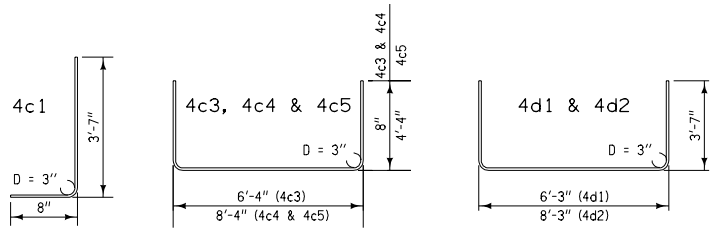
VARIABLE DIMENSIONS AND QUANTITIES FOR 3 GRATE INTAKE

Dimensions						Bar List																																		Quantities				
(1)	(2)					4c1		4c2		4c3 (3)				4c4 (3)					4c5 (3)				4d1				4d2				4d3				4d4				Concrete - Cu. Yds.				Steel
"H"	"A"	"E"	"F"	"G"	"J"	No.	L	No.	L	No. of Spaces			NO.	L	No. of Spaces			No.	L	No. of Spaces			NO.	L	SP	"K"	No.	L	SP	"M"	No.	L	SP	"N"	No.	L	SP	"P"	No.	L	Base	Lid	Walls	Total	(4)
(Ft.)	(In.)	(In.)	(In.)	(In.)	(In.)					"B"	"C"	"D"			"B"	"C"	"D"			"B"	"C"	"D"																						Total lbs.
3	6	2"	0"	7"	5"	24	4'-3"	--	--	2	--	--	8	7'-8"	2	--	--	8	9'-8"	2	--	--	8	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	2.7	2.5	7.7	810
4	6	2"	0"	7"	5"	24	4'-3"	52	3'-10"	3	--	--	10	7'-8"	3	--	--	10	9'-8"	3	--	--	10	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	2.7	3.4	8.5	989
5	6	2"	0"	7"	5"	24	4'-3"	52	4'-10"	4	--	--	12	7'-8"	4	--	--	12	9'-8"	4	--	--	12	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	2.7	4.2	9.4	1,068
6	6	2"	0"	7"	5"	24	4'-3"	52	5'-10"	5	--	--	14	7'-8"	5	--	--	14	9'-8"	5	--	--	14	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	2.7	5.1	10.2	1,150
7	6	2"	2"	6"	6"	24	4'-3"	52	6'-10"	6	--	--	16	7'-8"	6	--	--	16	9'-8"	6	--	--	16	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	5.9	11.0	1,273
8	9	2"	2"	6"	6"	24	4'-3"	52	7'-10"	6	1	--	18	7'-8"	6	1	--	18	9'-8"	6	1	--	18	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	6.8	11.9	1,353
9	12	2"	2"	6"	6"	24	4'-3"	52	8'-10"	6	2	--	20	7'-8"	6	2	--	20	9'-8"	6	2	--	20	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	7.6	12.7	1,434
10	6	2"	2"	6"	6"	24	4'-3"	52	9'-10"	6	4	--	24	7'-8"	6	4	--	24	9'-8"	6	4	--	24	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	8.4	13.6	1,562
11	9	2"	2"	6"	6"	24	4'-3"	52	10'-10"	6	5	--	26	7'-8"	6	5	--	26	9'-8"	6	5	--	26	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	9.3	14.4	1,641
12	12	2"	2"	6"	6"	24	4'-3"	52	11'-10"	6	6	--	28	7'-8"	6	6	--	28	9'-8"	6	6	--	28	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	10.1	15.3	1,722
13	6	2"	2"	6"	6"	24	4'-3"	52	12'-10"	6	8	--	32	7'-8"	6	8	--	32	9'-8"	6	8	--	32	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	2.7	11.0	16.1	1,849
14	9	0"	0"	3"	3"	24	4'-3"	52	13'-10"	6	9	--	34	7'-8"	6	9	--	34	9'-8"	6	9	--	34	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	11.8	17.0	2,050
15	12	0"	0"	3"	3"	24	4'-3"	52	14'-10"	6	10	--	36	7'-8"	6	10	--	36	9'-8"	6	10	--	36	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	12.7	17.8	2,129
16	12	0"	0"	3"	3"	24	4'-3"	52	15'-10"	6	10	2	40	7'-8"	6	10	2	40	9'-8"	6	10	2	40	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	13.5	18.6	2,256
17	12	0"	0"	3"	3"	24	4'-3"	52	16'-10"	6	10	4	44	7'-8"	6	10	4	44	9'-8"	6	10	4	44	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	14.4	19.5	2,383
18	12	0"	0"	3"	3"	24	4'-3"	52	17'-10"	6	10	6	48	7'-8"	6	10	6	48	9'-8"	6	10	6	48	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	15.2	20.3	2,509
19	12	0"	0"	3"	3"	24	4'-3"	52	18'-10"	6	10	8	52	7'-8"	6	10	8	52	9'-8"	6	10	8	52	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	16.0	21.2	2,636
20	12	0"	0"	3"	3"	24	4'-3"	52	19'-10"	6	10	10	56	7'-8"	6	10	10	56	9'-8"	6	10	10	56	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	16.9	22.0	2,763
21	12	0"	0"	3"	3"	24	4'-3"	52	20'-10"	6	10	12	60	7'-8"	6	10	12	60	9'-8"	6	10	12	60	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	17.7	22.9	2,888
22	12	0"	0"	3"	3"	24	4'-3"	52	21'-10"	6	10	14	64	7'-8"	6	10	14	64	9'-8"	6	10	14	64	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	18.6	23.7	3,015
23	12	0"	0"	3"	3"	24	4'-3"	52	22'-10"	6	10	16	68	7'-8"	6	10	16	68	9'-8"	6	10	16	68	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	19.4	24.6	3,141
24	12	0"	0"	3"	3"	24	4'-3"	52	23'-10"	6	10	18	72	7'-8"	6	10	18	72	9'-8"	6	10	18	72	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	20.3	25.4	3,269
25	12	0"	0"	3"	3"	24	4'-3"	52	24'-10"	6	10	20	76	7'-8"	6	10	20	76	9'-8"	6	10	20	76	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	21.1	26.3	3,395
26	12	0"	0"	3"	3"	24	4'-3"	52	25'-10"	6	10	22	80	7'-8"	6	10	22	80	9'-8"	6	10	22	80	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	22.0	27.1	3,521
27	12	0"	0"	3"	3"	24	4'-3"	52	26'-10"	6	10	24	84	7'-8"	6	10	24	84	9'-8"	6	10	24	84	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	22.8	27.9	3,647
28	12	0"	0"	3"	3"	24	4'-3"	52	27'-10"	6	10	26	88	7'-8"	6	10	26	88	9'-8"	6	10	26	88	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	2.7	23.7	28.8	3,774

The clear distance from face of concrete to near edge or end of reinforcing bar to be 2" unless otherwise noted.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER

(1) H = Wall height = form grade elevation (minus) bottom well elevation (minus) 1'-4", rounded up.

(2) A = First bar spacing at top of wall. Minimum spacing = 3". Maximum spacing = 12". Adjust as necessary.

(3) See Section A-A on sheet 2 for spacing.

(4) Quantity includes 312 lbs. for lid.

Iowa Department of Transportation
Highway Division

STANDARD ROAD PLAN | **RA-47A(4)**

REVISION: NEW.

REVISION NO.	NEW
REVISION DATE	04-18-06

Deanna Maifeldt
APPROVED BY DESIGN METHODS ENGINEER

TRIPLE GRATE
BARRIER INTAKE, RECTANGULAR
(Sheet 4 of 4)