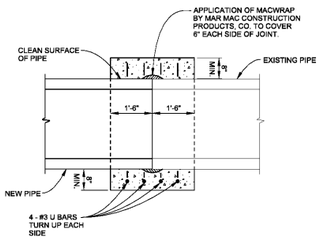
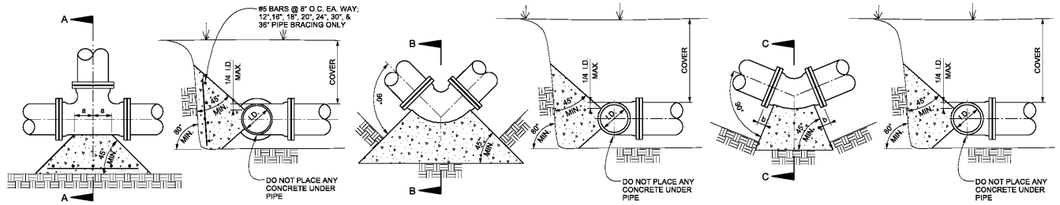


J1 | TRANSITION COLLAR DETAIL | NO SCALE



NOTES:

1. CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL AND INSPECTED PRIOR TO BACKFILLING.
2. DUCTILE IRON JOINTS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPE SHALL BE WRAPPED IN PLASTIC ENCASEMENT.
3. ASSUMED ALLOWABLE SOIL BEARING STRESS IS 2,500 lbs / SQ. FT. CONTACT ENGINEER SHOULD SOIL WITH LOWER BEARING STRESS BE ENCOUNTERED.

TYPICAL CONCRETE BRACING FOR TEES

PIPE DIA.	a	MIN. COVER	150 PSI BEARING AREA (SQ. FT.)	250 PSI BEARING AREA (SQ. FT.)
4"	5"	3'-0"	1	2
6"	6"	3'-0"	2	3
8"	7"	3'-0"	4	6
10"	9"	3'-0"	5	8
12"	10"	5'-0"	7	12
14"	1'-0"	5'-0"	10	16
16"	1'-1"	5'-0"	13	21
18"	1'-2"	5'-0"	16	26
20"	1'-4"	5'-0"	19	32
24"	1'-8"	5'-0"	28	46
30"	1'-11"	5'-0"	43	71
36"	2'-2"	5'-0"	62	102
42"	2'-4"	5'-0"	84	139
48"	2'-7"	5'-0"	109	181

NOTES:

1. CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL AND INSPECTED PRIOR TO BACKFILLING.
2. DUCTILE IRON JOINTS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPE SHALL BE WRAPPED IN PLASTIC ENCASEMENT.
3. ASSUMED ALLOWABLE SOIL BEARING STRESS IS 2,500 lbs / SQ. FT. CONTACT ENGINEER SHOULD SOIL WITH LOWER BEARING STRESS BE ENCOUNTERED.

TYPICAL CONCRETE BRACING FOR 90° BENDS

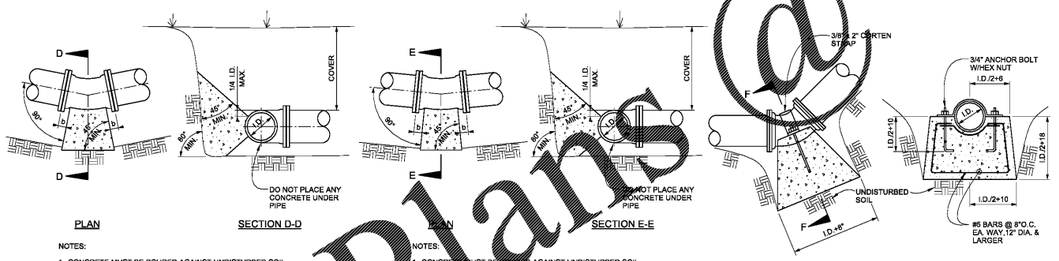
PIPE DIA.	b	MIN. COVER	150 PSI BEARING AREA (SQ. FT.)	250 PSI BEARING AREA (SQ. FT.)
4"	5"	3'-0"	2	2
6"	5"	3'-0"	3	4
8"	5"	3'-0"	5	8
10"	5"	3'-0"	7	12
12"	6"	5'-0"	10	16
14"	6"	5'-0"	14	22
16"	6"	5'-0"	18	29
18"	6"	5'-0"	22	36
20"	6"	5'-0"	27	45
24"	7"	5'-0"	39	64
30"	8"	5'-0"	60	100
36"	8"	5'-0"	87	144
42"	9"	5'-0"	118	196
48"	9"	5'-0"	154	256

