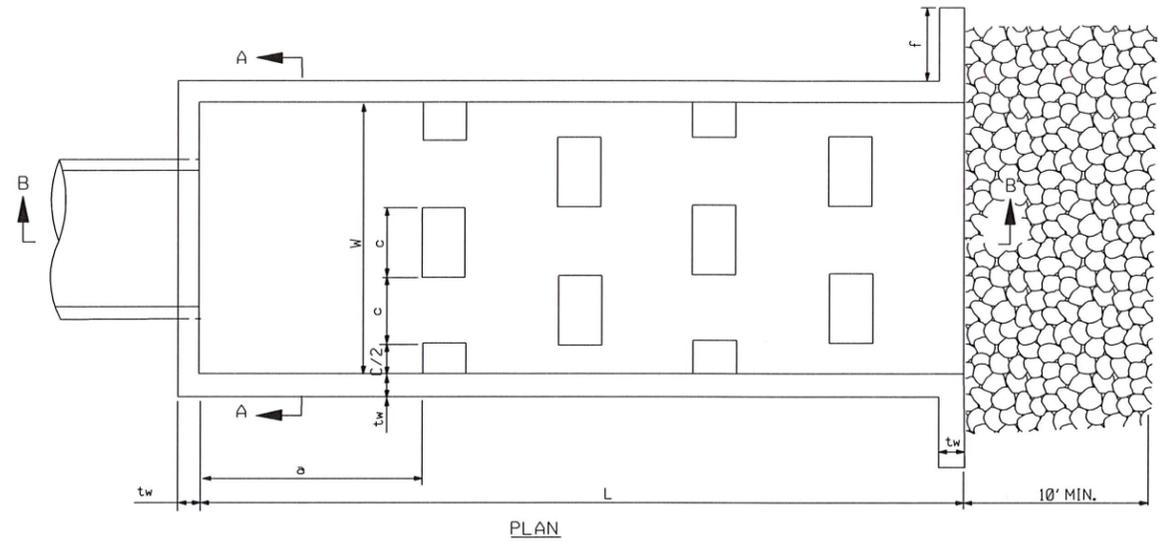
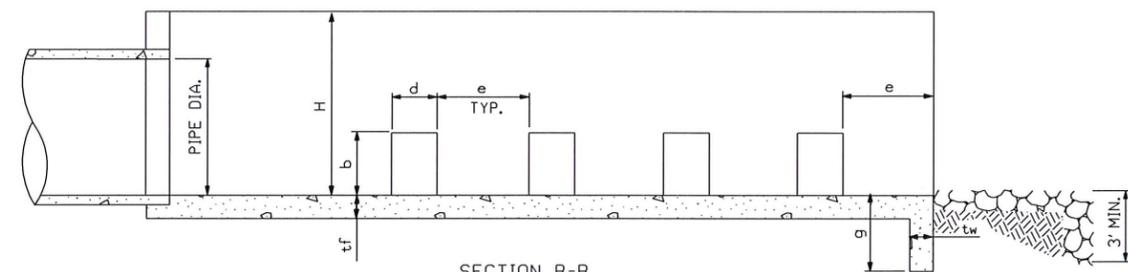
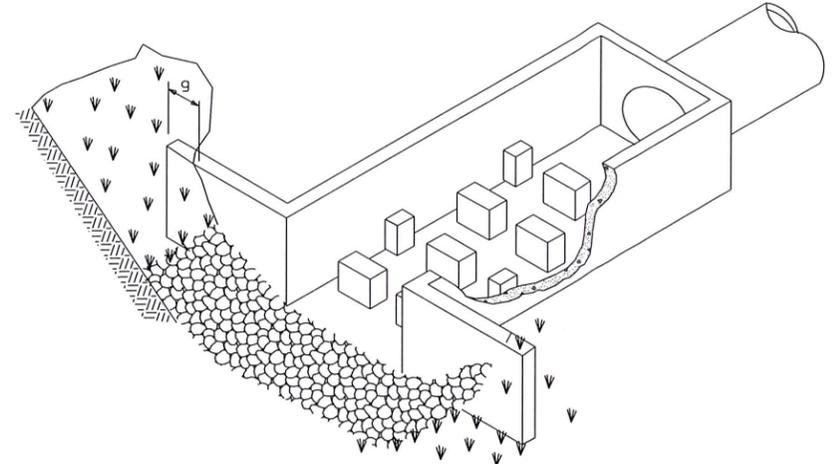


