

West Field Irrigation Company

Typical Drawings

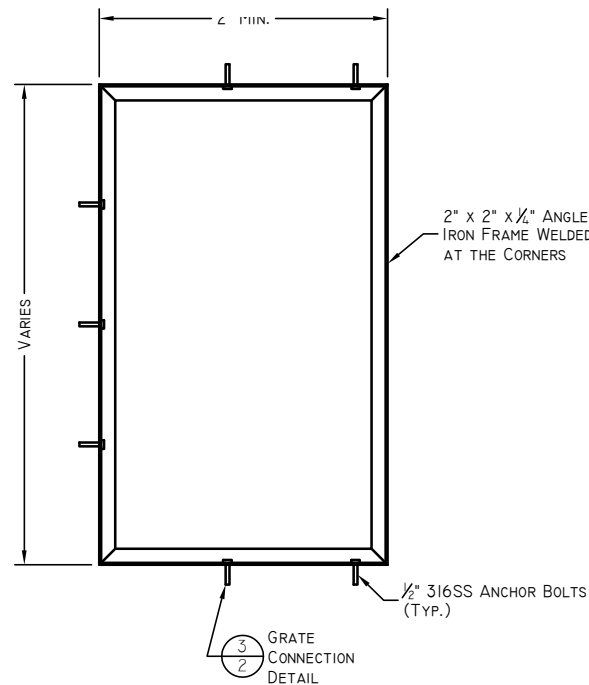
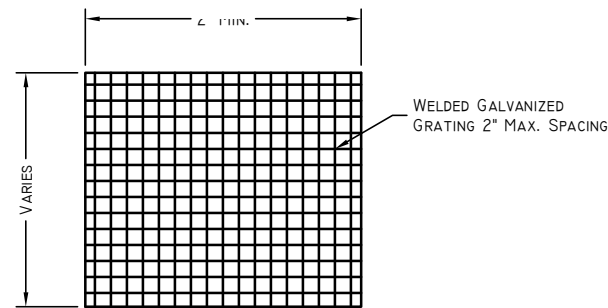
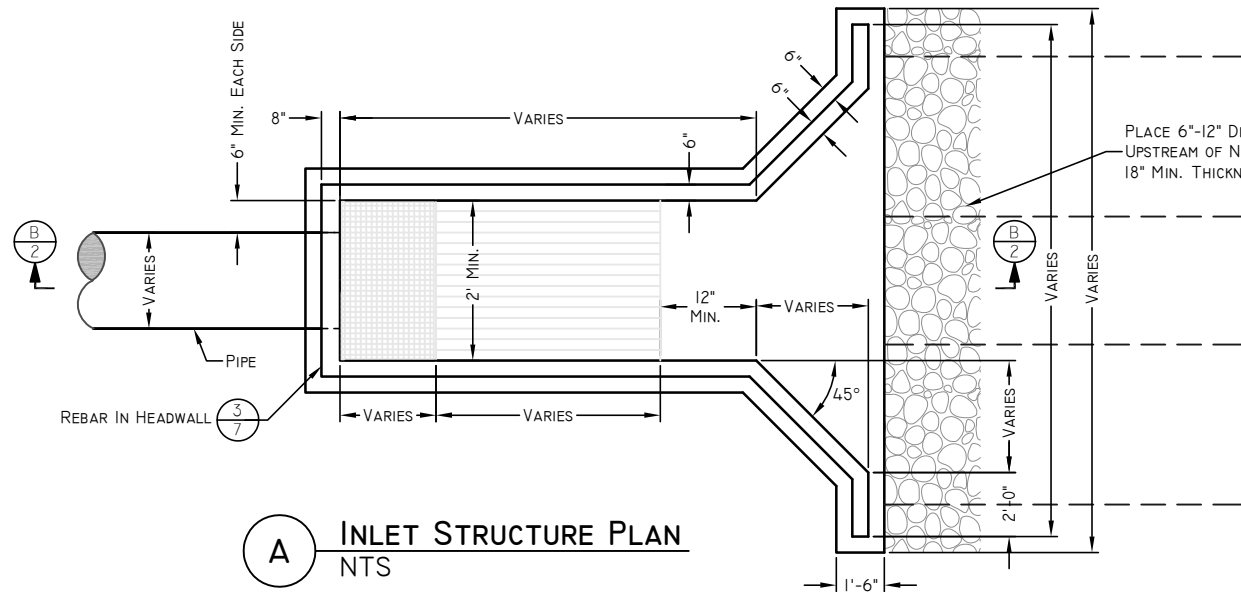
Sheet Index

- 1 COVER SHEET
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- 3 OPEN DITCH TO PIPE TRANSITION AND STRUCTURE
- 4 WEIR TURNOUT GATE
- 5 3-FOOT CIPOLLETTI WEIR
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- 7 90° V-NOTCH WEIR
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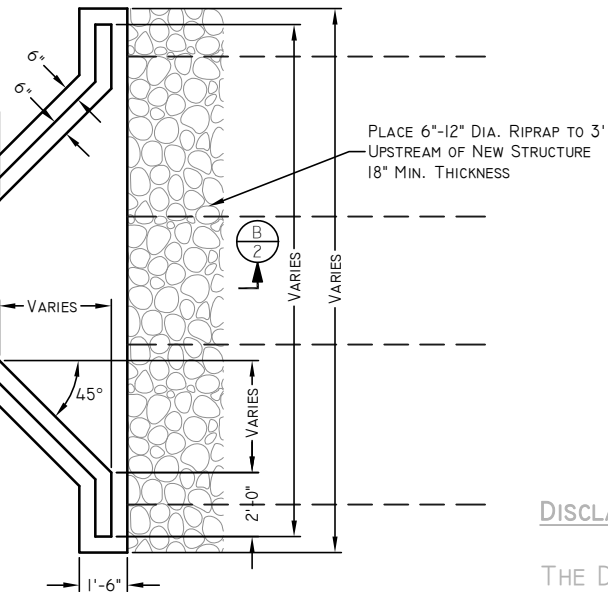
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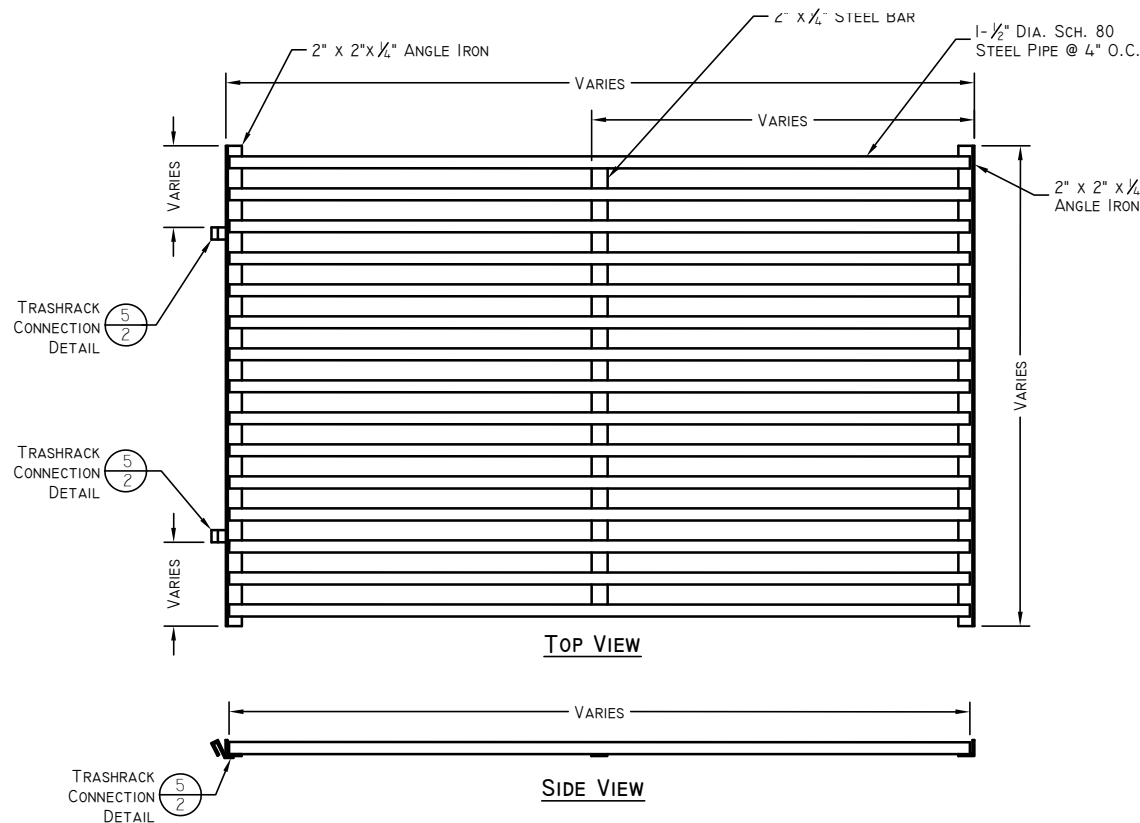


