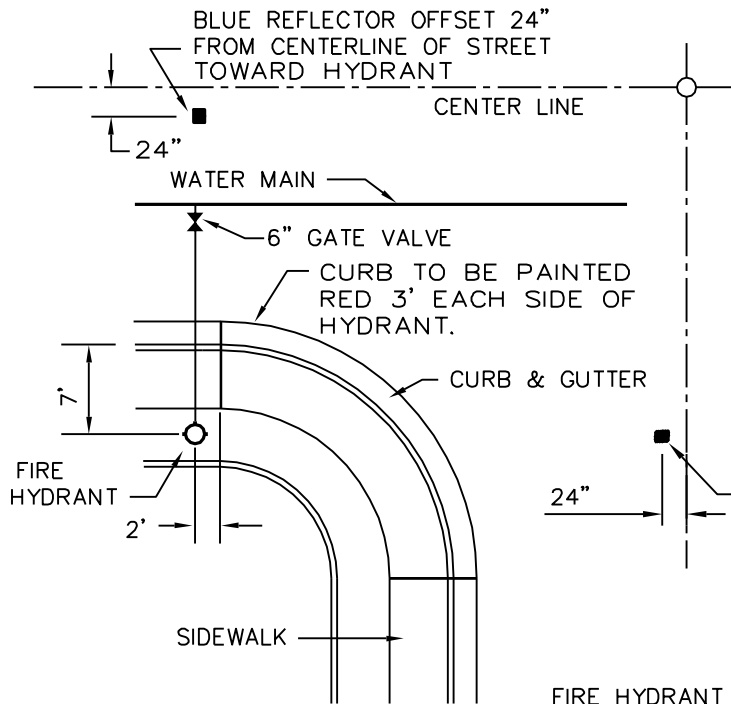


NOTES:

1. WHEN NON-CONTIGUOUS SIDEWALK IS APPROVED, METER AND BOX SHALL BE LOCATED IN PARKSTRIP.
2. A 3-INCH HIGH LETTER "W" SHALL BE SCRIBED ON FACE OF CURB ABOVE SERVICE LINE.

ITEM	1" SERVICE	1-1/2" SERVICE	2" SERVICE
SERVICE SADDLE	BRONZE DOUBLE STRAP	BRONZE DOUBLE STRAP	BRONZE DOUBLE STRAP
CORPORATION STOP	BRONZE	BRONZE	BRONZE
ANGLE METER STOP	BRONZE-LOCKABLE	BRONZE-LOCKABLE	BRONZE-LOCKABLE
WATER METER	BADGER E-SERIES UTLRASONIC METER, MEASURED IN GALLONS, WITH NICOR CONNECTOR		
TRANSMITTER	BADGER MODEL ORION LTE-M, LTE-MS CELLULAR ENDPOINT WITH NICOR CONNECTOR AND THRU-THE-LID MOUNTING KIT OR UNDERSIDE THREADS (ON POLYMER LIDS ONLY)		
UTILITY BOX	13"x24" (FL30)	17"x30" (FL36)	17"x30" (FL36)
UTILITY BOX COVER	MEDIUM DUTY (20K) RATED, NON-METAL, AMR/AMI COMPATIBLE, PORT IN CORNER SECURED W/PENTAHEAD BOLTS AND MARKED "WATER", SIZED TO FIT BOX		
SERVICE TUBING	SP-3406/SDR-9	SP-3406/SDR-9	SP-3406/SDR-9

REVISION DATE	CITY OF MENDOTA		Std. Dwg.
01/10/05	SERVICE CONNECTION WITH METER BOX & METER		W-1
9-25-07			
05/12/21			



**FIRE HYDRANT LOCATION
PLAN VIEW**

*FOR COMMERCIAL & SET
BACK SIDEWALK CENTER OF
HYDRANT SHALL BE LOCATED
2'-9" FROM FACE OF CURB.

NOTES:

NOZZLES AND CAPS SHALL HAVE NATIONAL
STANDARD PIPE THREADS.

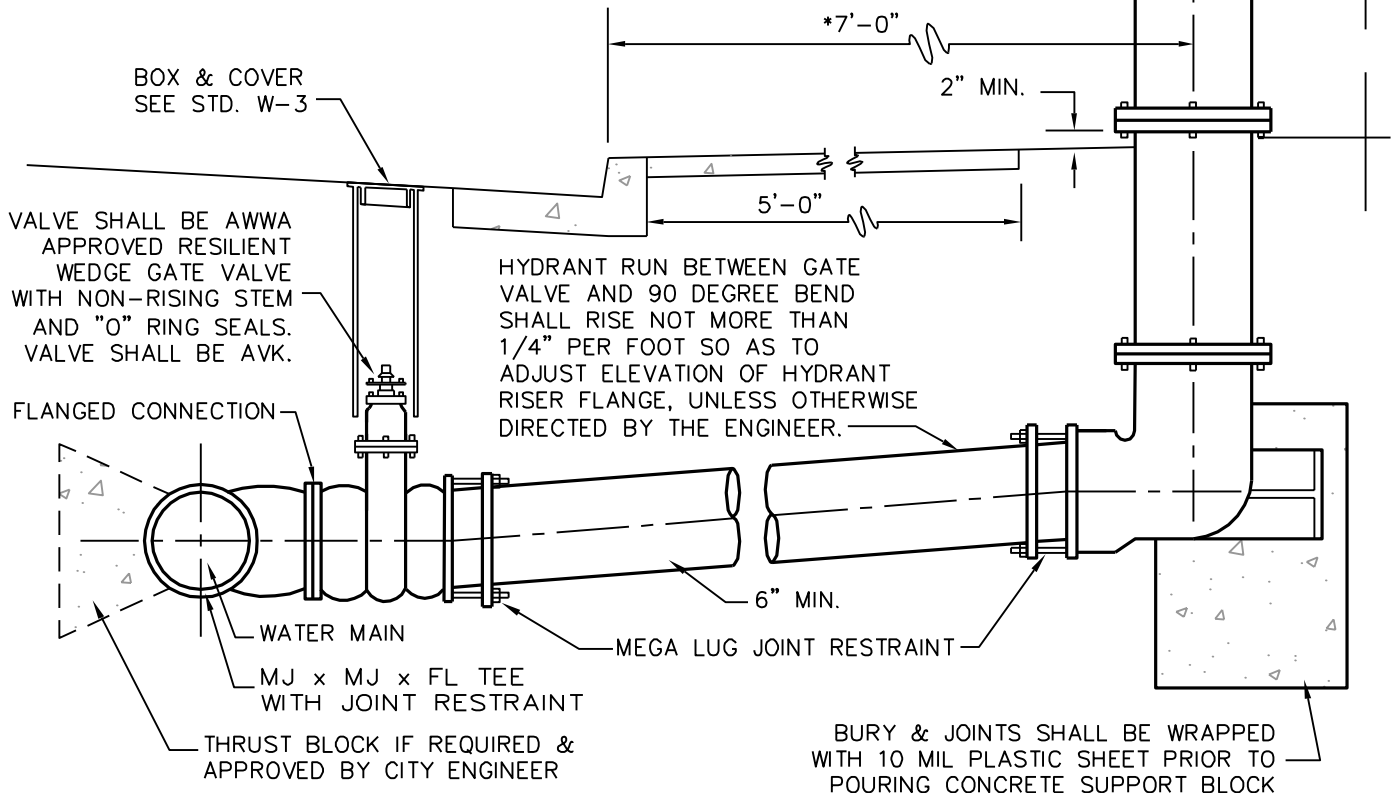
HYDRANTS TO BE PAINTED WITH RUSTOLEUM
7744, COLOR TO BE APPROVED BY THE
CITY ENGINEER.

