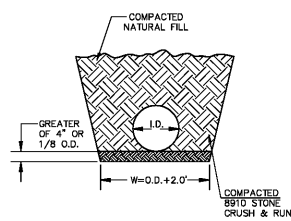


**TYPICAL THRUST BLOCK**  
(NTS)

**REQUIRED BEARING AREA (SQ. FT.)  
STATIC 100 P.S.I. OR LOWER**

PIPE	11 1/4" BEND	22 1/2" BEND	45" BEND	90" BEND	TEE
3"-4"	.17	.22	.60	1.00	.83
5"	.22	.67	1.60	3.00	2.00
6"	.55	1.33	3.33	5.33	7.50
10"	.83	2.20	5.60	10.40	8.00
12"	1.17	3.50	8.25	15.00	11.00
14"	1.8	4.50	9.60	17.50	12.25
16"	2.5	7.20	12.70	23.33	16.00
18"	3.3	7.30	16.10	30.00	21.00
20"	6.25	9.70	22.50	35.00	25.00

- NOTES:**
1. BASED ON 2500#/FT. SOIL BEARING CAPACITY
  2. CONCRETE TO BE CLASS "B" - 2,500PSI COMPRESSIVE STRENGTH
  3. CONCRETE TO BE POURED AGAINST UNDISTURBED EARTH ON BEARING SURFACE.
  4. ALL PIPE JOINTS TO BE MECHANICAL
  5. ALL FITTINGS TO BE WRAPPED IN PLASTIC TO PREVENT ADHERENCE OF CONCRETE TO METAL
  6. NO CONCRETE TO BE PLACED UNDER PIPE OR AROUND JOINT BOLTS.



**BEDDING FOR D.I. PIPE  
NON-ROADWAY TRENCHES**  
(NTS)

**PIPE DEFLECTIONS**

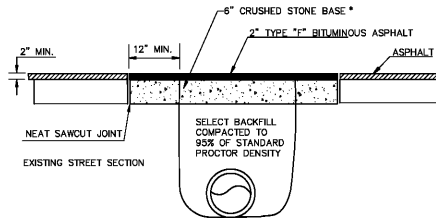
PIPE SIZE	18.0' JOINT	20.0' JOINT
4" - 12"	15"	16"
14", 16"	8"	9"
18", 20", 24"	8"	9"

NOTE: FOR MORE INFORMATION, SEE SHEET TWO OF THESE DETAILS.

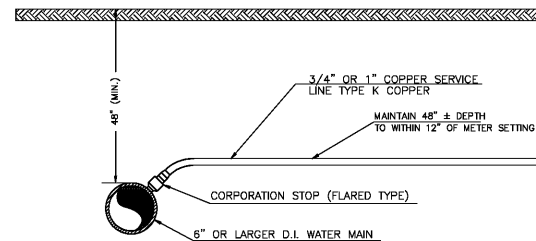


**\*SEE PIPE DEFLECTIONS CHART FOR INFO:**

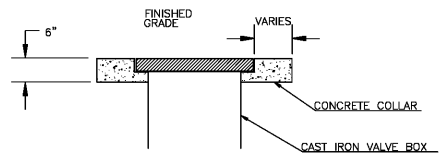
- NOTES:**
1. FOR ALL PIPE DEFLECTIONS SEE CHART ON PAGE 2 OF THIS DETAIL.
  2. ALL MATERIALS WILL BE AMERICAN MADE ONLY!!
  3. ALL FIRE HYDRANTS: NATIONAL STANDARD THREADS; 4-1/2" STREAMER & 2-1/2" HOSE NOZZLE. M & H STYLE/25 MUELLER/CONVIURON, AMERICAN DARLING B-82 B APPROVED; BRONZE TO BRONZE SEATED, EPOXY COATED SHOES, WEATHER CAPS SHALL NOT BE MADE OF RUBBER!!!
  4. ALL FITTINGS SHALL HAVE MECHANICAL JOINTS.
  5. ALL BRASS FITTINGS SHALL BE FLARED COPPER ONLY! MUELLER OR FORD OR APPROVED EQUAL.
  6. ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC.
  7. ALL FITTINGS 10" AND LARGER WILL BE FULL BODY ONLY. NO COMPACT FITTINGS.
  8. ALL COPPER LINES SHALL BE TYPE "K" ONLY.
  9. FOR ALL PIPES UNDER ROADS, TRENCH BACKFILL SHALL BE MECHANICALLY TAMPED FOR THE ENTIRE DEPTH OF TRENCH TO 95% STANDARD PROCTER, WITH THE TOP 12" TAMPED TO 98% MINIMUM. WITHIN SIX(6) FEET BEHIND CURBS, MECHANICALLY TAMP TO PREVENT SETTLEMENT. NO SPECIFIC DENSITY REQUIRED.
  10. ALL BENDS TO BE INSTALLED WITH RETAINER GLANDS.
  11. ALL M.J. BOLTS AND BOLTS ON RETAINER GLANDS ARE TO BE TIGHTENED WITH TORQUE WRENCH; 75-90 FT/LBS. RECOMMENDED.
  12. CHLORINE WILL BE INSTALLED ONLY IN LIQUID FORM THROUGH A TAP PLACED AT A POINT DETERMINED BY WATER BOARD INSPECTORS.
  13. ALL MAINLINE VALVES WILL BE RESILIENT SEAT G.V.