2 GRATE FRAME DETAIL
NTS



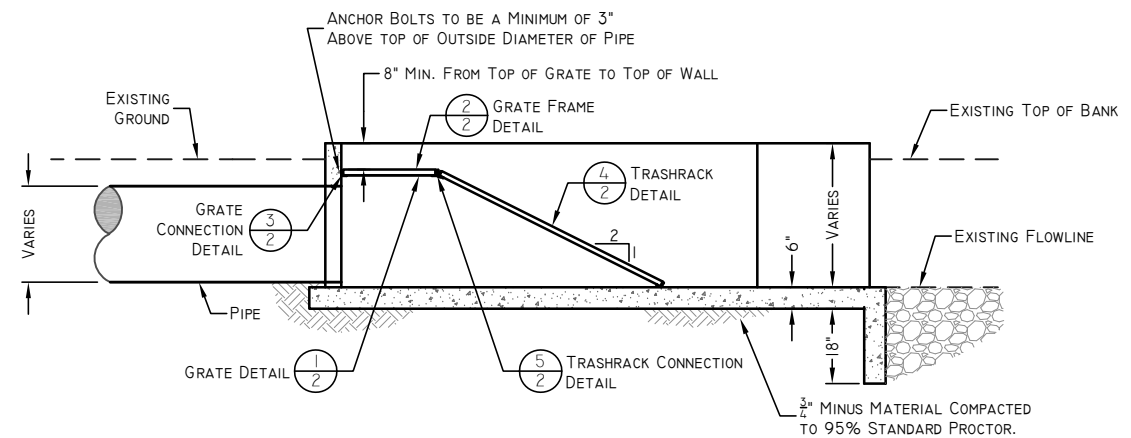
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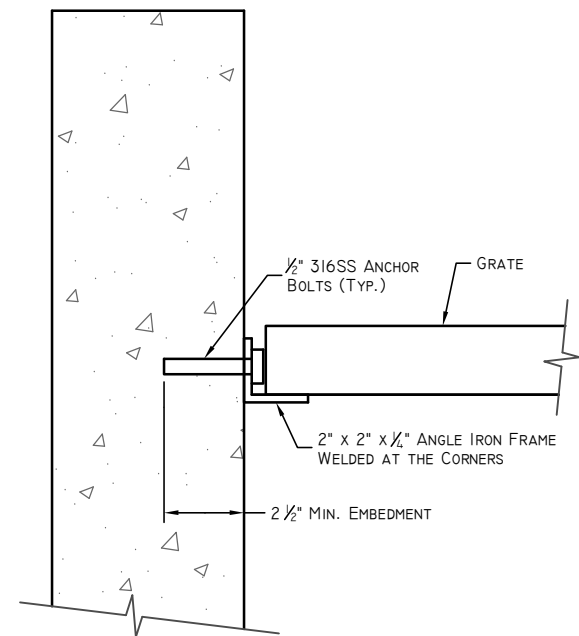


NOTES:

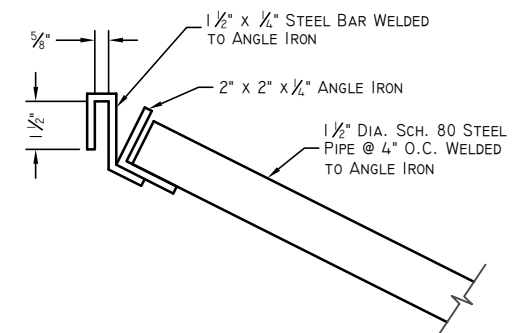
1. IF BOX IS CAST IN PLACE, REBAR TO BE PLACED AT 12 INCHES ON CENTER (O.C.) EACH WAY (E.W.) MINIMUM.
2. ALL PIPES INTO BOX SHALL BE GROUTED AND WATERTIGHT.
3. SUBMIT TO CANAL COMPANY ENGINEER FOR APPROVAL.
4. ENTIRE TRASHRACK TO BE HOT DIPPED GALVANIZED.
5. MINIMUM TWO GRATES TO BE INSTALLED. SUBMIT TO CANAL COMPANY ENGINEER FOR APPROVAL.



B INLET STRUCTURE PROFILE
NTS



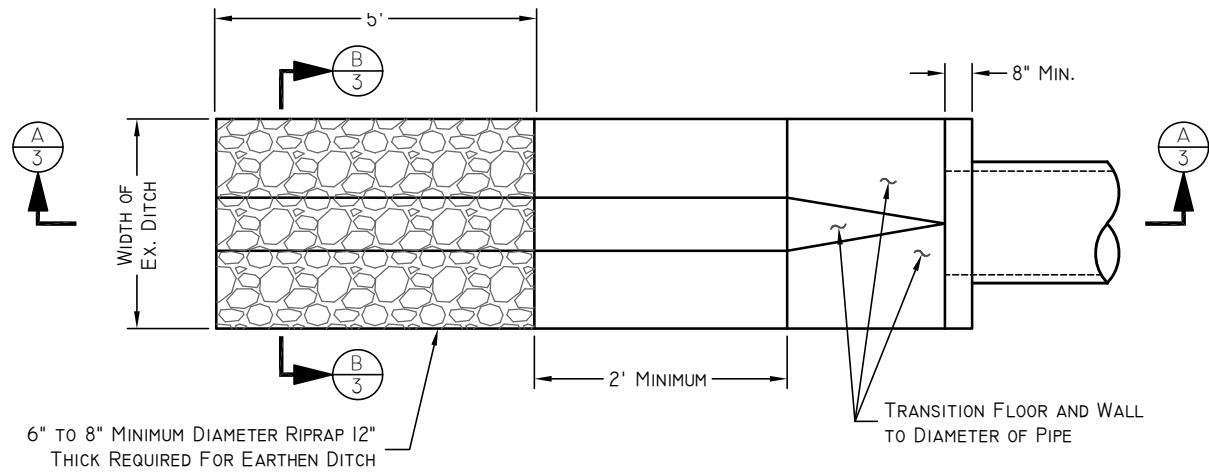
3 GRATE CONNECTION DETAIL
NTS



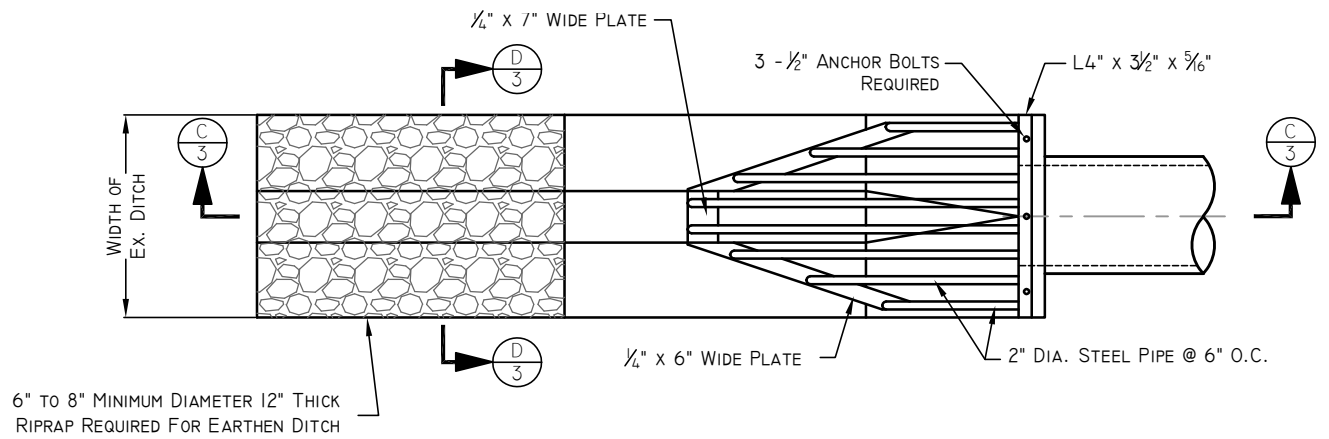
5 TRASHRACK CONNECTION DETAIL
NTS

TABLE 1 FOR DETAIL 5

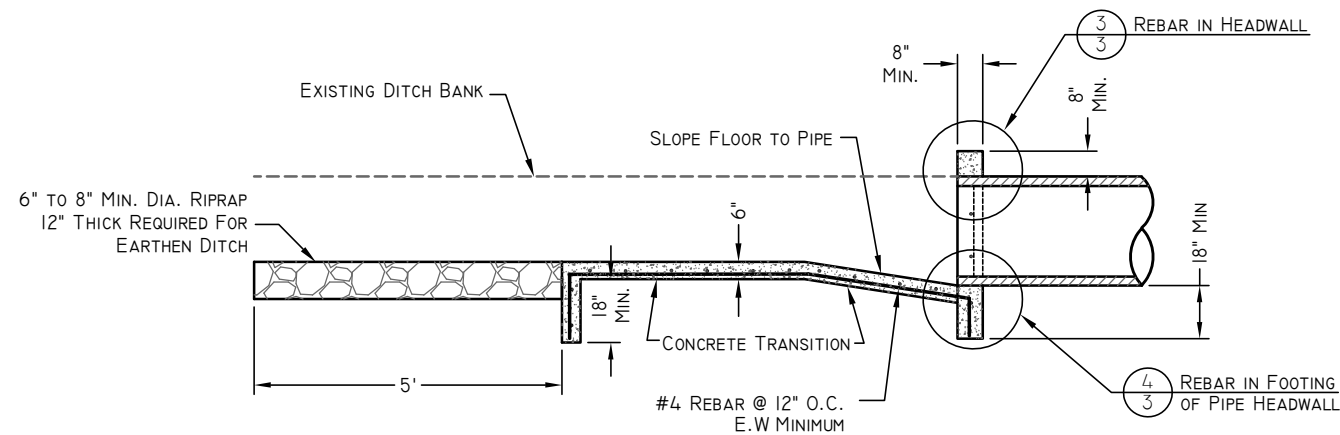
TRASHRACK CONNECTIONS REQUIRED	
PIPE SIZE	NUMBER OF CONNECTIONS REQUIRED
24"	4
30"	5



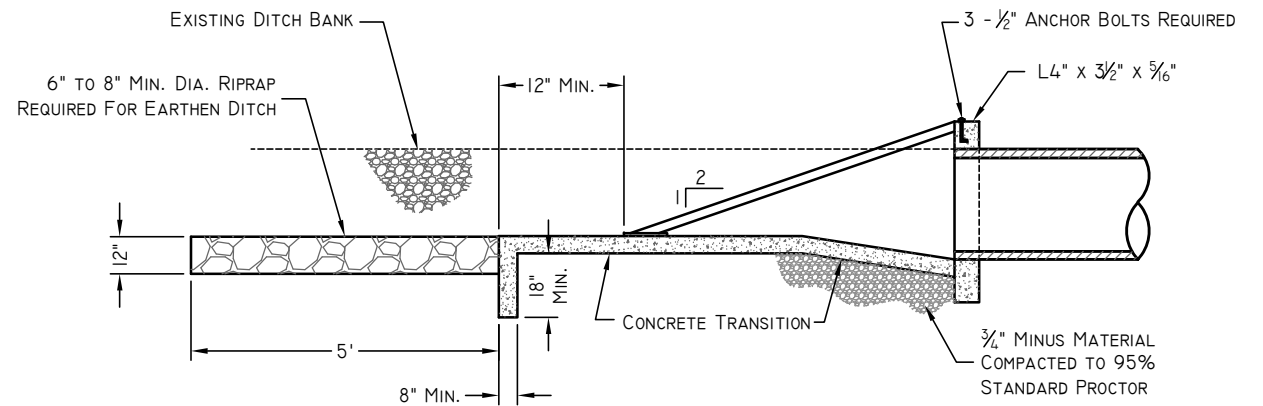
1 DITCH PIPE CONNECTION
NTS



2 TRASH RACK PLAN
NTS



A DITCH PIPE CONNECTION SECTION
NTS



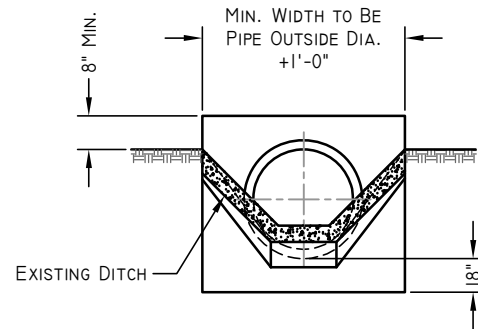
C TRASH RACK SECTION
NTS

DISCLAIMER:

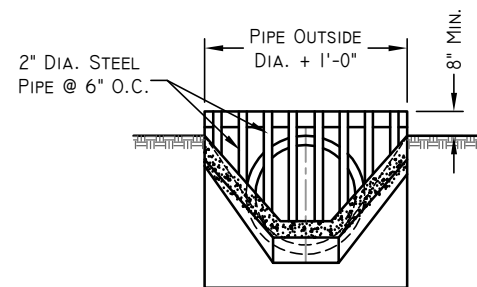
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NOTES:

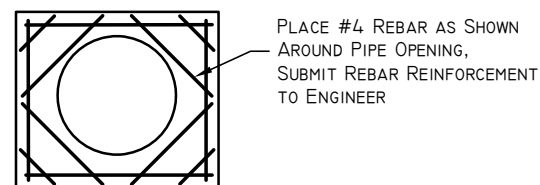
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2. ALL PIPES INTO BOX SHALL BE GROUTED AND WATERTIGHT.
3. SUBMIT TO CANAL COMPANY ENGINEER FOR APPROVAL OF FINAL DIMENSIONS ON REBAR REINFORCEMENT AND CONCRETE COMPONENTS.



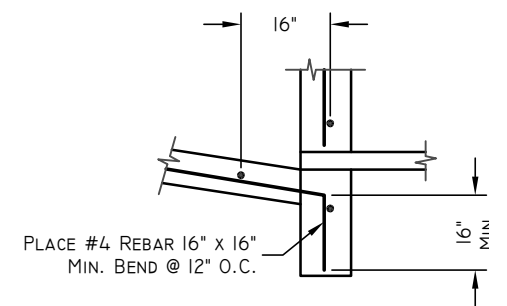
B DITCH PIPE CONNECTION SECTION
NTS



D TRASH RACK FRONT SECTION
NTS



3 REBAR IN HEADWALL
NTS



4 REBAR IN FOOTING OF PIPE HEADWALL
NTS

WEST FIELD IRRIGATION DISTRICT & COMPANY
TYPICAL DRAWINGS
OPEN DITCH TO PIPE TRANSITION & STRUCTURE

03-Open Ditch to Pipe Transition.dwg
03/22/2017 WFIC West Field Irrigation Reviews/Standard Drawings

JOB NO.

DESIGNER:
CHAD BROWN

DRAFTER:
MATT GURR

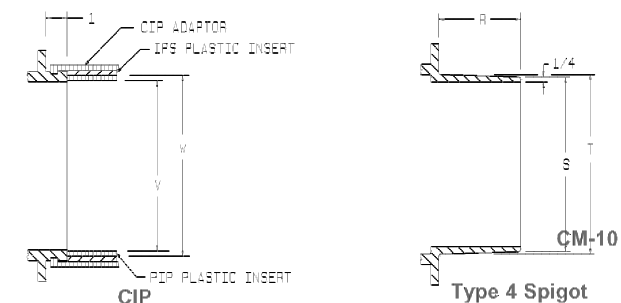
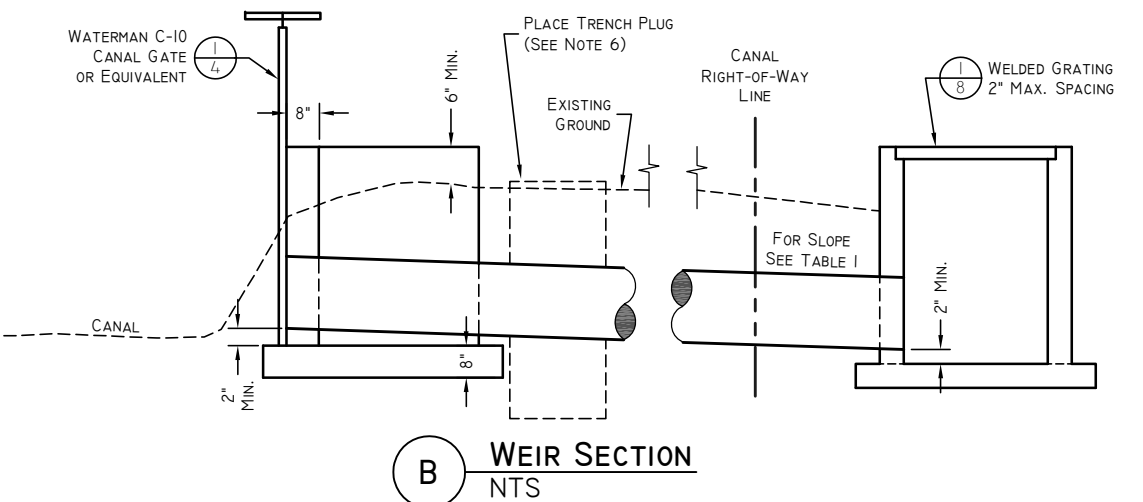
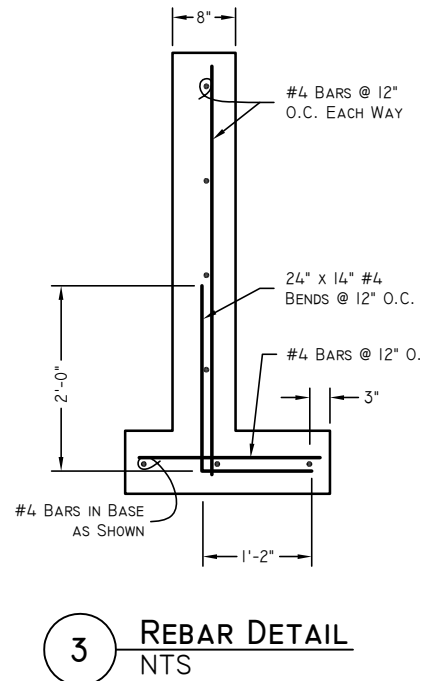
CHECKED:
REVIEWED:



CHECKED:
REVIEWED:

PROJECT LEADER:
CHAD BROWN

PRINT DATE:
NOVEMBER 15, 2022

NO.	DATE	DESCRIPTION



- NOTES:**
1. LID DETAILS FOR BOX SHOWN ON SHEET  OR .
 2. BOX NOT TO BE PLACED IN DRIVEWAYS, ROADS, OR OTHER TRAFFIC AREAS.
 3. ALL PIPES INTO BOXES SHALL BE GROUTED AND WATERTIGHT.
 4. BOX WALL THICKNESS AND REINFORCEMENT ARE DEPENDENT ON SITE CONDITIONS AND DEPTH. MINIMUM SIZE AS SHOWN.
 5. DIMENSIONS SHOWN ON WALLS AND BOXES ARE MINIMUM SIZE. SPECIFIC SITE CONDITIONS OF BOXES AND WALLS MAY REQUIRE ADDITIONAL THICKNESS OR WIDTH.
 6. TRENCH PLUG TO BE PLACED IN LOCATION SHOWN FOR WIDTH OF TRENCH AND 12 INCHES ABOVE AND BELOW PIPE AT A THICKNESS OF 24 INCHES. PLUGS SHALL BE A 10% BENTONITE AND 90% CLAY MIXTURE.
 7. PLACE STRUCTURE ON 6-INCHES OF IRRIGATION COMPANY ENGINEER APPROVED COMPACTED BEDDING.

MINIMUM PIPE SLOPES		
PIPE SIZE	MIN. SLOPE, FT/FT	MIN. SLOPE, %
24"	0.0008	.08%
30"	0.00058	.058%

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	V	W
6	8	9%	4	7%	2%	10	24	3	3½	2%	7	3¼	2¼	½	-	-	-	6.160	6.645
8	10	12	4%	7%	2%	10	24	3	3¾	2½	9	3½	2¼	½	4	7¼e	8	8.180	8.645
10	12	13%	6	7%	2%	10	24	3½	3¾	2½	11	3½	2¼	½	3%	9%	10	10.220	10.770
12	14	15%	7	7%	2%	10	24	4	3½	3	13	4	2¼	½	4	11%	12	12.270	12.780
14	16	17%	8	7%	2%	10	27	4¾	3¾	3¼	15	4	2¼	½	-	-	-	-	-
15	17	18%	8%	7%	2%	10	30	5	4½	3½	16	4	2½	½	4	14%	15	-	-
16	18¾	20%	9%	7%	2%	10	32	5½	4½	3½	17	4½	2¼	¾	-	-	-	-	-
18	21	22%	10%	1	3%	12	34	6	4½	4¼	19	4½	2¼	¾	4	17¼e	18	-	-
20	23¼	25%	11¾	1	3%	12	38	7	4¾	4	21	4½	2¼	¾	-	-	-	-	-
21	24	25%	12%e	1	3%	12	40	7	4¾	4	22	4½	2¼	¾	-	-	-	-	-
24	27¼	29%	13%	1	3½	12	44	8	5%	4½	25	4½	2¼	¾	-	-	-	-	-
30	33¾	36%	17%	1½	4	15	54	10	6	4½	31	6	2¼	¾	-	-	-	-	-
36	39¾	42%	20%	1½	4	15	62	12	6¼	5%	37	6	2½	¾	-	-	-	-	-
42	45¾	48%	23%	1½	5	18	84	14	7	6	43	6	2½	¾	-	-	-	-	-
48	51¾	54%	26%	1½	6	24	101	16	7%	6%	49%	6	2½	¾	-	-	-	-	-
54	58½	61%	30	2	6	30	111	18	7%	6%	55%	7	3	1	-	-	-	-	-
60	65	68	34	2	6	30	111	20	8%	7%	61%	8	3¼	1	-	-	-	-	-
72	77½	80¼	41	2	13	5	121	25½	10%	8%	73¼	8	3¾	1	-	-	-	-	-

GATE DIMENSIONS IN INCHES

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NOTES

1. TYPE 2 lubricated ball bearing lift used on 48" and larger gates.
2. Applies to spigotback gate only. Optional spigot, shown in separate detail.
3. All dimensions are also applicable for model CL-10 & CM-10 gates.
4. Add grout pad thickness to anchor bolt projection.
5. Type 3E 2:1 lift used, mounted to dual headrail.

