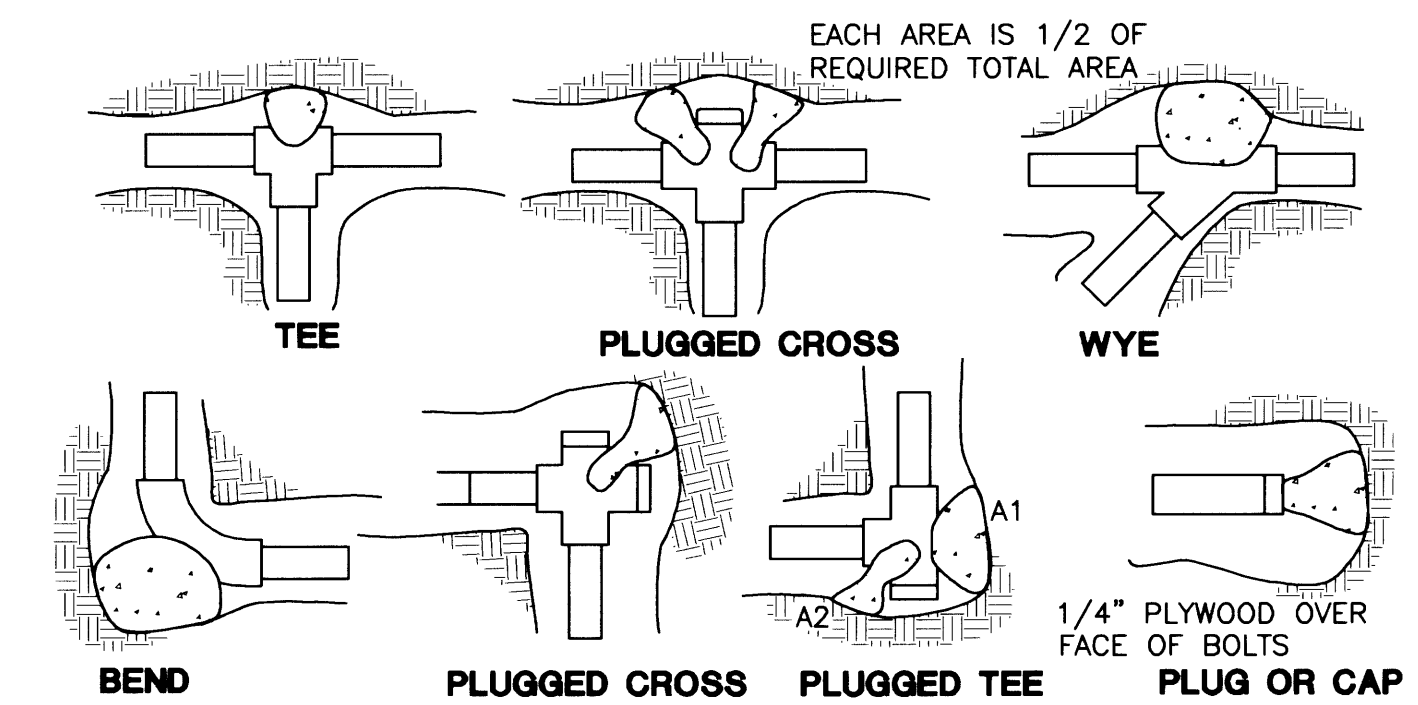