**TYPICAL UTILITY PATCH**

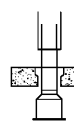


**3/4" OR 1" SERVICE CONNECTION  
FOR DUCTILE IRON WATER MAIN**  
(NTS)

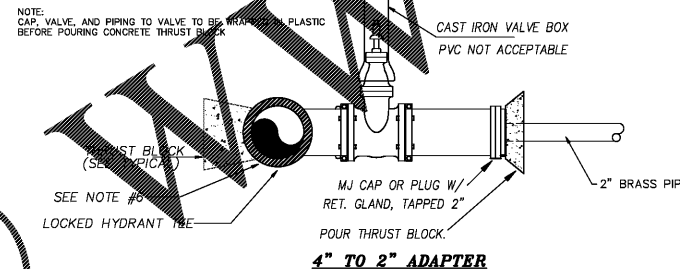


**TYPICAL WATER VALVE INSTALLATION**

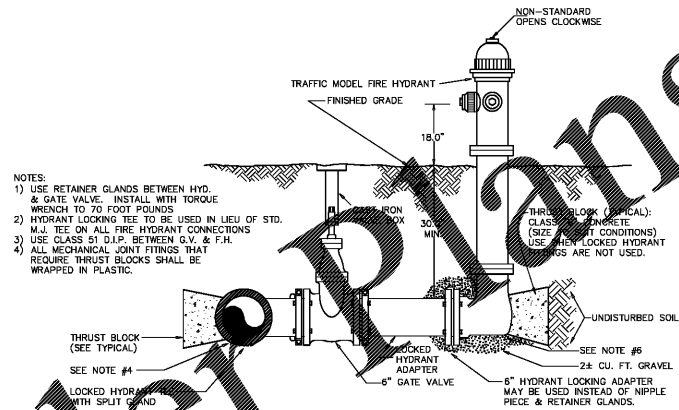
(NTS)



**VALVE BOX**  
(NTS)

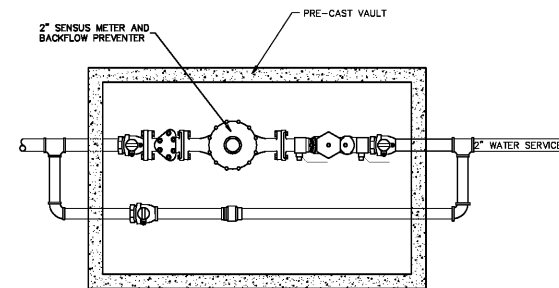


**4" TO 2" ADAPTER**

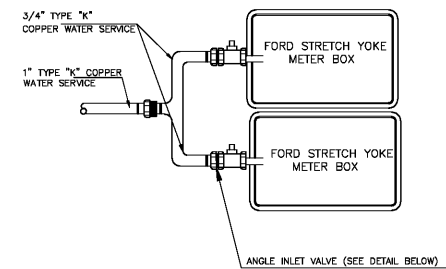


- NOTES:**
- 1) USE RETAINER GLANDS BETWEEN HYD. & GATE VALVE. INSTALL WITH TORQUE WRENCH TO 70 FOOT POUNDS
  - 2) HYDRANT LOCKING TEE TO BE USED IN LIEU OF STD. M.J. TEE ON ALL FIRE HYDRANT CONNECTIONS
  - 3) USE CLASS 51 G.P. BETWEEN G.V. & F.H.
  - 4) ALL MECHANICAL JOINT FITTINGS THAT REQUIRE THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC.
- THRUST BLOCK (TYPICAL):**  
CLASS 'B' CONCRETE (SIZE & SET CONDITIONS) USE WHEN LOCKED HYDRANT FITTINGS ARE NOT USED.

**FIRE HYDRANT INSTALLATION  
AS SHOWN W/ LOCKED HYDRANT FITTINGS**  
(NTS)



**TYPICAL DOMESTIC AND FIRE SERVICE SETTING**



**TYPICAL MULTIPLE METER BOX INSTALLATION**  
(NTS)

ENGINEER'S STAMP



SIGNATURE REQUIRED

**SMITH DESIGN GROUP, INC.**

308 WEST WALTON STREET  
LAGRANGE, GEORGIA 30240

706-882-8111  
www.SDGinc.com

**STOTHARD ENGINEERING, INC.**

1008 COLOUITT ST.

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PH: 706 884-5279

email: stothard@stothard-engineering.com

MODIFIED DATE:

JOB NO:

1731

ISSUED DATE:

SHEET:

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C'P-9

20 APRIL 2018

Order Plans @