

ESTIMATE QUANTITIES - FLUME BASIN

BILL OF REINFORCING STEEL		10' x 4'		10' x 5'		10' x 6'		10' x 8'		10' x 10'		10' x 12'		12' x 6'		12' x 8'		12' x 10'		12' x 12'		MARK																				
MARK	LOCATION	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	MARK																		
5c1	WALLS - VERT. - F.F.		30	2'-8 1/2"-1	137	32	3'-6 1/2"-1	177	34	4'-3 1/2"-2	220	38	5'-7 1/2"-11	308	42	7'-2 1/2"-0	419	46	8'9 1/4"-0	546	34	4'-4 1/2"-3	223	38	5'-8 1/2"-0	311	42	7'-3 1/2"-1	423	46	8'-10 1/4"-1	550	5c1									
5b1	WALLS - LONGIT. - F.F.		16	16'-2	270	16	17'-3	288	20	18'-4	382	24	20'-5	511	32	22'-7	754	40	24'-8	1029	20	18'-4	382	24	20'-5	511	32	22'-7	754	40	24'-8	1029	5b1									
5b2	WALLS - LONGIT. - F.F.		4	15'-2	63	8	16'-2	135	8	17'-5	145	8	19'-6	163	8	21'-7	180	12	23'-8	296	8	17'-5	145	8	19'-6	163	8	21'-7	180	12	23'-8	296	5b2									
5c1	WALLS - VERT. - B.F.		28	23'-5	685	21	25'-7	561	15	27'-8	432	4	31'-6	132	---	-----	-----	---	-----	-----	14	29'-10	435	3	33'-8	105	---	-----	-----	---	-----	-----	5c1									
5c2	WALLS - LONGIT. - B.F.		1	17'-9	19	10	17'-9 1/2"-6	226	18	17'-9 1/2"-0	373	33	17'-11 1/2"-11	755	41	17'-11 1/2"-0	981	45	18'-3 1/2"-4	1116	19	19'-11 1/2"-5	439	34	20'-1 1/2"-8	4	859	41	20'-1 1/2"-1	1073	45	20'-5 1/2"-6	1218	5c2								
5c3	WALLS - LONGIT. - B.F.		2	6'-1	13	20	6'-0 1/2"-1	137	36	6'-1 1/2"-2	267	66	6'-1 1/2"-11	551	82	7'-2 1/2"-0	819	90	8'-9 1/4"-0	1029	38	6'-0 1/2"-3	282	68	6'-0 1/2"-0	569	82	7'-3 1/2"-1	826	90	8'-10 1/4"-1	1077	5c3									
6f1	FLOOR - LONGIT. - TOP		18	14'-9	399	19	9	449	19	17'-0	485	20	19'-0	571	21	21'-0	662	22	23'-0	760	21	17'-0	536	22	19'-0	628	23	21'-0	725	24	23'-0	829	6f1									
5f2	FLOOR - LONGIT. - BOTT.		18	14'-9	277	19	9	312	19	17'-0	337	20	19'-0	396	21	21'-0	460	22	23'-0	528	21	17'-0	372	22	19'-0	436	23	21'-0	504	24	23'-0	576	5f2									
5g1	CURTAIN BRACKET - VERT.		4	5'-4	22	4	6	23	4	6'-3	26	4	6'-5	27	4	6'-8	28	4	6'-11	29	4	6'-3	26	4	6'-5	27	4	6'-8	28	4	6'-11	29	5g1									
5h1	BASIN BACKWALL - VERT.		12	7'-7	95	12	1	101	12	8'-10	111	12	9'-4	117	12	10'-4	129	12	11'-4	142	14	8'-10	129	14	9'-4	136	14	10'-4	151	14	11'-4	165	5h1									
6m1	FLOOR TRANS. - TOP		29	11'-8 1/8"-9	662	31	11'-8 1/8"-1	719	33	11'-8 1/8"-9	778	37	11'-10 2/20"-11	909	41	11'-10 2/21"-11	1038	45	12'-2 1/2"-3	1196	33	13'-8 1/2"-9	877	37	13'-10 2/22"-11	1020	41	13'-10 2/23"-11	1161	45	14'-2 1/2"-3	1331	6m1									
6p1	CURTAIN - TRANS.		2	18'-3, 18'-9	55	2	18'-9, 19'-3	57	2	19'-1, 19'-9	58	2	20'-3, 20'-11	62	2	21'-3, 21'-11	65	2	22'-7, 23'-3	69	2	21'-1, 21'-9	64	2	22'-3, 22'-11	68	2	23'-3, 23'-11	71	2	24'-7, 25'-3	75	6p1									
6s1	WALL - TOP SLOPE		4	16'-2	97	4	3	104	4	18'-4	110	4	20'-5	123	4	22'-7	136	4	24'-8	148	4	18'-4	110	4	20'-5	123	4	22'-7	136	4	24'-8	148	6s1									
511	CURTAIN - VERT.		15	6'-1	95	15	4	99	16	7'-1	118	17	7'-4	130	17	7'-7	134	18	7'-10	147	17	7'-1	126	18	7'-4	138	19	7'-7	150	20	7'-10	163	511									
TOTAL REINFORCING STEEL			2889 LBS.				3388 LBS.				3842 LBS.				4755 LBS.				5805 LBS.				7075 LBS.				8146 LBS.				9094 LBS.				10182 LBS.				11486 LBS.			
TOTAL CONCRETE			14.3 CU. YDS.				16.3 CU. YDS.				19.4 CU. YDS.				24.6 CU. YDS.				30.1 CU. YDS.				39.4 CU. YDS.				41.9 CU. YDS.				50.94 CU. YDS.				61.82 CU. YDS.				74.86 CU. YDS.			