NOTES:

1. CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL AND INSPECTED PRIOR TO BACKFILLING.
2. DUCTILE IRON JOINTS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPE SHALL BE WRAPPED IN PLASTIC ENCASEMENT.
3. ASSUMED ALLOWABLE SOIL BEARING STRESS IS 2,500 lbs / SQ. FT. CONTACT ENGINEER SHOULD SOIL WITH LOWER BEARING STRESS BE ENCOUNTERED.

TYPICAL CONCRETE BRACING FOR 45° BENDS

PIPE DIA.	b	MIN. COVER	150 PSI BEARING AREA (SQ. FT.)	250 PSI BEARING AREA (SQ. FT.)
4"	5"	3'-0"	1	1
6"	5"	3'-0"	2	3
8"	5"	3'-0"	3	4
10"	5"	3'-0"	4	7
12"	6"	5'-0"	6	9
14"	6"	5'-0"	8	12
16"	6"	5'-0"	11	16
18"	6"	5'-0"	12	20
20"	6"	5'-0"	15	23
24"	7"	5'-0"	21	32
30"	8"	5'-0"	33	50
36"	8"	5'-0"	47	70
42"	9"	5'-0"	64	107
48"	9"	5'-0"	84	139



NOTES:

1. CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL AND INSPECTED PRIOR TO BACKFILLING.
2. DUCTILE IRON JOINTS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPE SHALL BE WRAPPED IN PLASTIC ENCASEMENT.
3. ASSUMED ALLOWABLE SOIL BEARING STRESS IS 2,500 lbs / SQ. FT. CONTACT ENGINEER SHOULD SOIL WITH LOWER BEARING STRESS BE ENCOUNTERED.

TYPICAL CONCRETE BRACING FOR 22½° BENDS

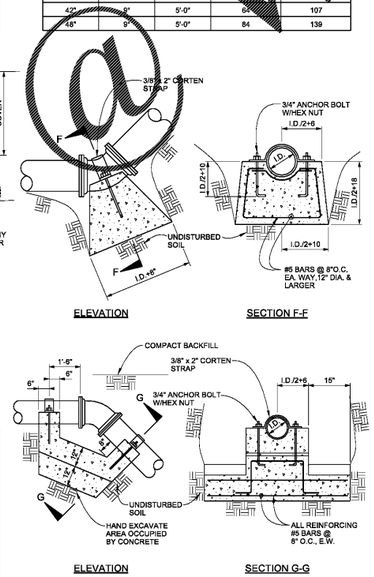
PIPE DIA.	b	MIN. COVER	150 PSI BEARING AREA (SQ. FT.)	250 PSI BEARING AREA (SQ. FT.)
4"	5"	3'-0"	1	1
6"	5"	3'-0"	1	2
8"	5"	3'-0"	2	2
10"	5"	3'-0"	2	4
12"	6"	3'-0"	3	5
14"	6"	5'-0"	4	7
16"	6"	5'-0"	5	8
18"	6"	5'-0"	6	10
20"	6"	5'-0"	8	13
24"	7"	5'-0"	11	18
30"	8"	5'-0"	17	28
36"	8"	5'-0"	24	40
42"	9"	5'-0"	33	55
48"	9"	5'-0"	43	71

NOTES:

1. CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL AND INSPECTED PRIOR TO BACKFILLING.
2. DUCTILE IRON JOINTS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPE SHALL BE WRAPPED IN PLASTIC ENCASEMENT.
3. ASSUMED ALLOWABLE SOIL BEARING STRESS IS 2,500 lbs / SQ. FT. CONTACT ENGINEER SHOULD SOIL WITH LOWER BEARING STRESS BE ENCOUNTERED.