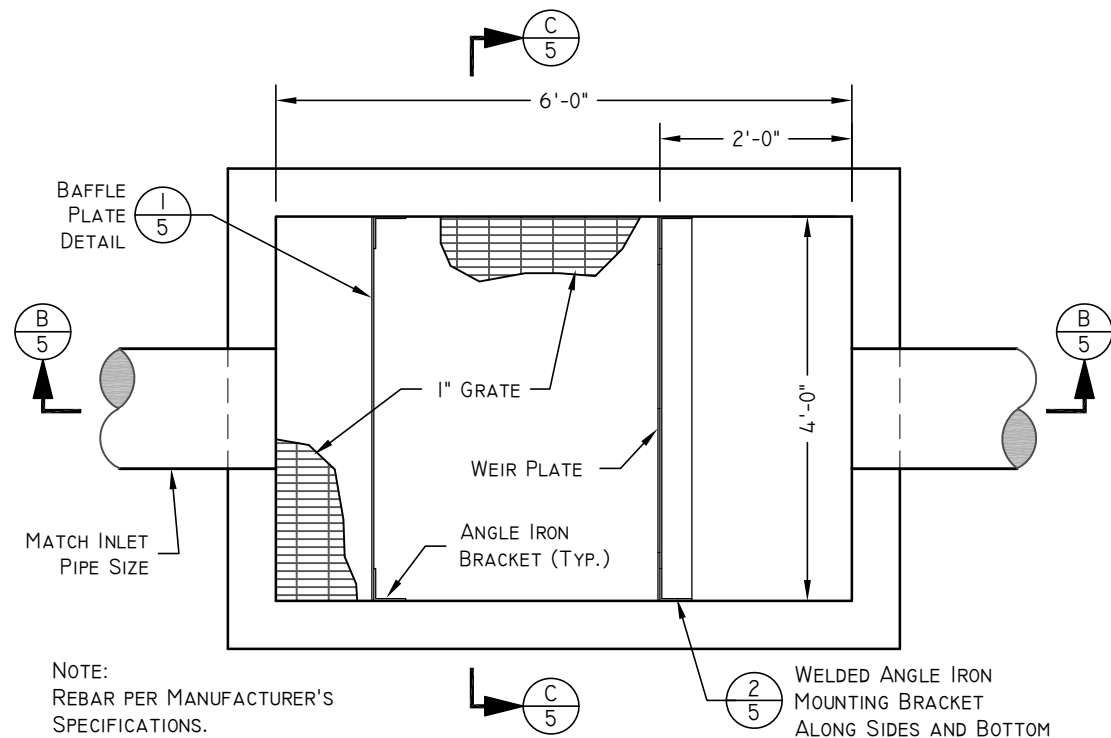
WEST FIELD
IRRIGATION DISTRICT

[illegible]

WEST FIELD IRRIGATION DISTRICT & COMPANY	
<p align="center">TYPICAL DRAWINGS</p> <p align="center">WEIR TURNOUT GATE</p>	
JOB NO.	04- Weir Turnout Gate.dwg 03/2017 WFLIC West Field Irrigation Reviews/Standard Drawings
SHEET	
4	OF 10

SEE WWW.WATERMANUSA.COM/PDF/C-10.PDF

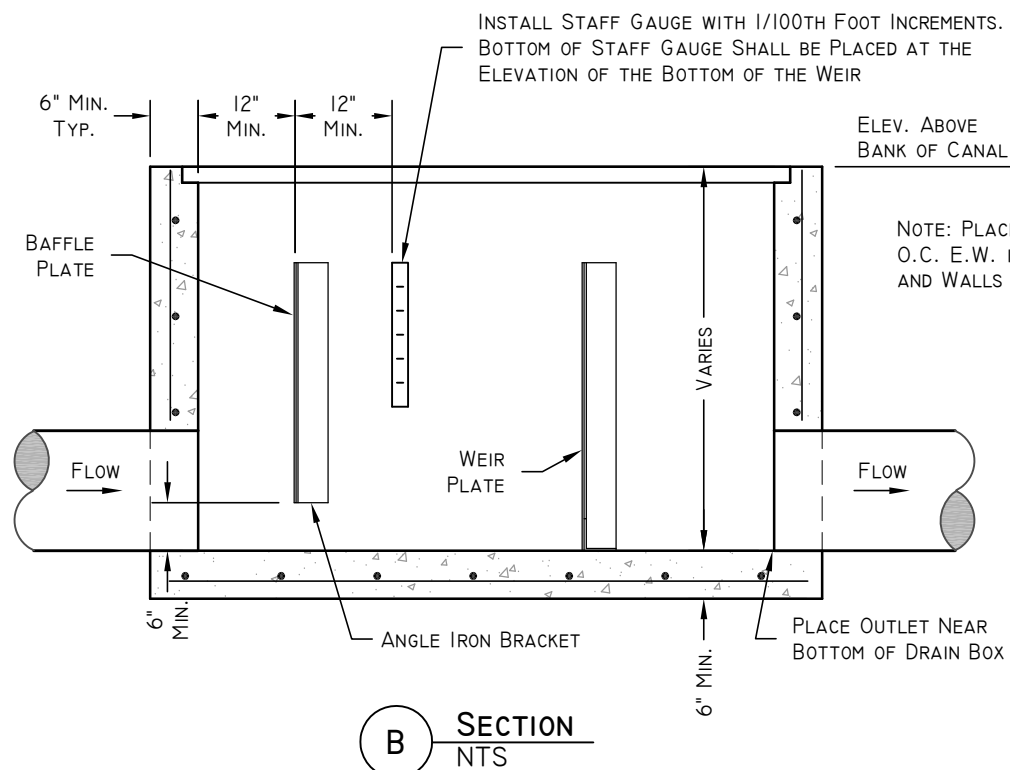
SHEET
4 OF 10



A PLAN VIEW
NTS

DISCLAIMER:

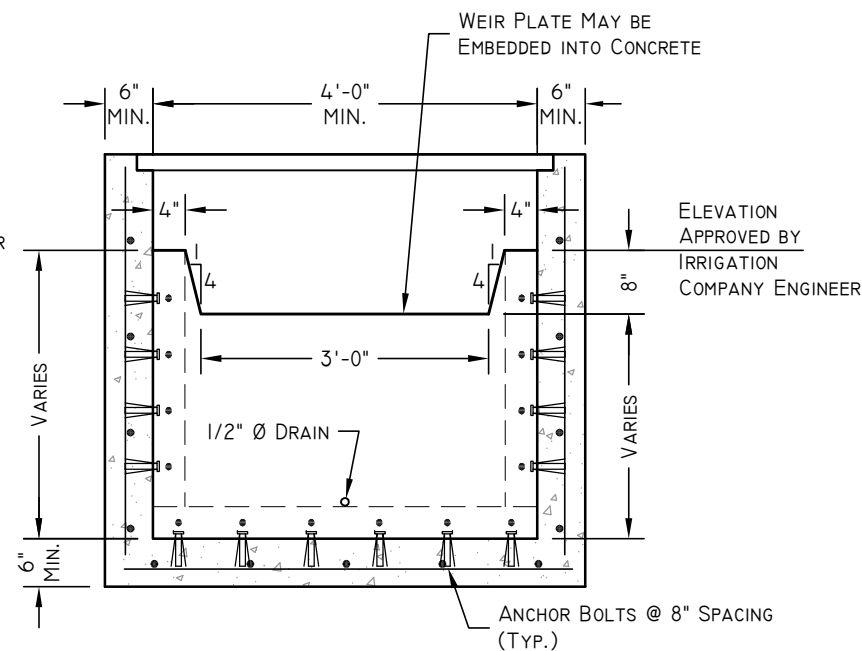
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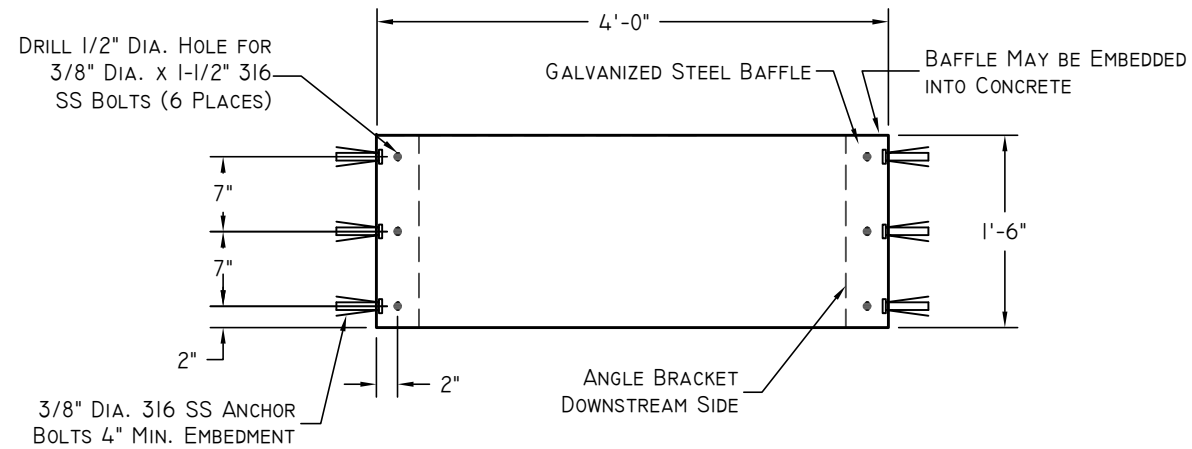
B SECTION
NTS