HYDRANTS IN AN AREA WITH NO CURBS OR
EXPOSED TO BACK SIDE DAMAGE SHALL
HAVE GUARD POSTS INSTALLED TO PROTECT
FROM VEHICLE DAMAGE. (SEE STD. M-8)

DISTANCES INDICATED SHALL BE USED,
UNLESS OTHERWISE DIRECTED BY THE CITY
ENGINEER.

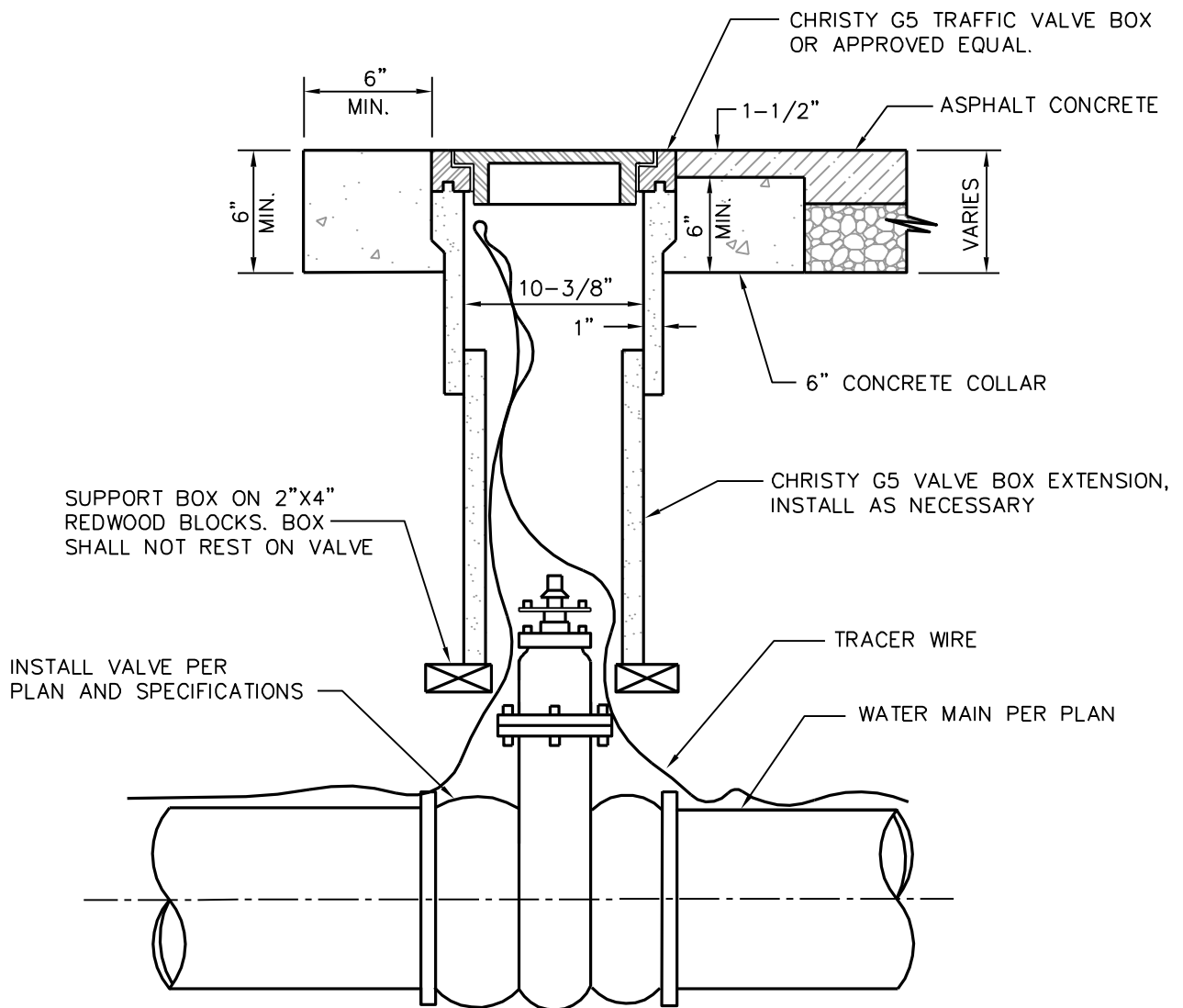
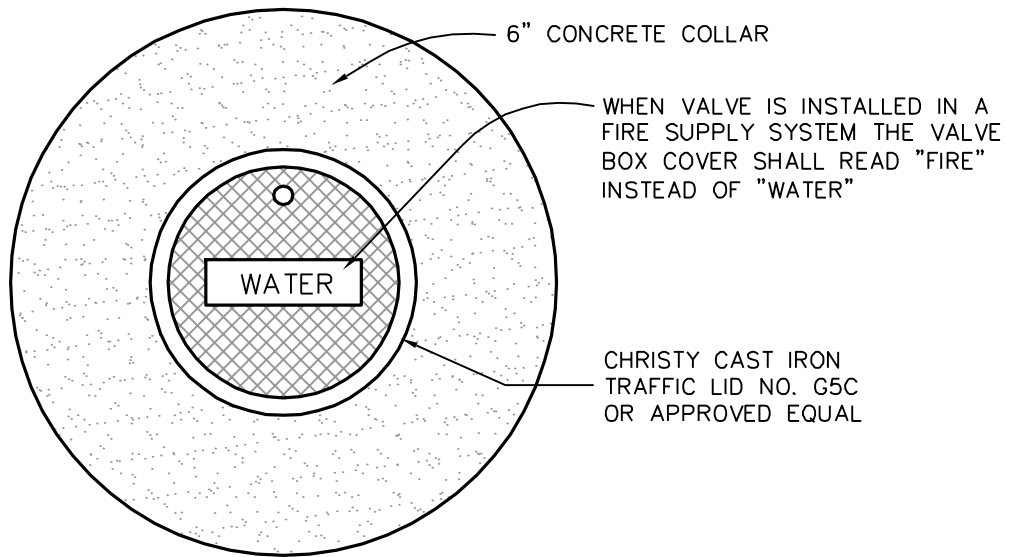
BLUE REFLECTOR OFFSET 24"
FROM CENTERLINE OF STREET
TOWARD HYDRANT

FIRE HYDRANT SHALL BE THREE-WAY
TYPE WITH 2-2-1/2" NOZZLES & 1-4
1/2" PUMPER NOZZLE. MAIN VALVE
OPENING SHALL BE A MINIMUM OF
5-1/4", HYDRANT SHALL BE AVK
MODEL 2780 DRY BARREL TYPE
COMPLETE WITH 36" MIN. BURY. DRAIN
HOLE TO BE PLUGGED.

