3/4"	3"	1 3/4"	1 1/4"

AUTOMATIC FLAP GATES

FILE NAME =	USER NAME = #USER#	DESIGNED - JML	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS				F.A.P. RTE. 681	SECTION *	COUNTY FORD/IRROQUOIS	TOTAL SHEETS 146	SHEET NO. 120
#FILE#	PLOT SCALE = #SCALE#	DRAWN - DJM	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66880			
	PLOT DATE = #DATE#	CHECKED - MSW	REVISED -										
		DATE - 08/04/10	REVISED -										