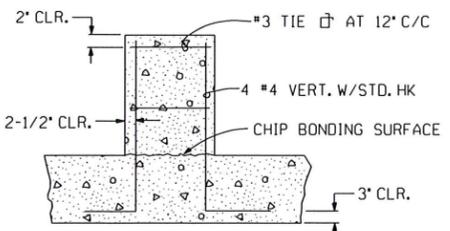
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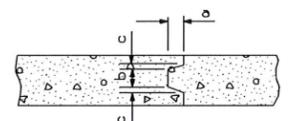
PLAN



SECTION B-B

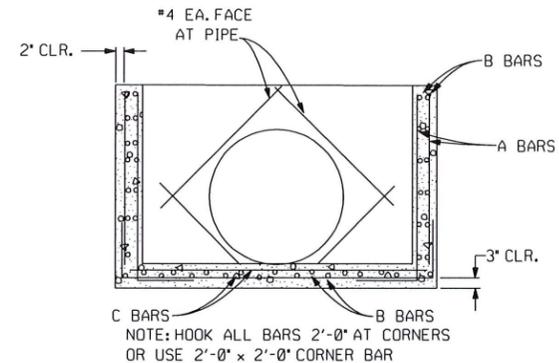


BAFFLE BLOCK DETAIL

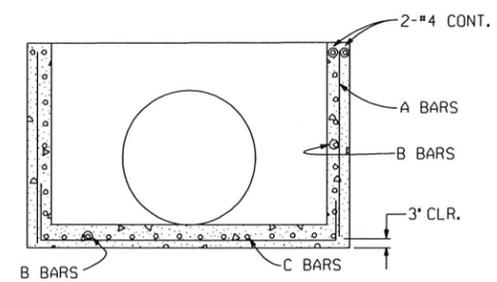


WALLS	a	b	c
6" TO 9"	2"	2"	1"
9" TO 12"	2"	3"	1"
12" TO 15-1/2"	3"	4"	2"

CONSTRUCTION JOINT DETAIL



SECTION A-A FOR WALLS GREATER THAN 7" THICK



SECTION A-A FOR WALLS 7" THICK OR LESS

NOTE:

1. THE USE OF THIS BASIN IS LIMITED TO INSTALLATIONS WHERE THE VELOCITY AT THE ENTRANCE TO THE STILLING BASIN DOES NOT GREATLY EXCEED 30 FT. PER SECOND.
2. FROM THE MAXIMUM EXPECTED DISCHARGE, DETERMINE THE STILLING BASIN DIMENSIONS USING THE TABLE SHOWN. THE USE OF MULTIPLE UNITS SIDE BY SIDE MAY PROVE ECONOMICAL IN SOME CASES.
3. COMPUTE THE NECESSARY PIPE AREA FROM THE VELOCITY AND DISCHARGE. THE VALUES IN THE TABLE SHOWN, COLUMNS 1 AND 2, ARE SUGGESTED SIZES BASED ON A VELOCITY OF 12 FT. PER SECOND AND THE DESIRE THAT THE PIPE RUN FULL AT THE DISCHARGE GIVEN IN COLUMN 3. REGARDLESS OF THE PIPE SIZE CHOSEN, MAINTAIN THE RELATION BETWEEN DISCHARGE AND BASIN SIZE GIVEN IN THE TABLE. AN OPEN CHANNEL ENTRANCE MAY BE USED IN PLACE OF A PIPE. THE APPROACH CHANNEL INVERT SHOULD BE THE SAME ELEVATION AS THE PIPE.
4. REINFORCING STEEL DESIGN DOES NOT INCLUDE SURCHARGE LOAD ON SOIL.
5. THE ENTRANCE PIPE OR CHANNEL MAY BE TILTED DOWNWARD ABOUT 15 3/4% WITHOUT AFFECTING PERFORMANCE ADVERSELY. FOR GREATER SLOPES USE A HORIZONTAL OR SLOPING PIPE (UP TO 15 3/4%) TWO OR MORE DIAMETERS LONG JUST UPSTREAM FROM THE STILLING BASIN. MAINTAIN PROPER ELEVATION OF INVERT AT ENTRANCE AS SHOWN ON THE DRAWING.
6. IF A HYDRAULIC JUMP IS EXPECTED TO FORM IN THE DOWNSTREAM END OF THE PIPE AND THE PIPE ENTRANCE IS SEALED BY INCOMING FLOW, INSTALL A VENT ABOUT ONE-SIXTH THE PIPE DIAMETER AT ANY CONVENIENT LOCATION UPSTREAM FROM THE JUMP.
7. RIPRAP SHALL BE PAID SEPARATELY.
8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF TULSA STANDARDS AND SPECIFICATIONS.
9. ALL EXPOSED SURFACES SHALL HAVE A CARBORUNDUM FINISH AND THIS SHALL BE INCLUDED IN THE BID.
10. ALL EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER EXCEPT BAFFLE BLOCKS.