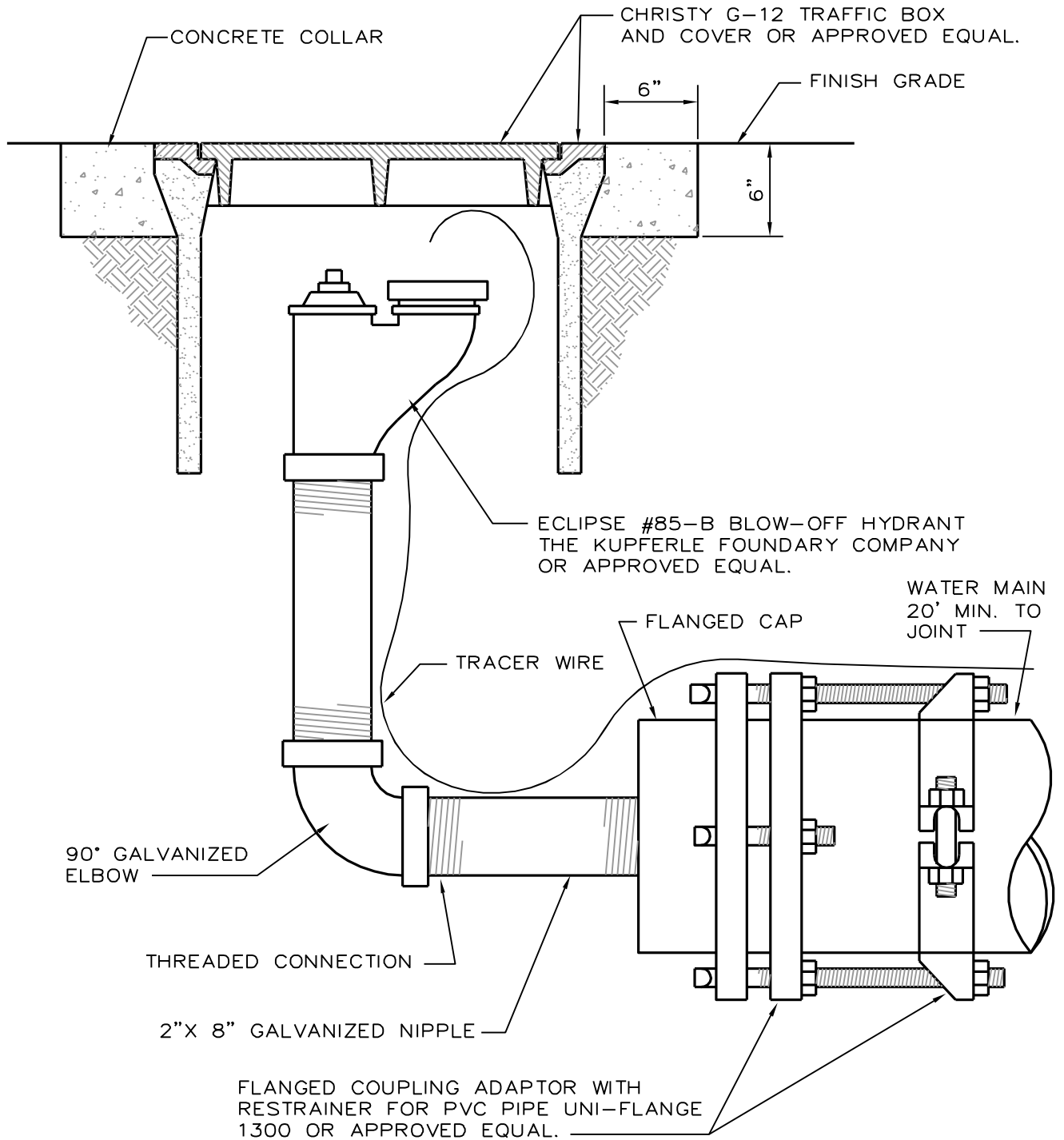


PROPERTY LINE

REVISION DATE		CITY OF MENDOTA	Std. Dwg.
1/10/06			
9-25-07		FIRE HYDRANT INSTALLATION & LOCATION	W-2



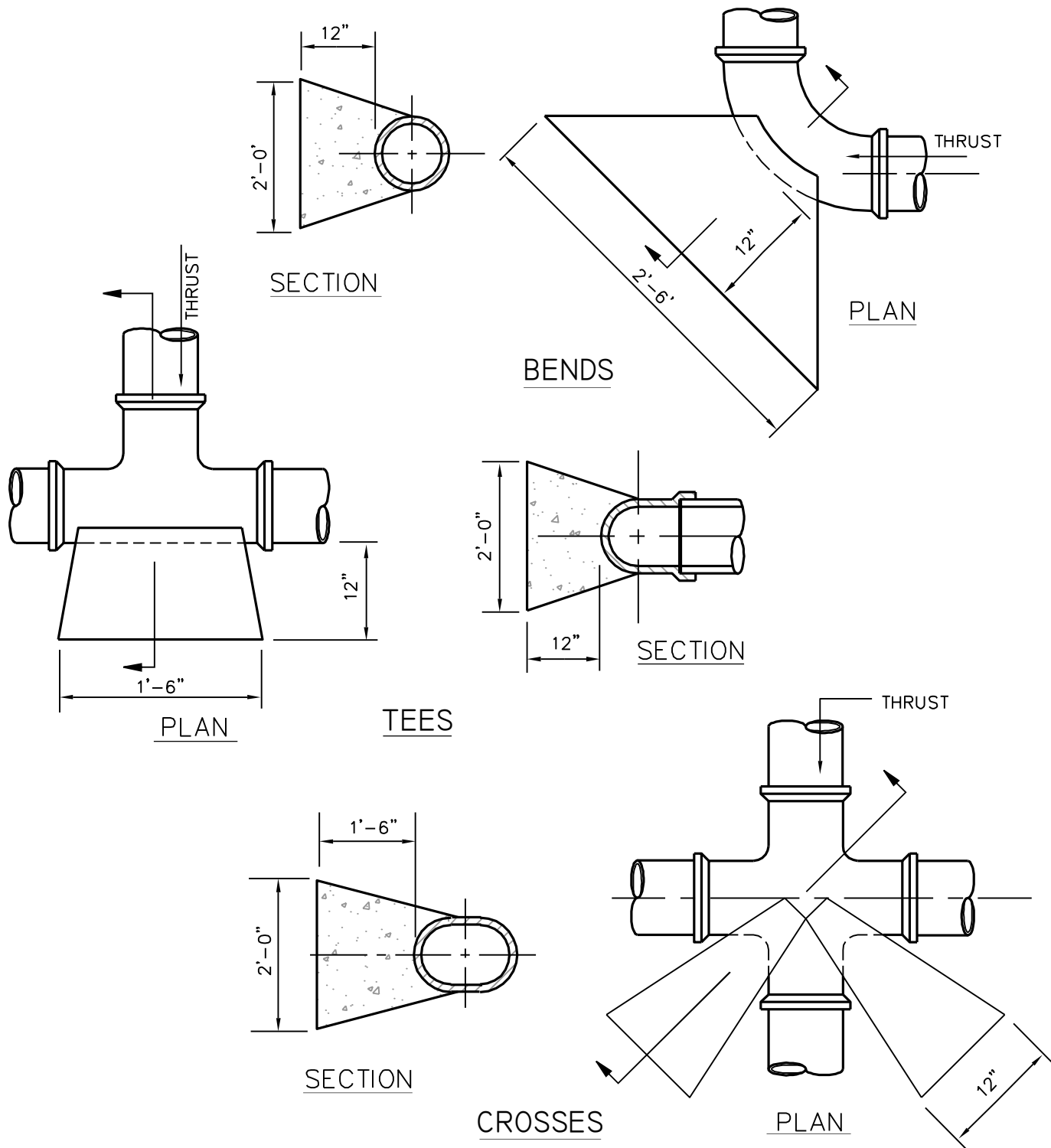
REVISION DATE	CITY OF MENDOTA	STD. DWG.
	VALVE BOX & COVER DETAIL	W-3



NOTE

ALL BURIED GALVANIZED PIPE SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.