TABLE I
 $Q=3.367 LH^{3/2} @ L=3$

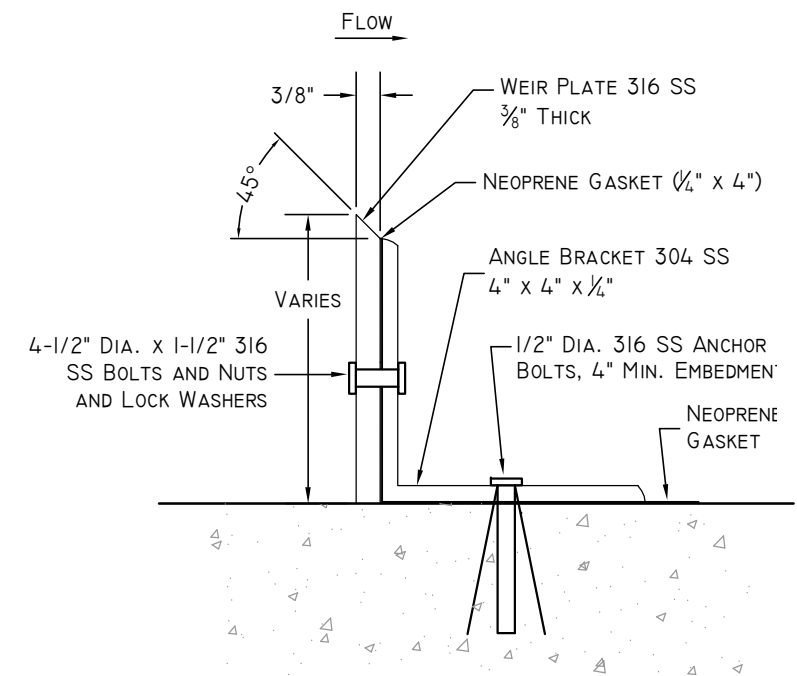
H (FT.)	Q (CFS)
0.2	0.90
0.3	1.66
0.4	2.56
0.5	3.57
0.6	4.69
0.66	5.42



C SECTION
NTS



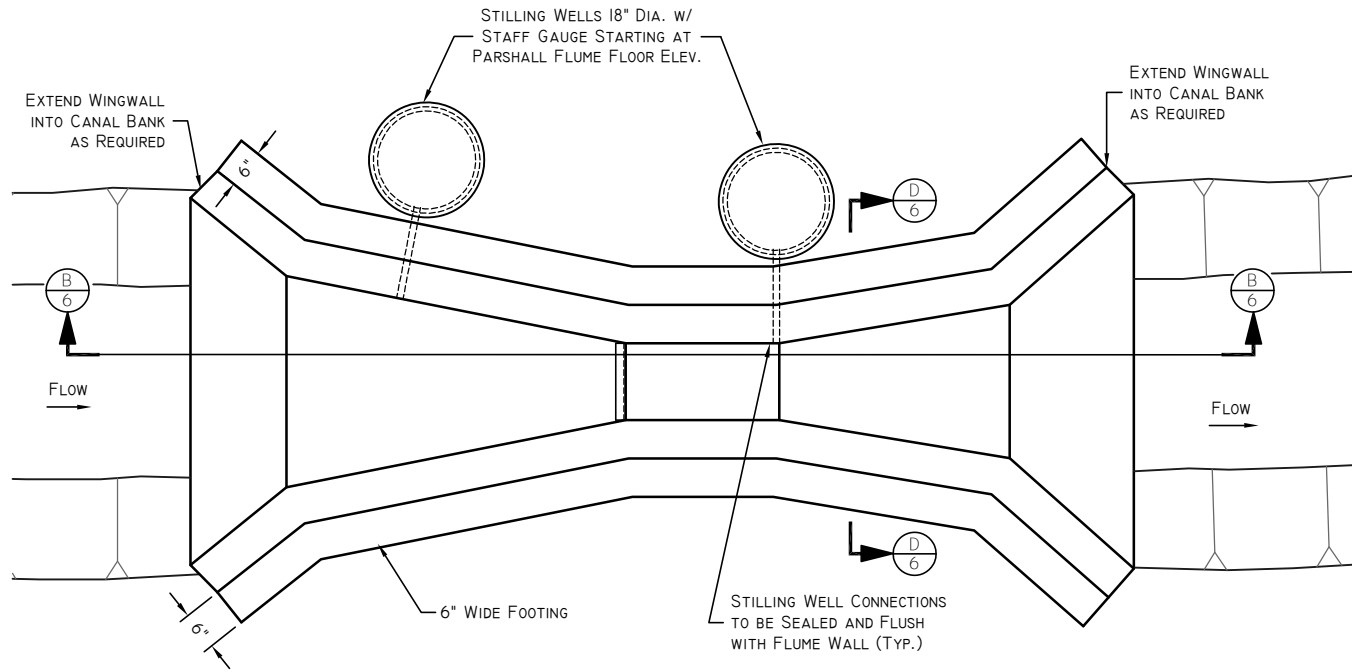
I BAFFLE PLATE DETAIL
NTS



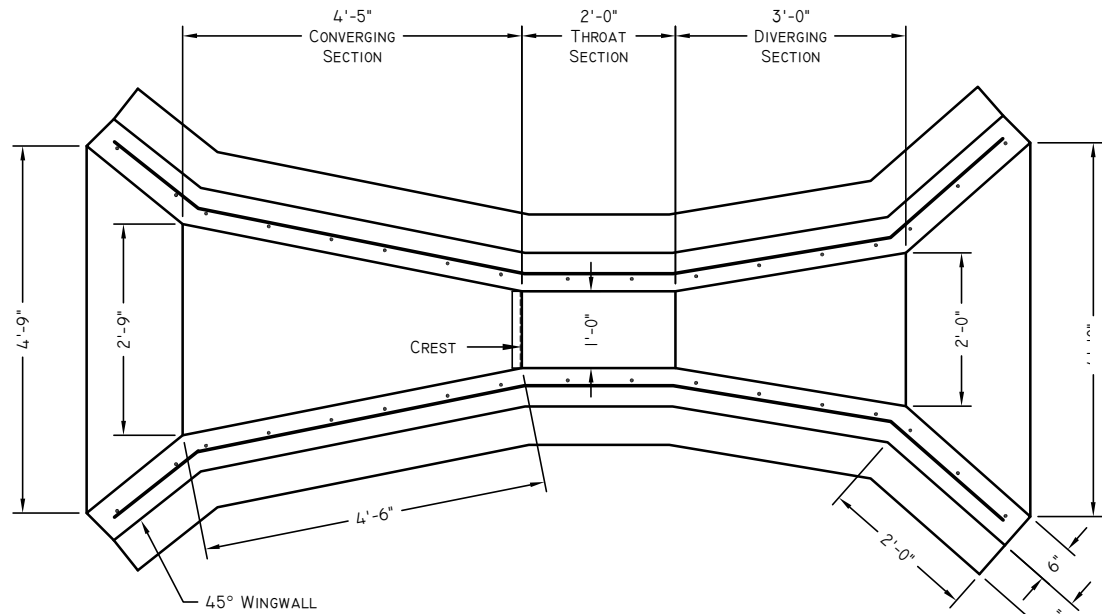
2 ANGLE IRON DETAIL
NTS

NOTES:

1. IF BOX IS CAST IN PLACE REBAR TO BE PLACED AT 12" O.C. E.W. MINIMUM.
2. DETAILS FOR CAST IN PLACE BOX SEE **2/4**.
3. ALL PIPES INTO BOX SHALL BE GROUTED AND WATERTIGHT.
4. SUBMIT TO IRRIGATION COMPANY ENGINEER FOR APPROVAL ON FINAL DIMENSIONS ON REBAR REINFORCEMENT AND CONCRETE COMPONENTS.
5. PLACE STRUCTURE ON 6-INCHES OF IRRIGATION COMPANY ENGINEER APPROVED COMPACTED BEDDING.



A PLAN



C REBAR PLAN

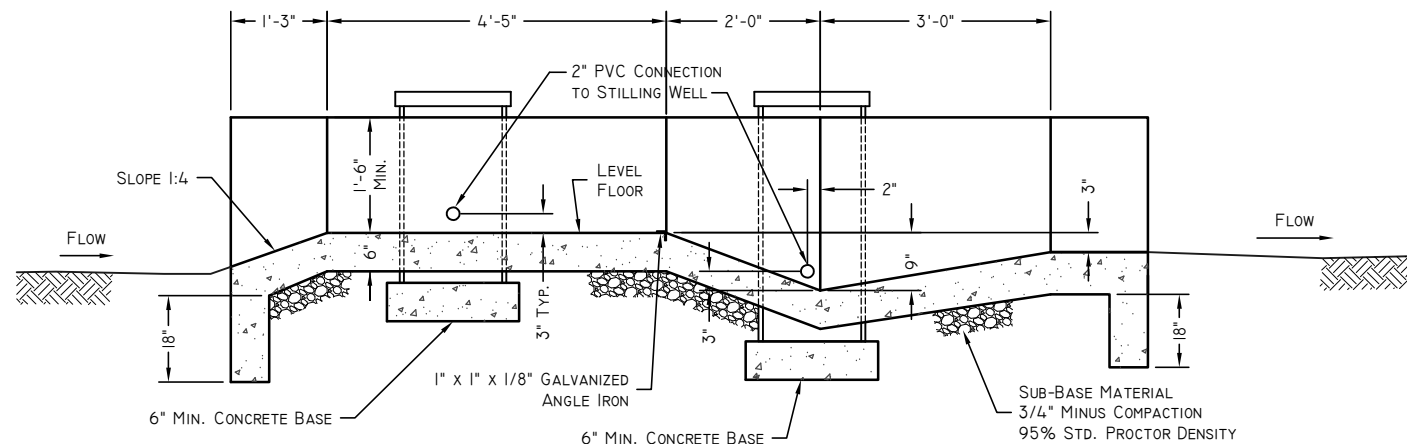
TABLE I HEAD-FLOW RELATIONSHIP FOR CONCRETE FLUME			
HEAD H _a (FEET)	FLOW Q (CFS)	HEAD H _a (FEET)	FLOW Q (CFS)
0.20	0.35	0.86	3.18
0.21	0.37	0.87	3.24
0.22	0.40	0.88	3.29
0.23	0.43	0.89	3.35
0.24	0.46	0.90	3.41
0.25	0.49	0.91	3.46
0.26	0.51	0.92	3.52
0.27	0.54	0.93	3.58
0.28	0.58	0.94	3.64
0.29	0.61	0.95	3.70
0.30	0.64	0.96	3.76
0.31	0.68	0.97	3.82
0.32	0.71	0.98	3.88
0.33	0.74	0.99	3.94
0.34	0.77	1.00	4.00
0.35	0.80	1.01	4.06
0.36	0.84	1.02	4.12
0.37	0.88	1.03	4.18
0.38	0.92	1.04	4.25
0.39	0.95	1.05	4.31
0.40	0.99	1.06	4.37
0.41	1.03	1.07	4.43
0.42	1.07	1.08	4.50
0.43	1.11	1.09	4.56
0.44	1.15	1.10	4.62
0.45	1.19	1.11	4.68
0.46	1.23	1.12	4.75
0.47	1.27	1.13	4.82
0.48	1.31	1.14	4.88
0.49	1.35	1.15	4.94
0.50	1.39	1.16	5.01
0.51	1.44	1.17	5.08
0.52	1.48	1.18	5.15
0.53	1.52	1.19	5.21
0.54	1.57	1.20	5.28
0.55	1.62	1.21	5.34
0.56	1.66	1.22	5.41
0.57	1.70	1.23	5.48
0.58	1.75	1.24	5.55
0.59	1.80	1.25	5.62
0.60	1.84	1.26	5.69
0.61	1.88	1.27	5.76
0.62	1.93	1.28	5.82
0.63	1.98	1.29	5.89
0.64	2.03	1.30	5.96
0.65	2.08	1.31	6.03
0.66	2.13	1.32	6.10
0.67	2.18	1.33	6.18
0.68	2.23	1.34	6.25
0.69	2.28	1.35	6.32
0.70	2.33	1.36	6.39
0.71	2.38	1.37	6.46
0.72	2.43	1.38	6.53
0.73	2.48	1.39	6.60
0.74	2.53	1.40	6.68
0.75	2.58	1.41	6.75
0.76	2.63	1.42	6.82
0.77	2.68	1.43	6.89
0.78	2.74	1.44	6.97
0.79	2.80	1.45	7.04
0.80	2.85	1.46	7.12
0.81	2.90	1.47	7.19
0.82	2.96	1.48	7.26
0.83	3.02	1.49	7.34
0.80	3.07	1.50	7.41
0.85	3.12		