BENT BAR DETAILS

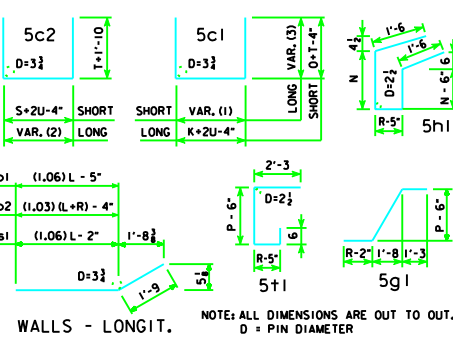


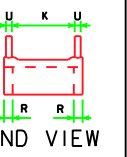
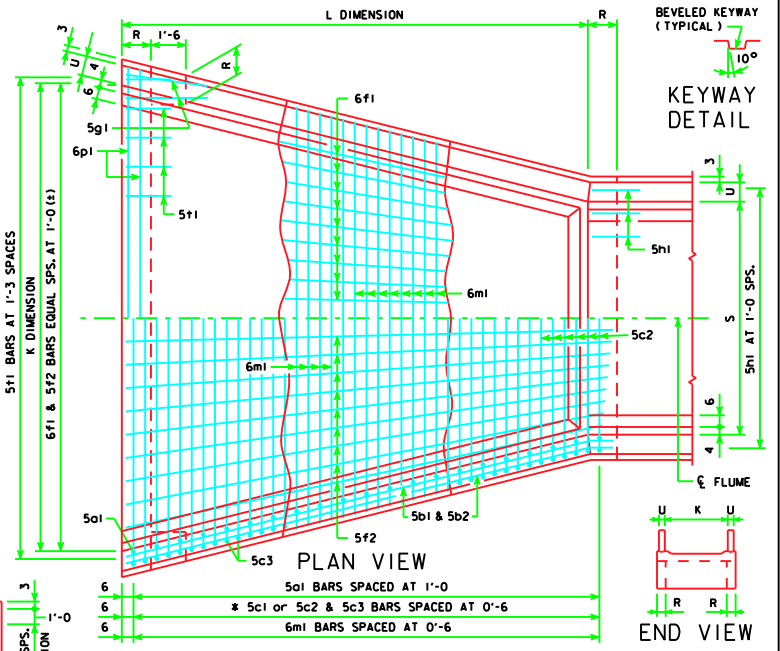
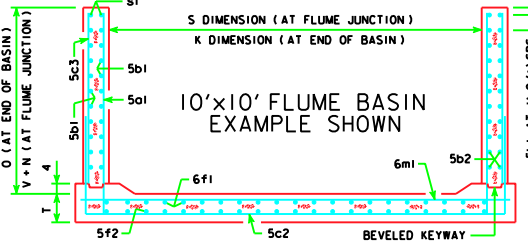
TABLE OF FLUME BASIN DIMENSIONS