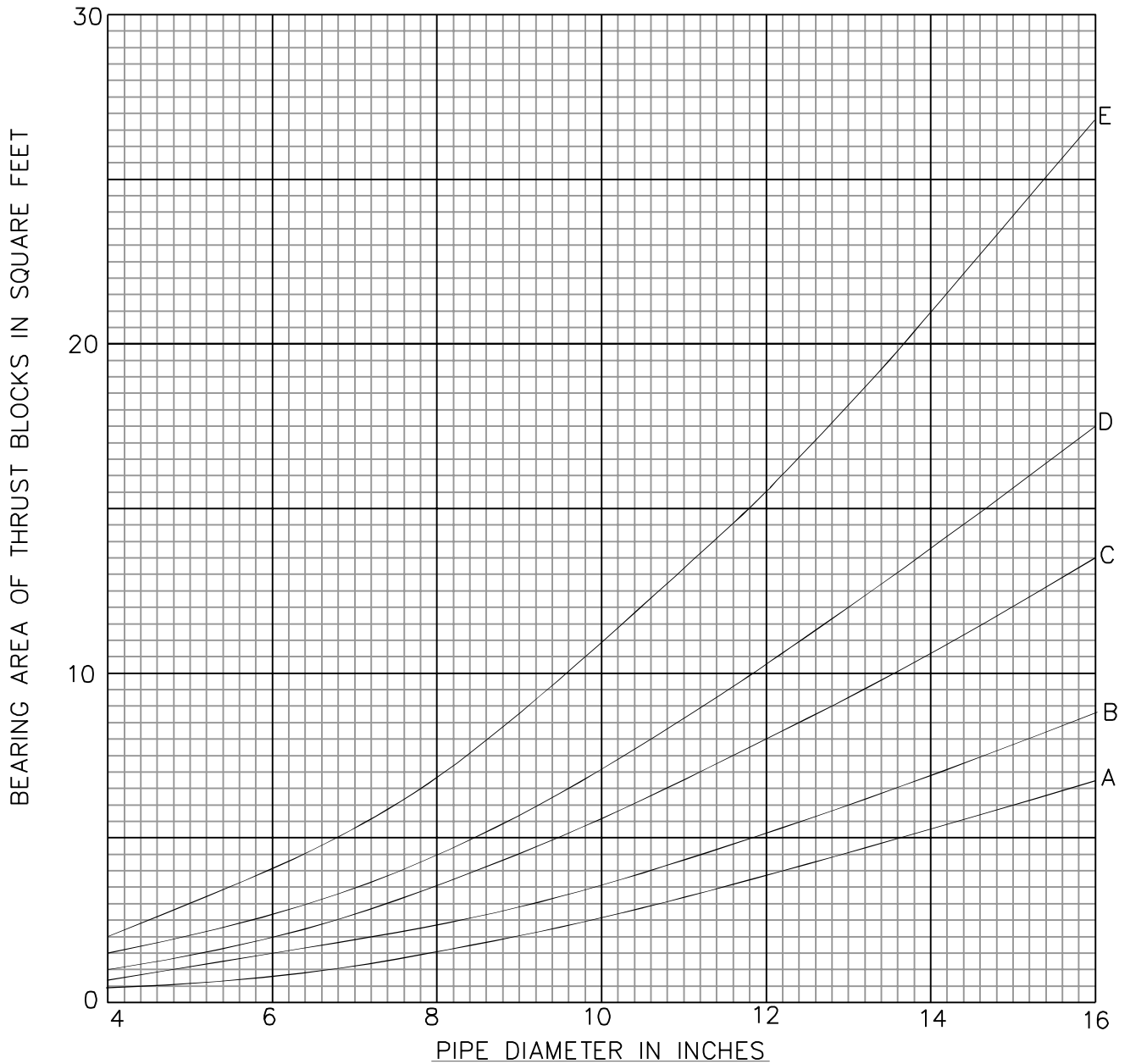
REVISION DATE	CITY OF MENDOTA	STD. DWG.
	WATER MAIN BLOW-OFF	W-4



NOTES:

1. ALL THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL, WITH A MINIMUM THICKNESS OF 12 INCHES BETWEEN FITTINGS AND SOIL.
2. ALL DIMENSIONS SHOWN ARE MINIMUM, SEE THRUST BLOCK BEARING AREA CHART.
3. CONCRETE SHALL BE 5 SACK MIX PER STATE OF CALIFORNIA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS, CURRENT EDITION.
4. SUPPORT AND PROTECT ALL PIPE. CONCRETE SHALL NOT BEAR AGAINST PIPES.

REVISION DATE	CITY OF MENDOTA	STD. DWG.
	THRUST BLOCK DETAILS	W-5



NOTES:

1. HORIZONTAL THRUST AT FITTINGS IS BASED ON 150 PSI WATER PRESSURE.
2. VALUES FROM CURVES ARE FOR TEES AND DEAD ENDS, i.e. STRAIGHT LINE THRUST. FOR OTHER FITTINGS, MULTIPLY THE BEARING AREA OBTAINED FROM CURVES BY THE FOLLOWING FACTORS: (FOR 90° BEND, 1.4) (FOR 45° BEND, 0.8) (FOR 22-1/2° BEND, 0.4).
3. SAFE BEARING LOADS ON UNDISTURBED SOIL ARE AS FOLLOWS:
 CURVE A = 4000 PSF, MASSIVE CRYSTALLINE BEDROCK.
 CURVE B = 3000 PSF, SEDIMENTARY AND FOLIATED BEDROCK.
 CURVE C = 2000 PSF, SANDY GRAVEL AND / OR GRAVEL.
 CURVE D = 1500 PSF, SANDY, SILTY SAND OR GRAVEL AND CLAYEY SAND OR GRAVEL.
 CURVE E = 1000 PSF, CLAY, SANDY CLAY, SILTY CLAY, AND CLAYEY SILT.
4. THRUST BLOCKS FOR CONDITIONS NOT COVERED BY CURVES SHALL BE APPROVED BY THE CITY ENGINEER.