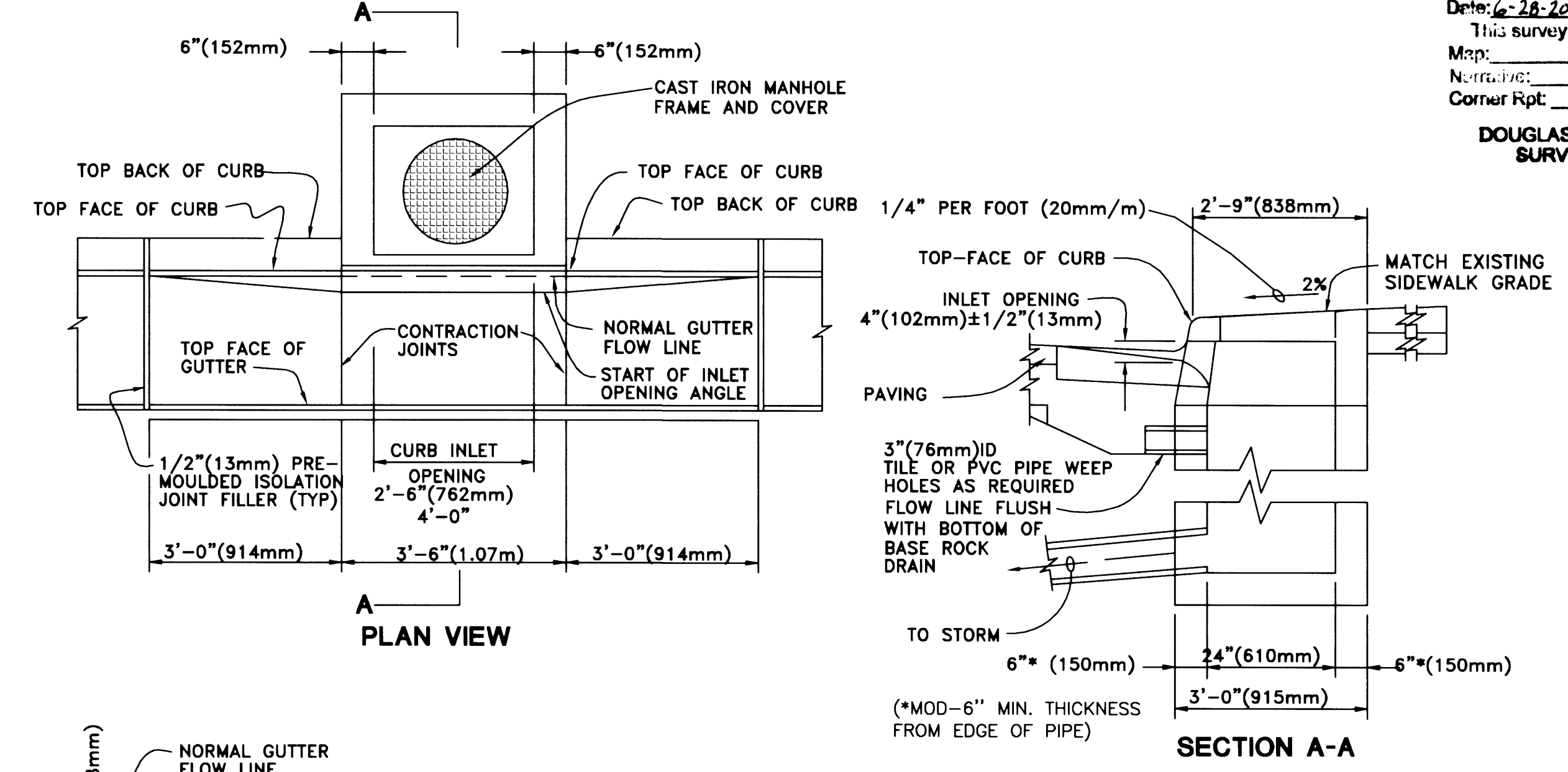