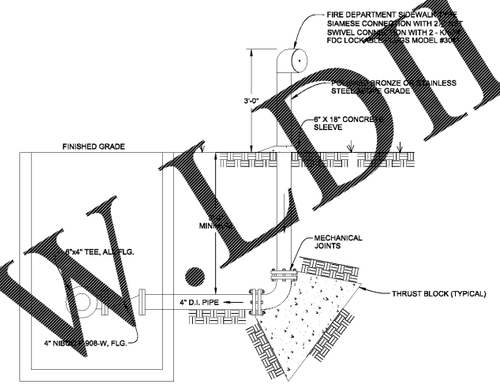
TYPICAL CONCRETE BRACING FOR 11¼° BENDS

PIPE DIA.	b	MIN. COVER	150 PSI BEARING AREA (SQ. FT.)	250 PSI BEARING AREA (SQ. FT.)
4"	5"	3'-0"	1	1
6"	5"	3'-0"	1	1
8"	5"	3'-0"	1	1
10"	5"	3'-0"	1	2
12"	6"	5'-0"	2	3
14"	6"	5'-0"	2	4
16"	6"	5'-0"	3	4
18"	6"	5'-0"	3	5
20"	6"	5'-0"	4	7
24"	7"	5'-0"	6	9
30"	8"	5'-0"	9	14
36"	8"	5'-0"	12	20
42"	9"	5'-0"	17	28
48"	9"	5'-0"	22	36



CONCRETE BRACING FOR VERTICAL BENDS

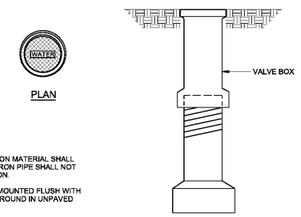
A1 | STANDARD PIPE BRACING DETAILS | NO SCALE



NOTES:

1. ALL SIAMESE CONNECTION'S MUST BE WITHIN 100 FEET OF A FIRE HYDRANT.
2. ALL THRUST BLOCKS SHALL BE INSPECTED PRIOR TO BACKFILLING.

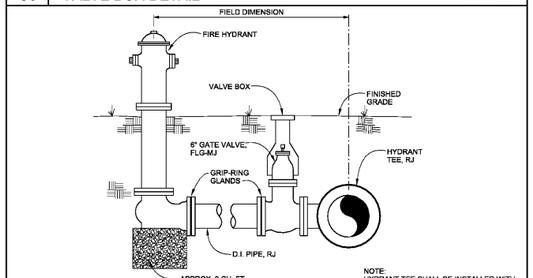
E8 | FIRE DEPARTMENT CONNECTION DETAIL | NO SCALE



NOTES:

1. VALVE BOX AND EXTENSION MATERIAL SHALL BE CAST IRON. DUCTILE IRON PIPE SHALL NOT BE USED AS AN EXTENSION.
2. VALVE BOXES SHALL BE MOUNTED FLUSH WITH TOP OF PAVEMENT, OR GROUND IN UNPAVED AREAS.
3. ALL VALVE BOXES SHALL BE TRAFFIC RATED.
4. WHERE INSTALLED IN VEGETATED AREAS, VALVE BOX SHALL BE INSTALLED WITH CONCRETE GRADE RING.
5. VALVE BOX COVER SHALL READ "GAS" WHERE INSTALLED OVER GAS VALVES.

C8 | VALVE BOX DETAIL | NO SCALE



NOTE:
HYDRANT TEE SHALL BE INSTALLED WITH A MINIMUM 18 L.F. OF RESTRAINED JOINT PIPE ON BOTH MAINLINE SIDES OF TEE.

A8 | FIRE HYDRANT DETAIL | NO SCALE

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ALABAMA LICENSED No. 35801 PROFESSIONAL ENGINEER JOSS TAYLOR III

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ISSUE FOR BID	2018.05.25

DRAWN BY: LHL
CHECKED BY: JRT

SIMULATION LABORATORY
BUILDING - USA JOB #16-07
MOBILE, ALABAMA
ABC #2017372
GMC # AMOB160019

MISCELLANEOUS DETAILS

C2.03

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