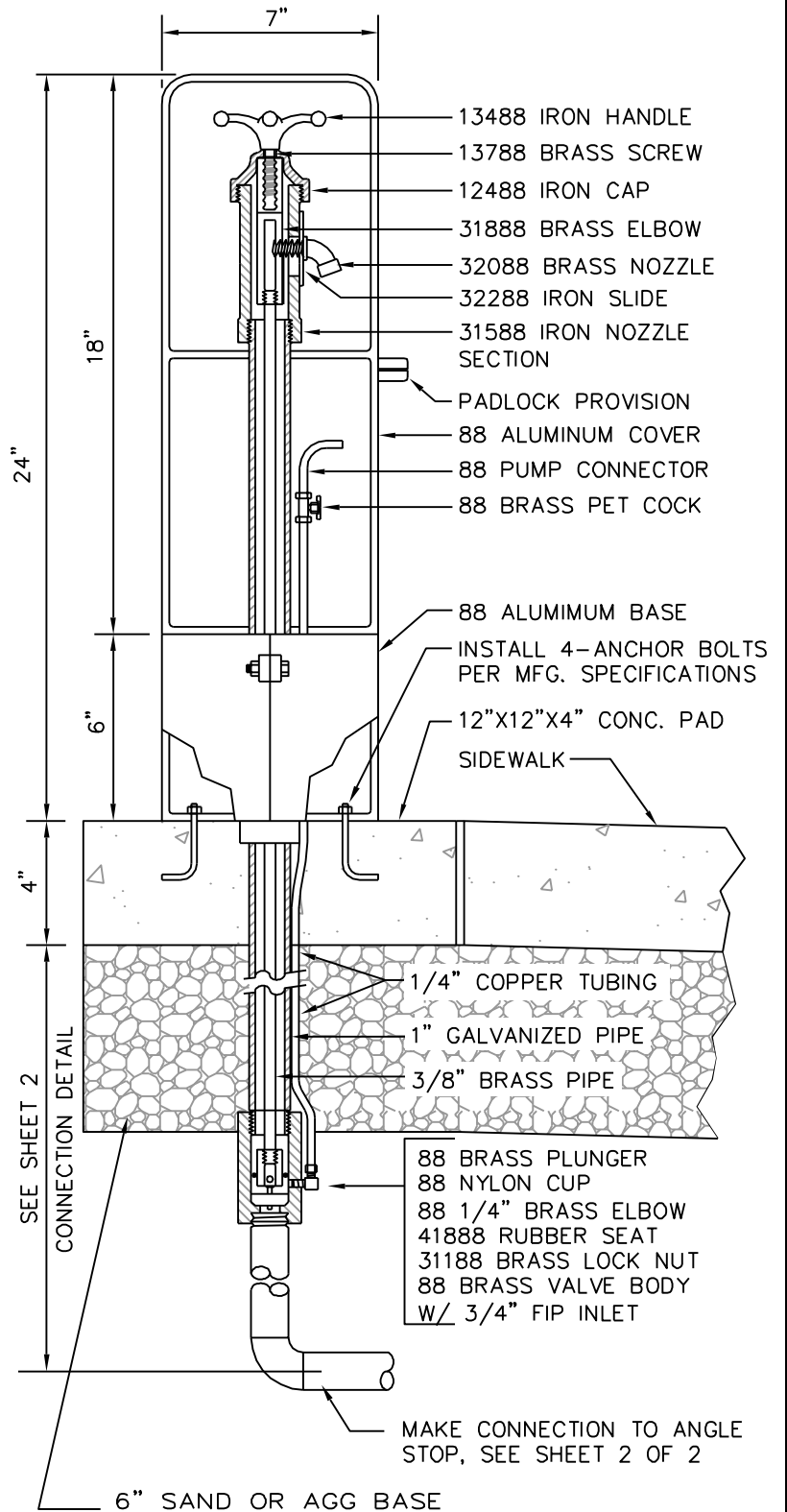
REVISION DATE	CITY OF MENDOTA	STD. DWG.
	THRUST BLOCK BEARING AREA	W-6

STANDARD SPECIFICATIONS:

SAMPLING STATIONS SHALL HAVE A MINIMUM. 3/4" FIP INLET, AND A 3/4" HOSE OR UNTHREADED NOZZLE. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NONREMOVABLE, ALUMINUM-CAST HOUSING. WHEN OPENED THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL-BRASS WATERWAY. ALL WORKING PARTS WILL ALSO BE BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING. A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIAL GROWTH. THE EXTERIOR PIPING WILL BE GALVANIZED, AS MANUFACTURED BY KUPFERLE FOUNDRY, ST. LOUIS, MO. 63102.

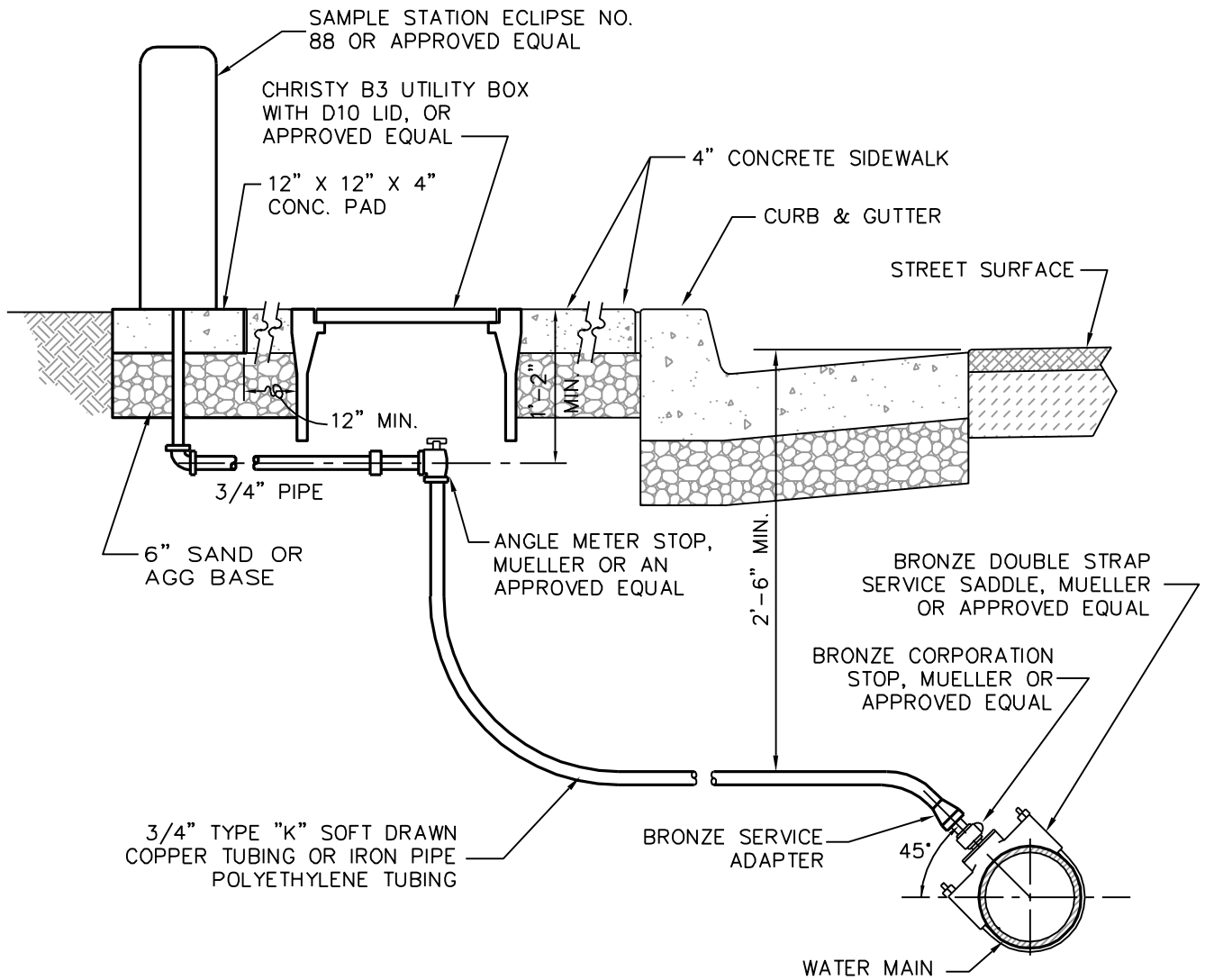
NOTES:

1. LOCATION OF WATER SAMPLE STATIONS SHALL BE DETERMINED BY THE SUPERINTENDENT OF PUBLIC WORKS AND APPROVED BY THE CITY ENGINEER.
2. WATER SAMPLE STATIONS SHALL BE LOCATED WITHIN EACH WELL SUPPLY AND DISTRIBUTION AREA TO PROVIDE THE MINIMUM NUMBER OF SAMPLES REQUIRED BY THE STATE HEALTH DEPARTMENT.