- TIE IN NOTES:**
- 1) CONTRACTOR TO FIELD VERIFY LOCATION, GRADE, ALIGNMENT AND CONFIGURATION OF EXISTING PIPING AT THE TIE IN PRIOR TO CONSTRUCTION
  - 2) ALL PIPE AND FITTINGS FOR TIE IN TO BE CLEAN AND WIPED w/CHLORINE PRIOR TO INSTALLATION.
  - 3) CONTRACTOR TO ALIGN NEW MAINLINES IN BOTH ALIGNMENT AND GRADE w/EXISTING WATERLINES. CONNECTION TO EXISTING WATERLINE CAN ONLY BE MADE AFTER INSTALLATION, TESTING & DISINFECTION OF NEW WATERLINE HAS BEEN COMPLETED.
  - 4) CONTRACTOR TO PROVIDE ALL TEMPORARY & PERMANENT THRUST BLOCKING AS REQUIRED.
  - 5) CITY WILL NOTIFY INDIVIDUAL HOME OWNERS FOR TEMPORARY SHUT DOWN. COORDINATE WORK WITH CITY WATER DIVISION.



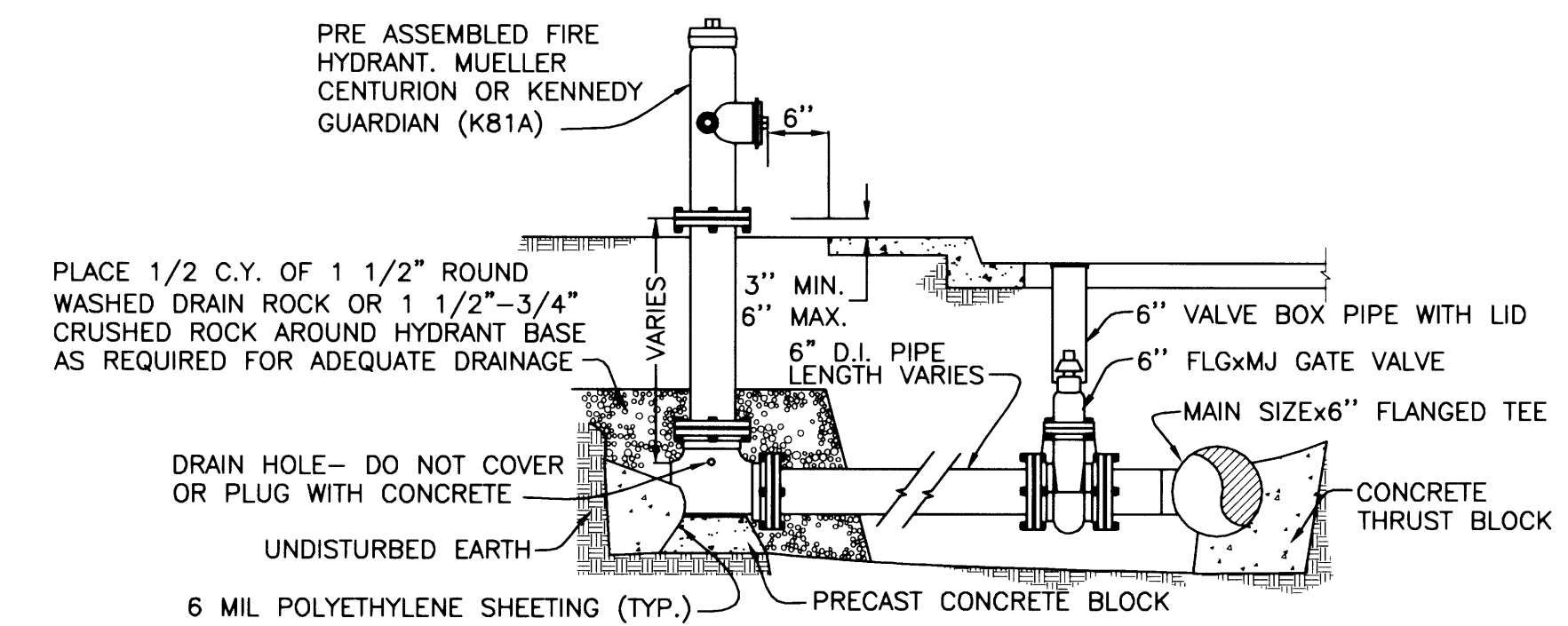
FITTING SIZE	TEE, WYE, PLUG, OR CROSS	90° BEND PLUGGED CROSS	TEE PLUGGED ON RUN A1 A2	45° BEND	22 1/2° BEND	11 1/4° BEND
2	0.5	1.1	1.6	1.1	0.5	—
3	1.3	2.1	3.2	2.1	1.3	—
4	2.7	3.7	5.1	3.7	2.7	0.5
6	5.6	8.0	11.5	8.0	4.3	1.3
8	10.1	14.2	20.3	14.4	7.7	4.0
10	15.8	22.4	31.5	22.4	12.3	6.4
12	22.7	32.0	45.4	32.0	17.6	9.1
14	30.7	43.5	61.4	43.5	23.8	12.3
16	40.1	56.9	80.1	56.9	31.0	16.0
18	50.7	72.1	101.5	72.1	39.0	20.3
20	62.7	88.9	125.5	88.9	48.3	25.1
24	90.8	128.2	181.6	128.2	70.0	36.3

NOTE: ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 200 p.s.i. AND AN ALLOWABLE SOIL BEARING STRESS OF 1,000 lbs. PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE/200) x (1000/SOIL BEARING STRESS) x (TABLE VALUE)

