STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

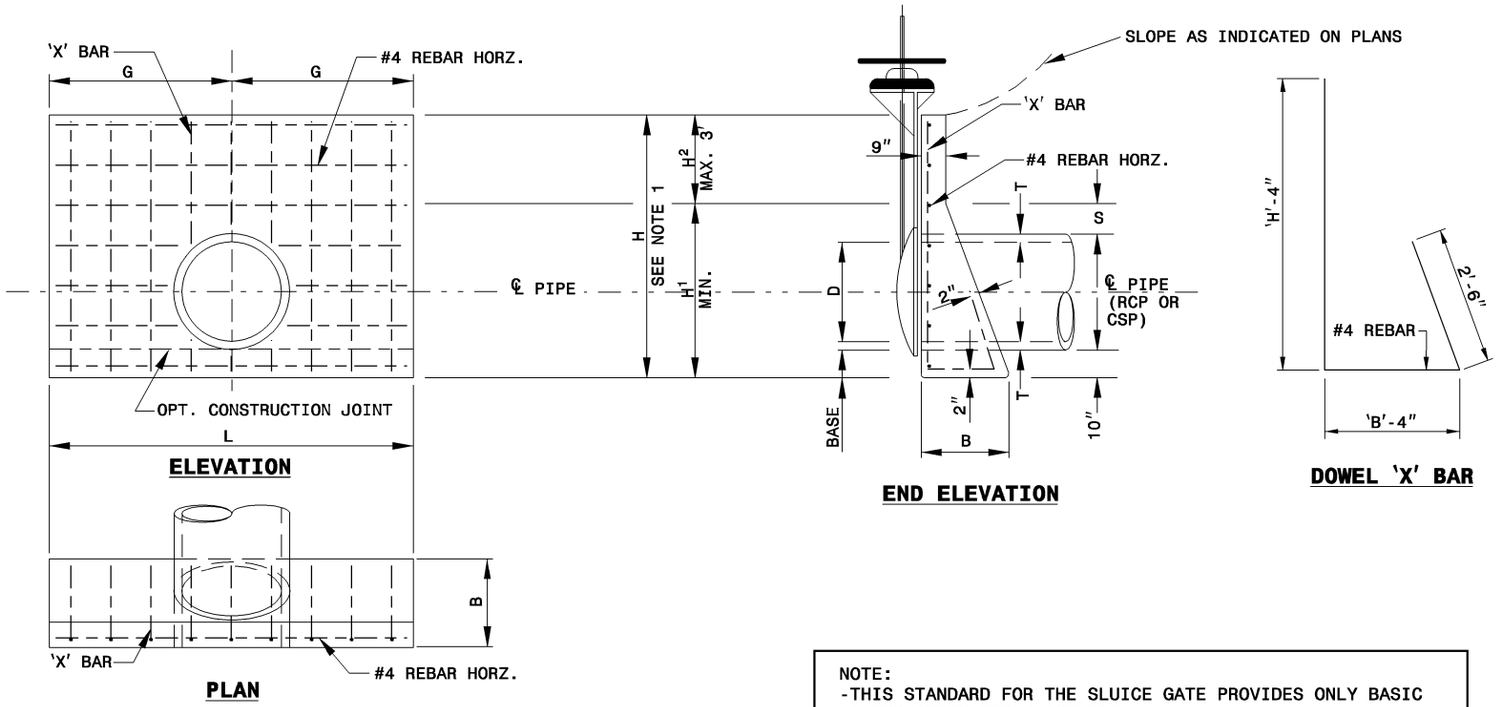
ENGLISH STANDARD DRAWING FOR

CONCRETE ENDWALL AND SLUICE GATE

15″ THRU 36″ PIPE - 90° SKEW

SHEET 1 OF 1

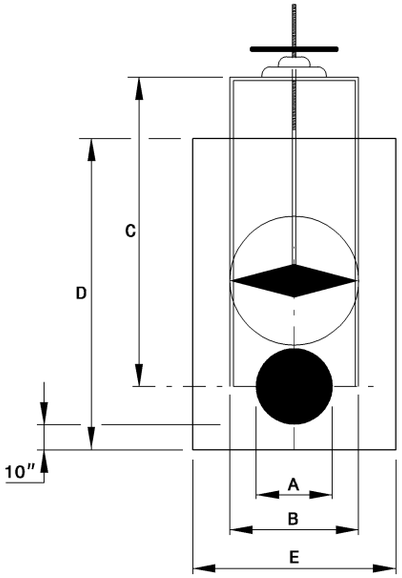
838.02



NOTE:
- THIS STANDARD FOR THE SLUICE GATE PROVIDES ONLY BASIC INFORMATION FOR PLACEMENT.
- INSTALL THE SLUICE GATE IN ACCORDANCE WITH THE MANUFACTURER'S DIMENSIONS AND SPECIFICATIONS.
- SEE PLANS FOR LOCATIONS AND PIPE SIZES

SLUICE GATE DIMENSIONS

PIPE DIAMETER	A	15″	18″	24″	30″	36″
GATE DIAMETER	B	22″	25″	32″	38¾″	46″
FRAME HEIGHT, MIN.	C	36″	36″	48″	60″	72″
H. W. HEIGHT, MIN.	D	4′-5½″	4′-7″	5′-10″	7′-1″	8′-4″
H. W. WIDTH	E	5′-6″	6′-4″	8′-0″	9′-2″	11′-0″



DIMENSIONS AND QUANTITIES FOR RCP OR CSP

CALCULATIONS BASED ON CONCRETE PIPE

PIPE DIA.	H^1 MINIMUM DIMENSIONS						
D	H^1	B	G	T	S	L	CONC YD³
15″	3′-3″	1′-8″	2′-9″	2¼″	9½″	5′-6″	0.7
18″	3′-7″	1′-10″	3′-2″	2½″	10″	6′-4″	1.0
24″	4′-2″	2′-1″	4′-0″	3″	10″	8′-0″	1.5
30″	5′-0″	2′-6″	4′-7″	4¼″	11½″	9′-2″	2.3
36″	5′-8″	2′-8″	5′-6″	4¾″	12½″	11′-0″	3.4

H^2 QUANTITES

PIPE DIA.	PER 1′ ADDTIONAL HEIGHT	