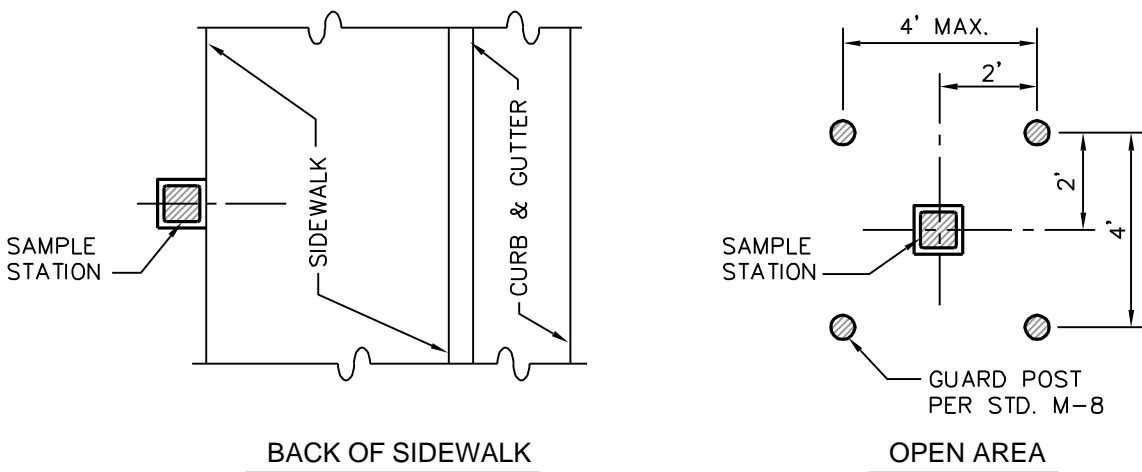


**ECLIPSE NO. 88
SAMPLING STATION**

REVISION DATE		CITY OF MENDOTA	Std. Dwg.
9-25-07			
		3/4" WATER SAMPLE STATION	W-7
			1 OF 2

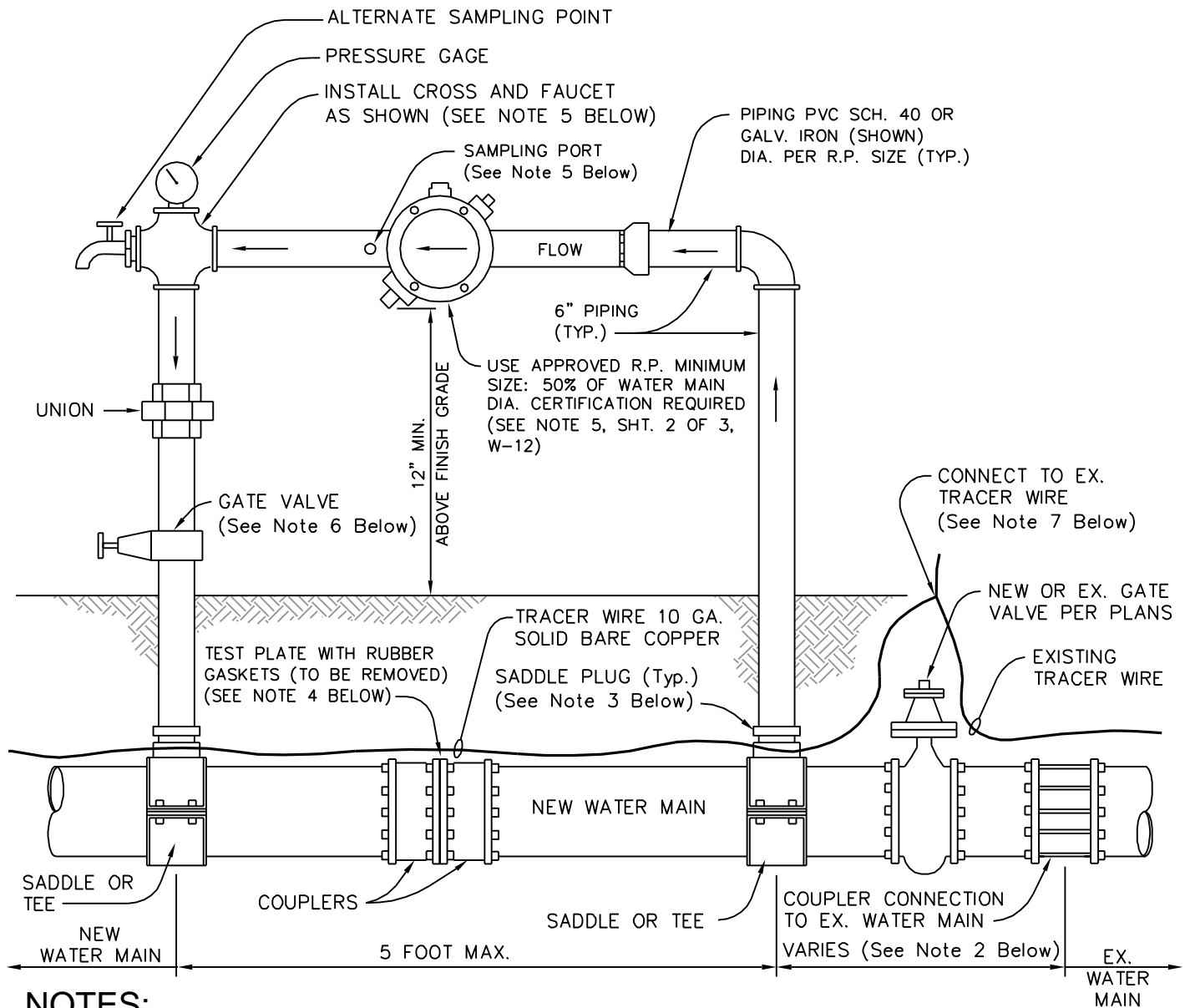


sample station connection detail



PLAN VIEW

REVISION DATE		CITY OF MENDOTA	Std. Dwg.
9-25-07			
		3/4" WATER SAMPLE STATION	W-7 2 OF 2



NOTES:

1. WATER MAIN CONNECTION AND REDUCED PRESSURE PRINCIPAL (R.P.) BACK FLOW PREVENTION ASSEMBLY AS SHOWN ABOVE SHALL BE UTILIZED FOR CONNECTION TO THE EXISTING MAIN AS SHOWN ON PLANS.
2. DISTANCE VARIES PER INSTALLATION, DISTANCE REQUIRES CITY ENGINEER'S PRIOR APPROVAL. ALL PIPING BETWEEN EXISTING WATER MAIN SHALL BE SWABBED PER NOTE #3, SHT. 2 OF 3, W-8.
3. INSTALL SADDLE PLUGS WITH TEFLON TAPE WHEN R.P. ASSEMBLY IS REMOVED AND NEW WATER MAIN HAS PASSED THE BACTERIA TEST.
4. REMOVE TEST PLATE AFTER NEW WATER MAIN HAS PASSED THE BACTERIA TEST. BOLT COUPLERS TOGETHER USING ONLY ONE RUBBER GASKET BETWEEN FLANGES, AND PROCEED PER NOTE #13, SHT. 3 OF 3, W-8.
5. SAMPLING PORT TO BE USED ON R.P. SHALL BE DOWN STREAM SIDE OF R.P. OR SHALL BE ALTERNATE SAMPLING POINT AS SHOWN.
6. MAY BE DELETED WITH ENGINEERING DIVISION APPROVAL IF NEW WATER MAIN IS COMPLETELY INSTALLED.
7. SPLICING OF FINDER WIRE SHALL BE ACCOMPLISHED BY WRAPPING THE BARE ENDS OF THE WIRE TOGETHER, SOLDERING THE CONNECTION, AND WRAPPING THE SOLDERED CONNECTION WITH ELECTRICAL TAPE.