STILLING BASIN DIMENSIONS

SUGGESTED PIPE SIZE	Q	FEET AND INCHES										INCHES		A BARS	B BARS	C BARS	REMARKS	
		DIA.	AREA (S.F.)	W	H	L	a	b	c	d	e	f	g					tw
18	1.77	21	4-0	3-6	13-8	2-8	1-0	1-0	1-0	1-9	SEE	4'-0"	6	6	#4 AT 2'	#4 AT 12'	#4 AT 12'	CENTER WALL BARS
24	3.14	38	5-0	4-0	18-6	3-6	1-3	1-3	1-3	2-6	NOTE	4'-0"	6	6	#4 AT 2'	#4 AT 12'	#4 AT 12'	CENTER WALL BARS
30	4.91	59	6-0	4-6	22-2	4-6	1-6	1-6	1-5	3-0	2	4'-0"	6	6-1/2	#4 AT 2'	#4 AT 12'	#4 AT 12'	CENTER WALL BARS
36	7.07	85	6-8	5-0	24-8	5-4	1-8	1-8	1-6	3-4		4'-0"	7	7	#4 AT 10'	#4 AT 12'	#4 AT 10'	CENTER WALL BARS
42	9.62	115	7-0	5-6	26-7	6-3	1-9	1-9	1-7	3-6		4'-0"	8	9	#4 AT 12'	#4 AT 18'	#4 AT 12'	BAR ARE EA. FACE
48	12.57	151	8-0	6-0	29-8	7-0	2-0	2-0	1-8	4-0		4'-0"	9	10	#4 AT 11'	#4 AT 18'	#4 AT 11'	BAR ARE EA. FACE
54	15.90	191	8-8	6-6	32-0	8-0	2-2	2-2	1-9	4-3		4'-0"	10	11	#4 AT 10'	#4 AT 18'	#4 AT 10'	BAR ARE EA. FACE
60	19.63	236	9-4	7-0	33-0	9-0	2-4	2-4	1-10	4-2		4'-0"	11	12	#5 AT 14'	#4 AT 16'	#5 AT 14'	BAR ARE EA. FACE
72	28.27	339	12-0	8-0	34-8	10-8	2-8	3-0	2-0	4-0		4'-0"	12	12-1/2	#5 AT 10'	#4 AT 16'	#5 AT 10'	BAR ARE EA. FACE

1. SUGGESTED PIPE WILL RUN FULL WHEN VELOCITY IS 12 FT. PER SECOND OR HALF FULL WHEN VELOCITY IS 24 FT. PER SECOND. SIZE MAY BE MODIFIED FOR OTHER VELOCITIES BY Q=AV, BUT RELATION BETWEEN Q AND BASIN DIMENSIONS MUST BE MAINTAINED.
2. DIMENSION f IS THE HORIZONTAL DISTANCE FROM SIDE WALL TO THE CHANNEL SIDE PLUS DIMENSION g.
3. END WALLS AND WING WALLS TO HAVE SAME REINFORCEMENT AS SIDE WALLS.
4. RIP-RAP TO BE 12" MINIMUM STONES OVER FILTER FABRIC OR 6" MINIMUM STONES GROUTED.

Kulaga
CITY ENGINEER

HAS
DESIGN MANAGER

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

STANDARD BAFFLE BLOCK
ENERGY DISSIPATOR

REVISION	BY	DATE

DATE: MARCH 2022

STD. 780