D	STEEL LBS.	CONC YD³
15″	7.5	0.2
18″	8.7	0.2
24″	11.1	0.2
30″	12.6	0.3
36″	15.1	0.3

REBAR IN ENDWALL (H^1 MIN.)

USE WITH RC OR CS PIPE	PIPE DIA.						
	15″	18″	24″	30″	36″	42″	48″
	QTY	QTY	QTY	QTY	QTY	QTY	QTY
'X' BARS	6	7	9	10	12	14	15
HORZ BARS	4	4	5	6	7	7	8
TOTAL LBS.	41	50	74	112	131	161	195

GENERAL NOTES:
1. LIMIT VARIABLE HEIGHT DIMENSION (H) TO FRAME HEIGHT OF SLUICE GATE, 3′ ABOVE THE H^1 DIMENSION OR 10′ WHICHEVER IS LESS.
2. ATTACHMENT OF GATE MAY REQUIRE SPECIFIC POSTIONING OF PIPE AND/OR MODIFICATION OF ENDWALL. CONFIRMATION OF GATE DIMENSIONS AND ATTACHMENT METHOD IS RECOMMENDED PRIOR TO CONSTRUCTION OF ENDWALL.
3. PLACE NO. 4 REBAR ON 12″ HORIZONTAL AND VERTICAL CENTERS WITH 2″ MINIMUM CONCRETE COVERAGE.
4. CONSTRUCT 1″ CHAMFER OR RADIUS ON ALL EXTERIOR CORNERS.
5. USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
6. WALL THICKNESS (T) IS USED TO COMPUTE QUANTITIES, NOT TO INFER SIZE.
7. WHEN THE BASE IS POURED SEPARATELY, LEAVE THE POUR ROUGH.
8. USE CLASS 'B' CONCRETE.
9. CUT OR BEND REBARS AS NEEDED TO ACCOMMODATE PIPE.

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