REVISION DATE	CITY OF MENDOTA	Std. Dwg.
	WATER MAIN CONNECTION PROCEDURE	W-8
		SHT. 1 OF 3

Water Main Installation and Connection Procedure

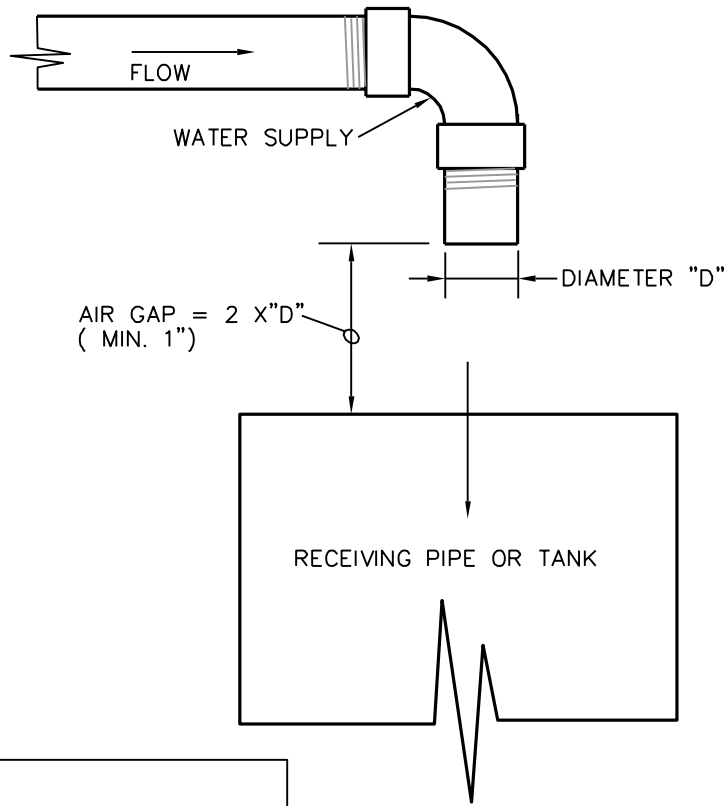
1. CONTRACTOR SHALL SECURE THE END OF ALL WATER MAIN PIPES BEING INSTALLED IN TRENCH EACH AND EVERY TIME THE WORK SITE IS LEFT UNATTENDED, i.e. LUNCH BREAKS, OVERNIGHT, ETC. ONLY WATER TIGHT PLUGS WILL BE ALLOWED.
2. ALL CHLORINATION DISINFECTION PROCEDURES SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF A.W.W.A. STANDARD, C-651, FOR DISINFECTING WATER MAINS.
3. ALL CONNECTIONS TO EXISTING CITY WATER MAINS, WHERE FEASIBLE, SHALL BE HOT TAP FITTINGS. GATE VALVE, TEMPORARY PLUMBING AND R.P. VALVE SHALL BE DISINFECTED BY SWABBING WITH 1% HYPOCHLORITE SOLUTION TO THE SATISFACTION OF THE CITY INSPECTOR PRIOR TO INSTALLATION. WHERE HOT TAP IS NOT POSSIBLE AS DETERMINED BY THE CITY INSPECTOR, ALL NECESSARY PRECAUTIONS, INCLUDING OVER EXCAVATION AND PUMPING, SHALL BE TAKEN TO PREVENT CONTAMINATION OF THE EXISTING MAIN. CONTRACTOR SHALL NOTIFY ALL AFFECTED WATER CUSTOMERS A MINIMUM OF 48 HOURS PRIOR TO DISRUPTION OF WATER SERVICE.
4. CONTRACTOR SHALL NOTIFY CITY ENGINEERING DIVISION 48 HOURS PRIOR TO COMMENCING INSTALLATION OF WATER MAIN.
5. CONTRACTOR SHALL USE APPROVED REDUCED PRESSURE PRINCIPAL (R.P.) BACKFLOW PREVENTER ASSEMBLY BETWEEN NEW WATER MAIN AND EXISTING CITY WATER MAIN. CITY INSPECTOR SHALL BE PRESENT DURING THE TIME OF CONNECTION. THE R.P. SHALL BE CHECKED, APPROVED BY AN A.W.W.A. CERTIFIED TESTER AND WRITTEN CERTIFICATION SUBMITTED TO THE CITY INSPECTOR AFTER INSTALLATION AND PRIOR TO ANY CONNECTION TO A NEWLY INSTALLED WATER MAIN.
6. CITY INSPECTOR SHALL TEST AFTER 24 HOURS TO VERIFY RESIDUAL OF 10 ppm MINIMUM CHLORINE.
7. AFTER 48 HOURS, IF CHLORINE RESIDUAL LEVEL IS APPROVED, CONTRACTOR SHALL FLUSH NEW MAIN THROUGH R.P. VALVE UNTIL CHLORINE RESIDUAL IS ZERO (0) AS TESTED AND VERIFIED BY THE CITY INSPECTOR. GATE VALVE SHALL THEN BE CLOSED TO MAINTAIN ISOLATION.
8. AFTER 48 HOURS OF ISOLATION, CITY WILL SAMPLE FOR BACTERIOLOGICAL ANALYSIS.
9. UPON APPROVAL OF BACTERIOLOGICAL TEST, CONTRACTOR SHALL REMOVE R.P. VALVE AND BLOW-OFF ASSEMBLY, THEN MAKE CONNECTION TO THE EXISTING WATER MAIN. CITY ENGINEERING DIVISION SHALL BE NOTIFIED 24 HOURS IN ADVANCE AND THE CITY INSPECTOR SHALL BE PRESENT DURING THE CONNECTION PROCEDURE.
10. CONTRACTOR SHALL PREVENT EXCESS WATER WHICH IS FLOWING FROM DISCONNECTED PIPES FROM COMING IN CONTACT WITH EXISTING AND NEW WATER MAIN BY OVER EXCAVATION OF CONNECTION SITE. WATER SHALL BE PUMPED OUT OF WORK AREA TO PREVENT CONTACT WITH AND INFILTRATION INTO THE WATER MAINS.
11. FINAL CONNECTION PIPING AND FITTINGS SHALL BE SWABBED WITH A 1% HYPOCHLORITE SOLUTION IN ACCORDANCE WITH PARAGRAPH 3 ABOVE.
12. THE CONTRACTOR SHALL SUBMIT A CONNECTION SEQUENCE AND PLAN INCLUDING LOCATION OF R.P. VALVE FOR APPROVAL BY THE CITY. IN THOSE CASES WHERE THE POINT OF CONNECTION AND/OR R.P. VALVE ARE LOCATED IN A TRAFFIC AREA, REMOTE LOCATION OF R.P. VALVE MAY BE SUBMITTED FOR APPROVAL.