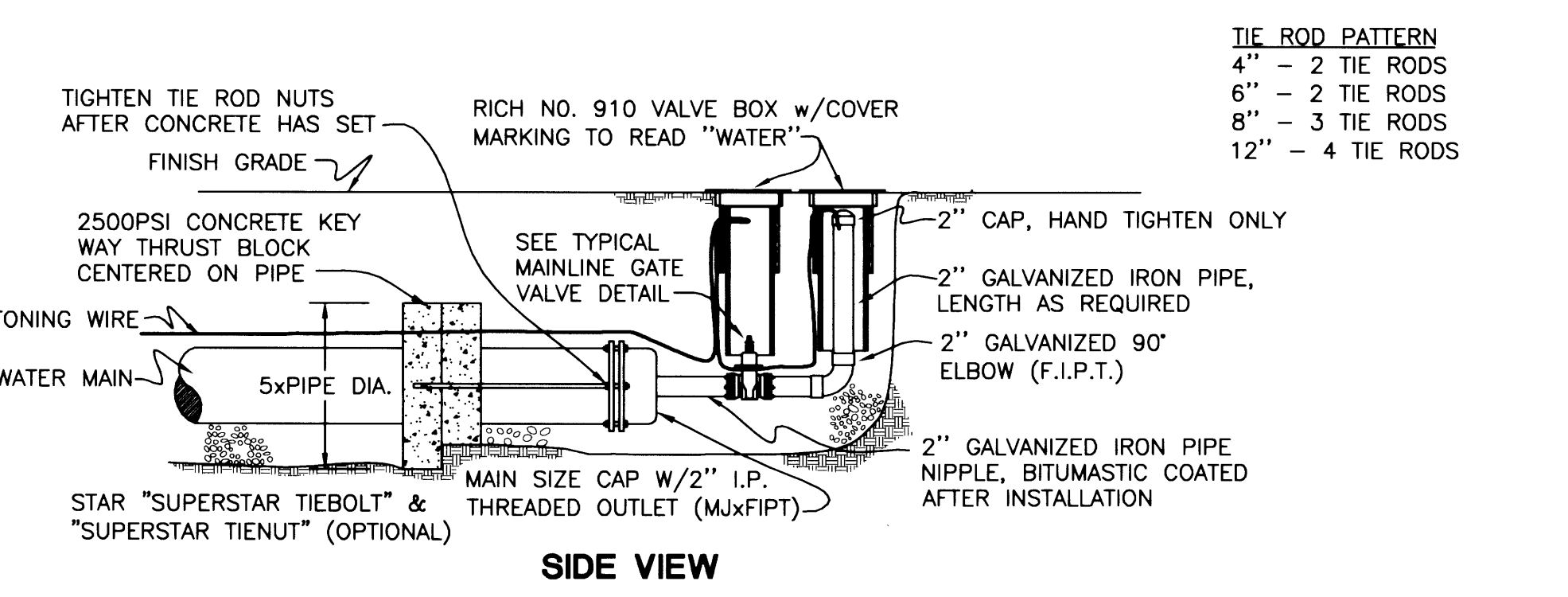
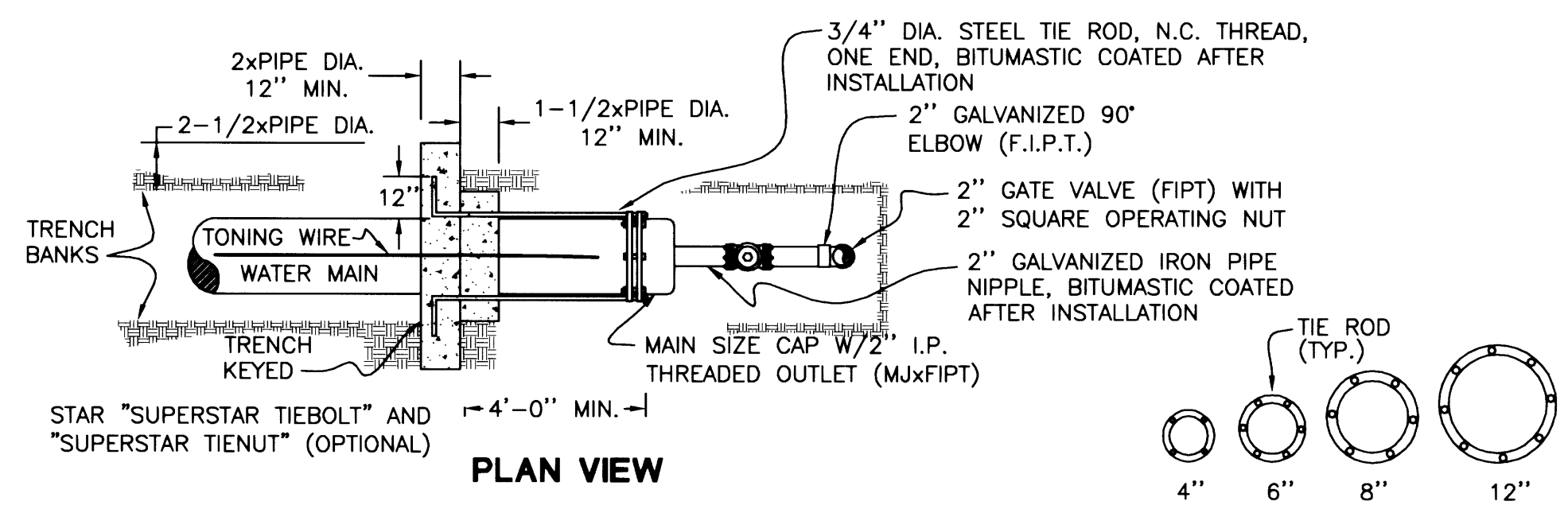
**NOTES:**