DISCLAIMER:

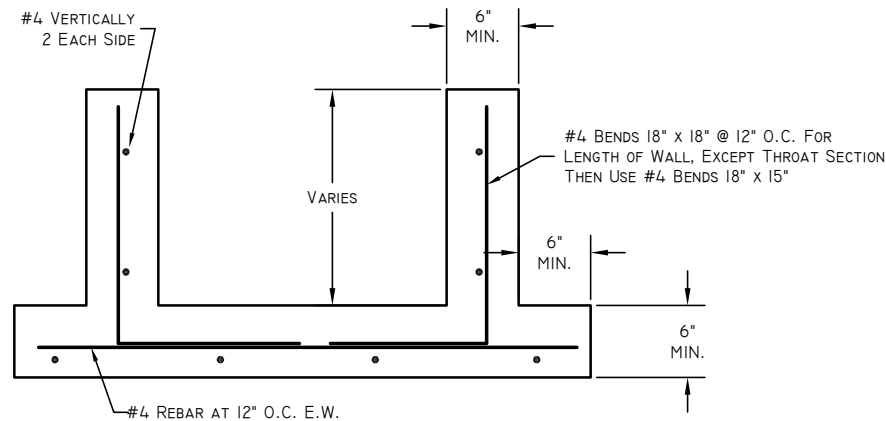
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NOTES:

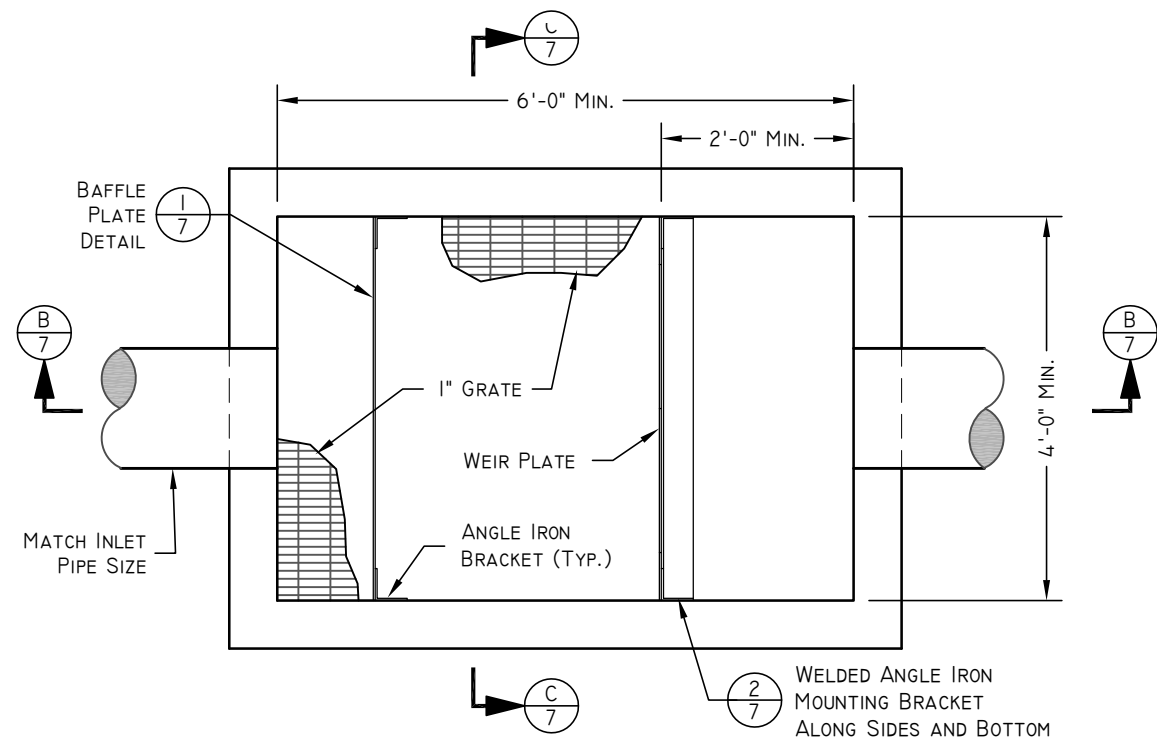
1. REINFORCING TO BE #4 REBAR @ 12-INCHES O.C. E.W. WITH 20-INCH MINIMUM SPLICE LENGTH.
2. REBAR TO BE BENT AT ANGLES OF STRUCTURES. OVERLAP TO BE IN STRAIGHT LENGTHS ONLY.
3. APPLICANT TO SUBMIT ACTUAL PLANS AND MATERIAL OF FLUME PRIOR TO CONSTRUCTION.



B PROFILE



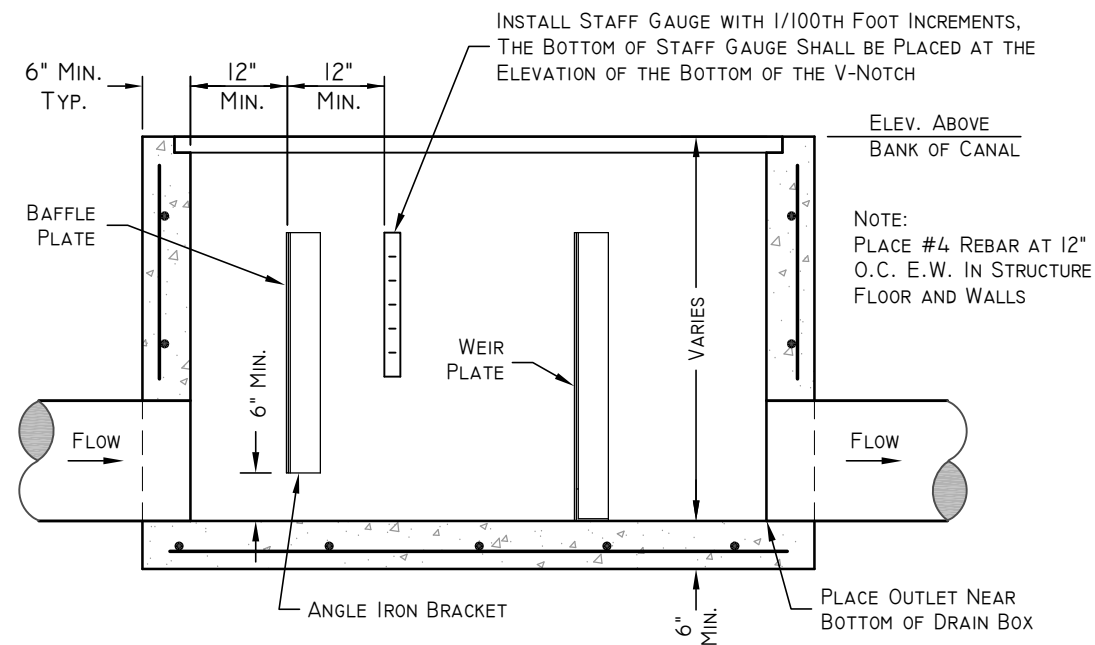
D CROSS SECTION
NTS



A PLAN VIEW
NTS

DISCLAIMER:

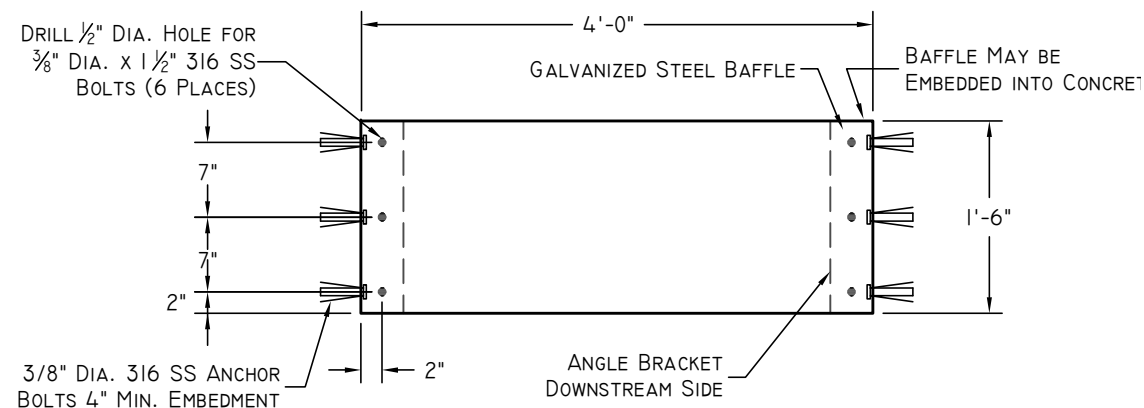
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B SECTION
NTS