S x H	K	L	M	N	O	P	R	T	U	V
10' x 4'	17'-0	14'-0	3'-0	2'-3	1'-11	3'-3	1'-0	1'-1	9	3'-1 1/2
10' x 5'	17'-6	15'-0	3'-9	2'-9	3'-6	1'-0	1'-1	9	3'-10 1/2	
10' x 6'	18'-0	16'-0	4'-6	2'-9	3'-6	4'-0	1'-3	1'-1	9	4'-7 1/2
10' x 8'	19'-0	18'-0	6'-0	3'-0	4'-10	4'-3	1'-3	1'-1	10	6'-2 1/2
10' x 10'	20'-0	20'-0	7'-6	3'-6	6'-5	4'-6	1'-3	1'-1	10	7'-8 1/2
10' x 12'	21'-0	22'-0	9'-0	4'-0	8'-0	4'-9	1'-3	1'-1	10	9'-3 1/2
12' x 6'	20'-0	16'-0	4'-6	2'-9	3'-6	4'-0	1'-3	1'-2	9	4'-7 1/2
12' x 8'	21'-0	18'-0	6'-0	3'-0	4'-10	4'-3	1'-3	1'-2	10	6'-2 1/2
12' x 10'	22'-0	20'-0	7'-6	3'-6	6'-5	4'-6	1'-3	1'-2	10	7'-8 1/2
12' x 12'	23'-0	22'-0	9'-0	4'-0	8'-0	4'-9	1'-3	1'-2	10	9'-3 1/2

VARIABLE DIMENSIONS		CONCRETE PLACEMENT		
VARIABLE (1)	$K+2U-4'' \cdot \frac{(K-S)(\text{No. of } c1 - 1)}{\text{No. of } c1 + c2 - 1}$	BASIN	FOOTING	WALLS
VARIABLE (2)	$S+2U-4'' \cdot \frac{(K-S)(\text{No. of } c2 - 1)}{\text{No. of } c1 + c2 - 1}$	10' x 4'	11.6	2.6
VARIABLE (3)	$O+T-4'' \cdot \frac{(N+V-0)(\text{No. of } c1 - 1)}{\text{No. of } c1 + c2 - 1}$	10' x 5'	12.7	3.6
		10' x 6'	14.7	4.7
		10' x 8'	17.0	7.6
		10' x 10'	19.2	10.8
		10' x 12'	22.1	17.3
		12' x 6'	17.2	4.7
		12' x 8'	19.9	7.6
		12' x 10'	22.5	10.8
		12' x 12'	25.6	17.3

FLUME BASIN NOTES:
 SEE STANDARD SHEET RCF-01-04 FOR GENERAL INFORMATION.
 5c2 & 5c3 BARS ARE LAPPED.
 * 5c1 BARS ARE OMITTED IF BOTH S AND H ARE EQUAL TO OR LARGER THAN 8' AND 10' RESPECTIVELY.

10'x10' FLUME BASIN EXAMPLE SHOWN



REVISED 04-07 - BAR SIZES ADDED TO BAR LABELS. RCFB-03-04 - THIS SHEET ISSUED 01-04.

LATEST REVISION DATE : 04-07	APPROVED BY : 	STANDARD DESIGN REINFORCED CONCRETE FLUME BASINS FOR REINFORCED CONCRETE FLUMES
		IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION JANUARY, 2004
		RCFB-03-04