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. THE REQUIRED THRUST BEARING AREAS FOR SPECIAL CONNECTIONS ARE SHOWN ENCIRCLED ON THE PLANS, e.g. (15) INDICATES 15 SQUARE FEET BEARING AREA REQUIRED.
4. IF NOT SHOWN ON PLANS REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED ABOVE, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIAL SPECIFICATIONS.
5. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS. TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.

**THRUST BLOCK DETAILS AND INFORMATION**  
 NO SCALE

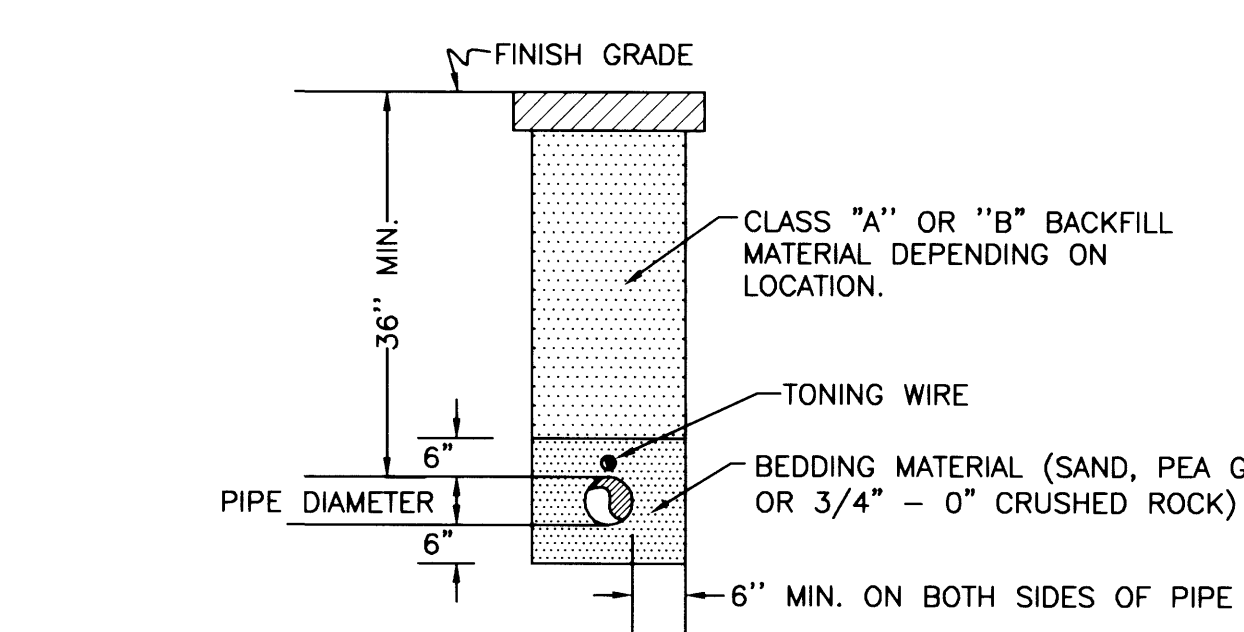


**TYPICAL FIRE HYDRANT INSTALLATION**  
 (THRUST BLOCKED)



**TYPICAL 2" BLOWOFF ASSEMBLY DETAIL**

**TYPICAL CG-3 INLET DETAIL**



**TYPICAL WATER MAINLINE TRENCH DETAIL**

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 FAX (541) 440-9392  
 jemail@ieengineering.com

Project Name: **PHASE 2 TAFT DRIVE SUBDIVISION**

Title: **DETAILS**

Rev.	Date	Dwg	Description
1	4/23/03	BWC	AGENCY REVIEWS

DES DTB PROJECT NO. 140-7812  
 DWG FLB DATE: MARCH 27, 2003  
 CHK SNL SCALE: NO SCALE  
 APP DTB SHEET: 12 OF 13

REGISTERED PROFESSIONAL ENGINEER  
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 OREGON  
 MAY 25, 1998  
 DAVID I. BUHL  
 EXPIRES: 12/31/2005

R908DETS