FLOW TABLE
 $Q = CW \times H^{2.5}$

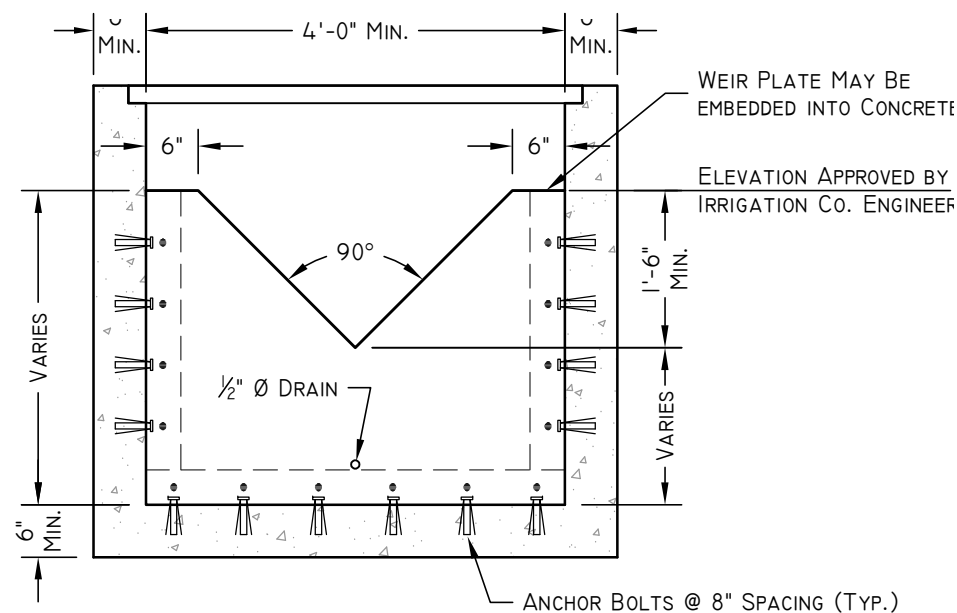
CW	2.5
H (FT.)	Q (CFS)
0.20	0.04
0.30	0.12
0.40	0.25
0.50	0.44
0.60	0.70
0.70	1.02
0.80	1.43
0.90	1.92
1.00	2.50
1.10	3.17
1.20	3.94
1.30	4.82
1.40	5.80
1.50	6.89



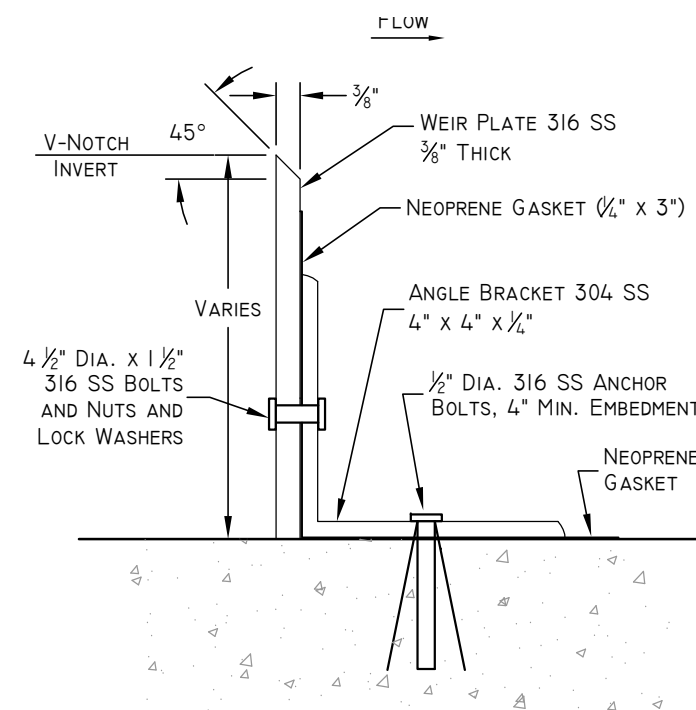
1 BAFFLE PLATE DETAIL
NTS

NOTES:

1. IF BOX IS CAST IN PLACE, PUT #4 REBAR PLACED AT 12" O.C. E.W. IN STRUCTURE FLOOR AND WALLS MINIMUM.
2. DETAILS FOR CAST IN PLACE BOX SEE **2**.
3. ALL PIPES INTO BOX SHALL BE GROUTED AND WATERTIGHT.
4. SUBMIT TO IRRIGATION COMPANY ENGINEER FOR FINAL DIMENSIONS ON REBAR REINFORCEMENT AND CONCRETE COMPONENTS.
5. PLACE STRUCTURE ON 6-INCHES OF IRRIGATION COMPANY ENGINEER APPROVED COMPACTED BEDDING



C SECTION
NTS



2 ANGLE IRON DETAIL
NTS

WEST FIELD
IRRIGATION DISTRICT

DESIGNER:	DRAFTSMAN:	CHECKED:	REVIEWED:	PROJECT LEADER:	NO.	DATE	DESCRIPTION
CHAD BROWN	MATT GURK			CHAD BROWN			

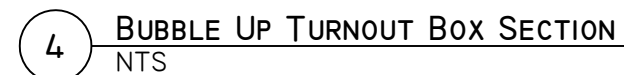
WEST FIELD IRRIGATION DISTRICT & COMPANY

TYPICAL DRAWINGS
90D V-NOTCH WEIR

07-90° V-Notch Weir.dwg
03/2017 WFIG West Field Irrigation Reviews/Standard Drawings

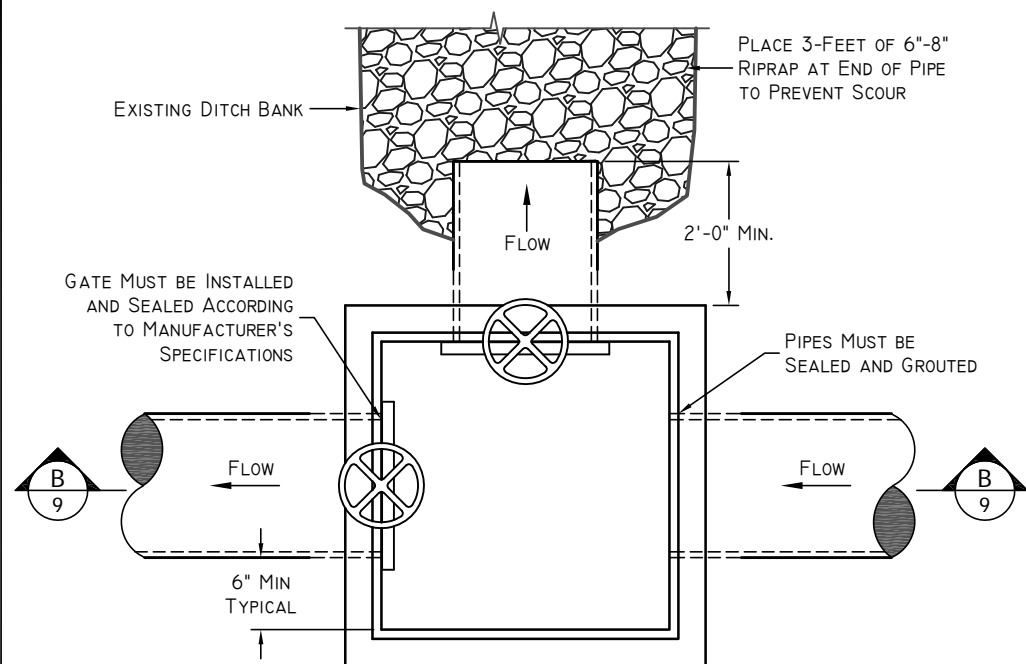
JOB NO.

SHEET
7 OF **10**

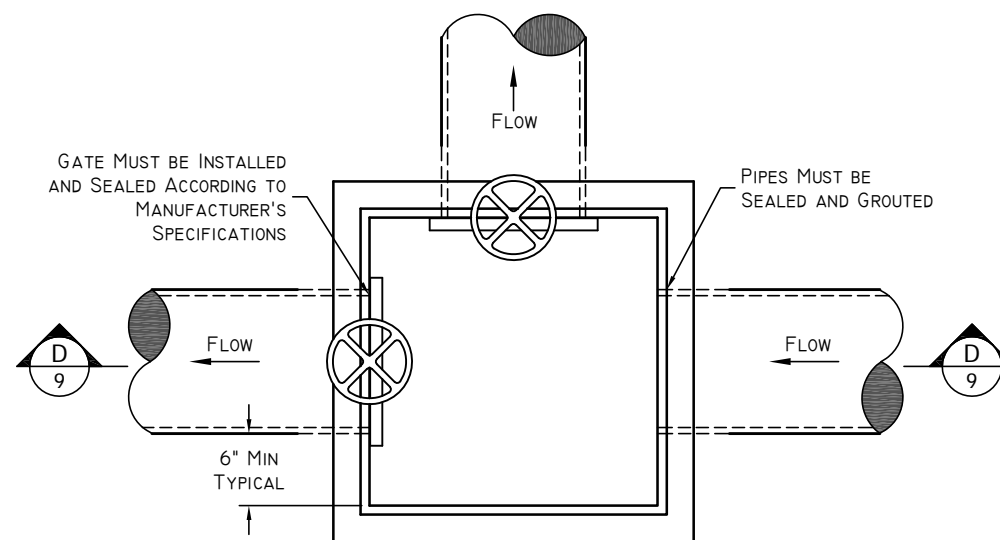


- ### 3 BUBBLE UP BOX SECTION

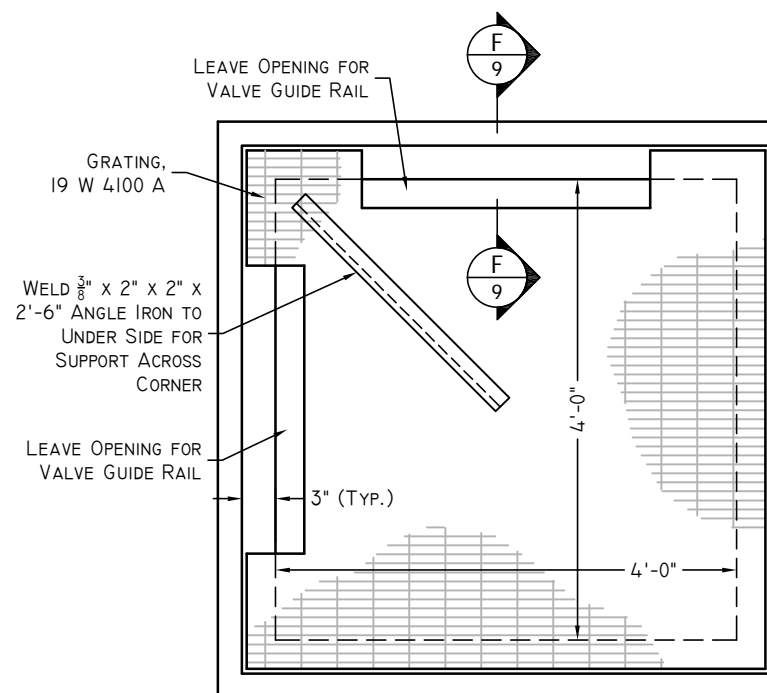
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A TURNOUT BOX PLAN



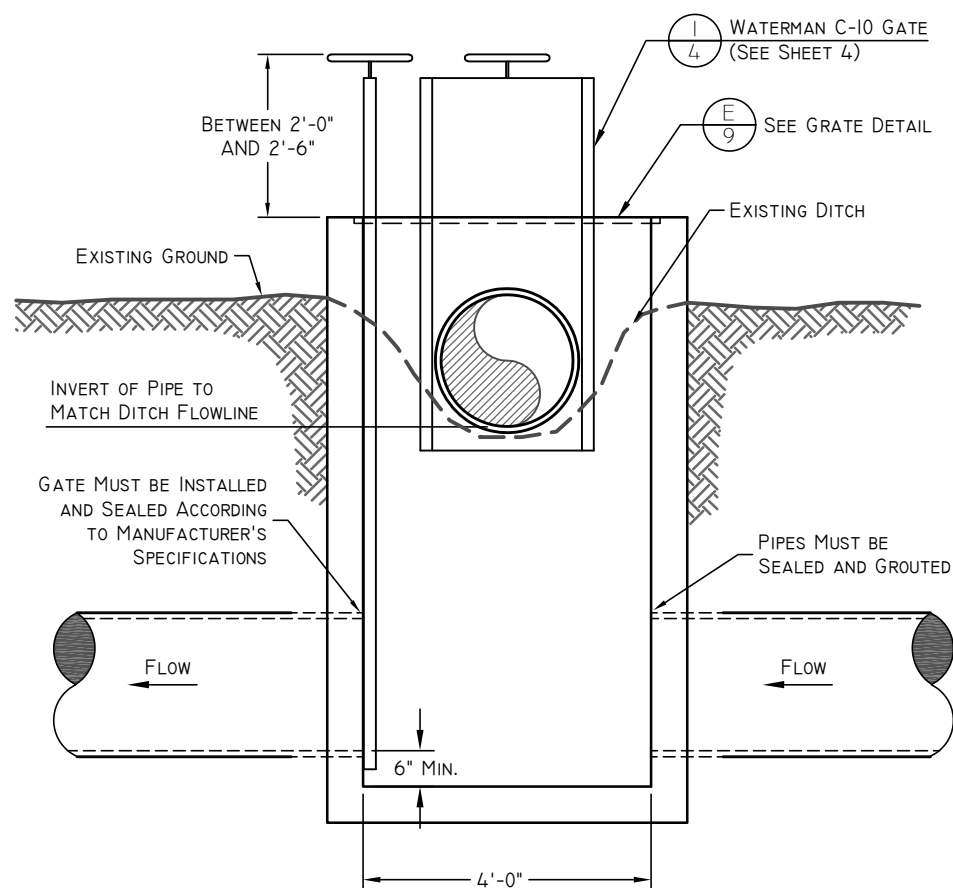
C DIVERSION BOX
NTS



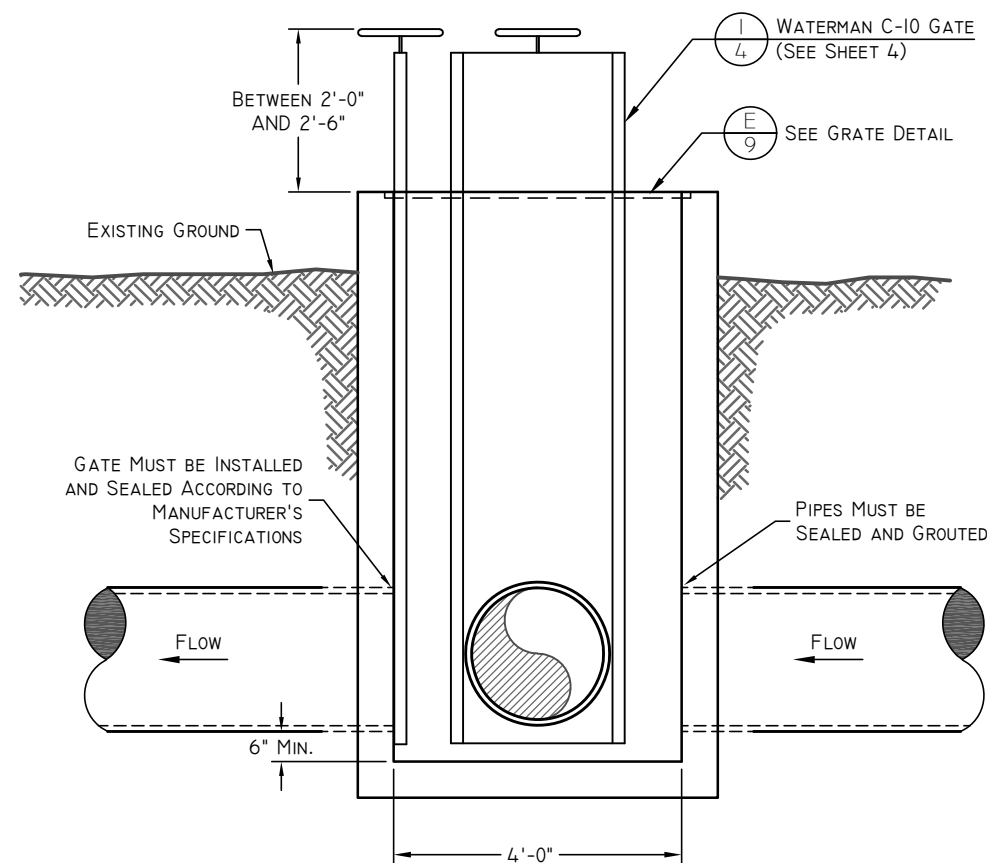
E GRATE DETAIL - TOP VIEW
NTS

DISCLAIMER:

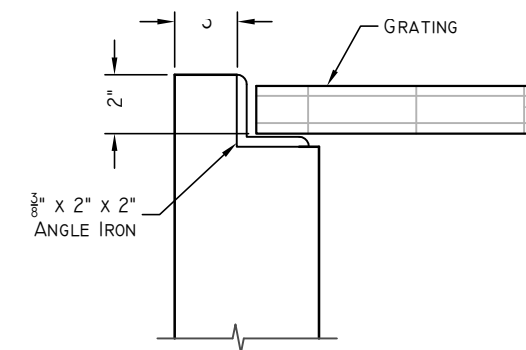
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B TURNOUT BOX SECTION
NTS



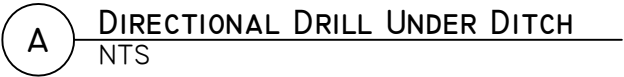
D DIVERSION BOX SECTION



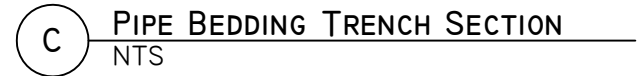
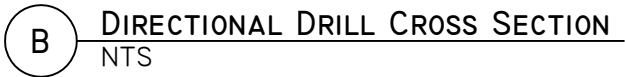
WALL SECTION
NTS

- NOTES:
1. ALL PIPES INTO BOX SHALL BE GROUTED AND WATERTIGHT.
 2. BOXES MAY BE PRECAST OR CAST IN PLACE. BOXES SHALL HAVE A MINIMUM INTERIOR WIDTH AND LENGTH OF 4 FEET WITH #4 REBAR @ 12 INCHES O.C. BOXES MUST BE SUBMITTED FOR REVIEW.
 3. TURNOUT AND DIVERSION BOXES SHALL NOT BE PLACED IN ROADWAY.
 4. ALL EXPOSED METAL SHALL BE GALVANIZED.

9 OF 10	WEST FIELD IRRIGATION DISTRICT & COMPANY									
	TYPICAL DRAWINGS									
	IRRIGATION TURNOUT-DIVERSION BOX									
	JOB NO.		09- Irrigation Turnout Diversion Box.dwg 03/22/17 WHFC West Field Irrigation Review/Standard Drawings							



1. BORE PIT COMPACTION TO BE 95% STANDARD PROCTOR DENSITY.
2. FILL BORE PITS WITH A MIXTURE OF NATIVE MATERIAL AND 10% BENTONITE POWDER TO CREATE A SEAL THAT WILL PREVENT WATER FROM FOLLOWING THE NEW CONDUIT.
3. CONDUIT MUST BE A MINIMUM OF 2 FEET BELOW THE BOTTOM OF THE EXISTING DITCH OR PIPE.
4. BORE PITS MUST BE COMPLETELY PLACED OUTSIDE OF THE DITCH RIGHT-OF-WAY.



I. MAXIMUM LIFT IS 12" BEFORE COMPACTION

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TYPICAL DRAWINGS

DIRECTIONAL DRILLING - PIPE BEDDING

11.1 Directional Drilling

JOB NO.	11 - Directional Drilling.dwg O:\2017 WFIC West Field Irrigation Reviews\Standard Drawings
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