REVISION DATE	CITY OF MENDOTA	Std. Dwg.
	WATER MAIN CONNECTION PROCEDURE	W-8
		SHT. 2 OF 3

Water Main Installation and Connection Procedure Continued

13. CONTRACTOR SHALL FLUSH NEW WATER MAIN (BOTH WAYS IF POSSIBLE) THROUGH FIRE HYDRANT AND/OR BLOW-OFF ASSEMBLY IMMEDIATELY AFTER ALL CONNECTIONS HAVE BEEN MADE TO THE EXISTING WATER MAINS. THIS IS TO REMOVE CHLORINE SWABBING RESIDUE. THE CITY INSPECTOR WILL THEN VERIFY (0) RESIDUAL. THE CONTRACTOR SHALL THEN CLOSE ALL VALVES, IN THE PRESENCE OF THE INSPECTOR, TO ACHIEVE ISOLATION OF THE NEWLY INSTALLED WATER SYSTEM.
14. CITY WILL SAMPLE FOR BACTERIOLOGICAL ANALYSIS. IF ANY BACTERIA ARE FOUND IN ANY SAMPLES TAKEN THE CONTRACTOR SHALL IMMEDIATELY SUBMIT TO CITY ENGINEERING DIVISION CORRECTIVE ACTION PLANS FOR RECHLORINATION AND RETESTING.
15. CONTRACTOR SHALL REIMBURSE THE CITY FOR ALL COSTS INCURRED BY THE CITY FOR BACTERIOLOGICAL RETESTING PRIOR TO FINAL PROJECT APPROVAL.
16. UPON APPROVAL, CONTRACTOR SHALL FULLY OPEN ALL NEW MAINLINE VALVES AND FIRE HYDRANT VALVES. THE CITY INSPECTOR MUST VERIFY AND APPROVE THIS PROCEDURE PRIOR TO FINAL PROJECT APPROVAL.
17. WATER DISCHARGE FROM FLUSHING OPERATIONS SHALL NOT BE DISCHARGED TO A SANITARY SEWER SYSTEM.

REVISION DATE	CITY OF MENDOTA	Std. Dwg.
	WATER MAIN CONNECTION PROCEDURE	W-8 SHT. 3 OF 3



EXAMPLE

PIPE DIAMETER: 3"
 AIR GAP: 2 X 3-INCHES = 6-INCHES

SPECIFICATIONS

THIS BACKFLOW PREVENTER MUST CONFORM TO THE MOST RECENT SPECIFICATIONS OF THE STATE OF CALIFORNIA APPROVED BACKFLOW PREVENTION ASSEMBLIES FOR SERVICE ISOLATION

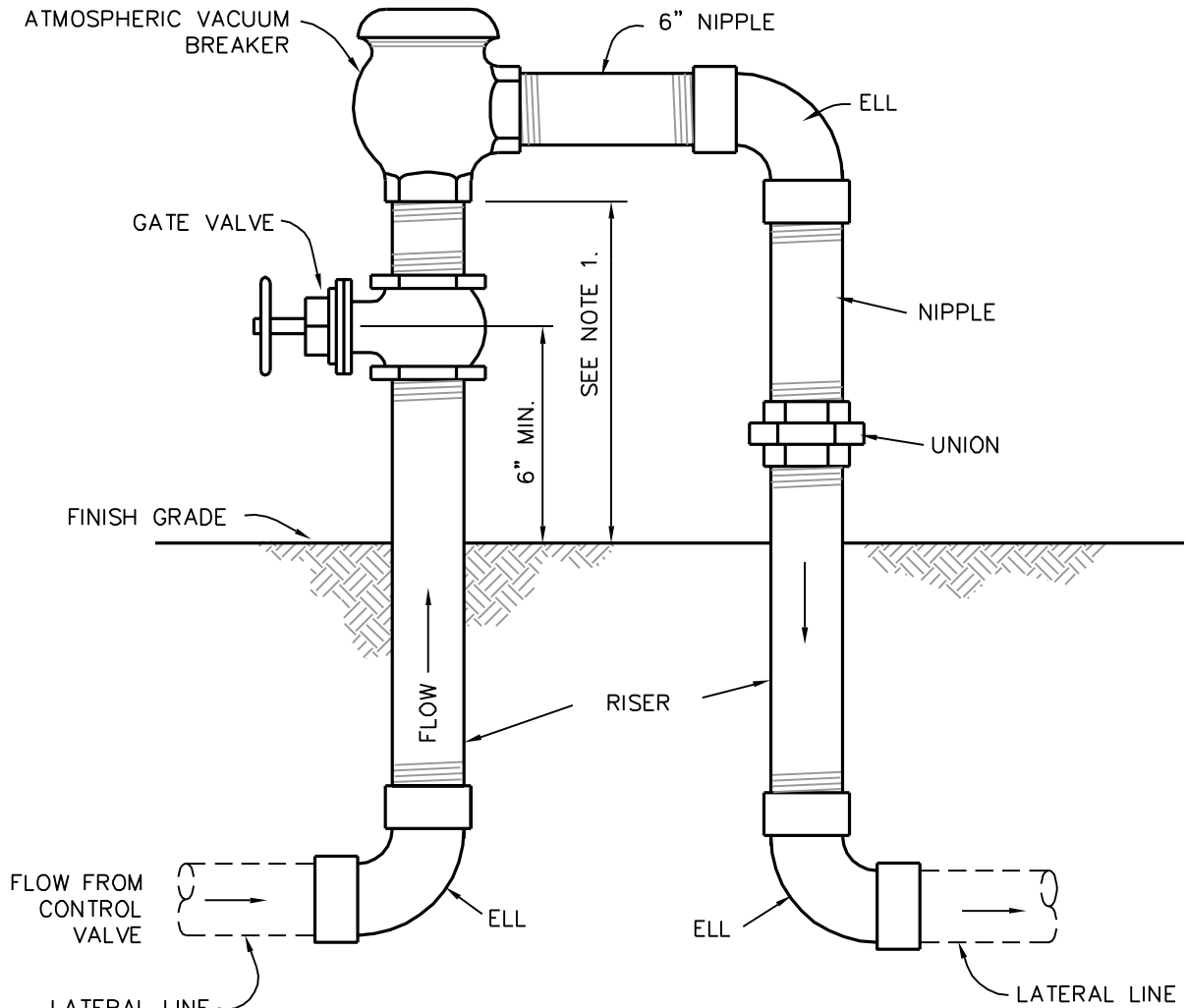
NOTES:

1. DEVICES AND INSTALLATION SHALL MEET FRESNO COUNTY DEPARTMENT OF HEALTH AND CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS REGULATIONS AND REQUIREMENTS.
2. CLOSE NIPPLES SHALL NOT BE USED.
3. APPROVED PLASTIC TAPE (1/2") WIDE SHALL BE USED ON ALL THREADED CONNECTIONS.
4. ALL PIPE SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE UNLESS OTHERWISE SPECIFIED.
5. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
6. ALL VALVES SHALL BE PROVIDED WITH RESILIENT SEATS.

REVISION DATE		CITY OF MENDOTA	STD. DWG.
DRAFT			
		AIR GAP DETAIL	W-9

SPECIFICATIONS

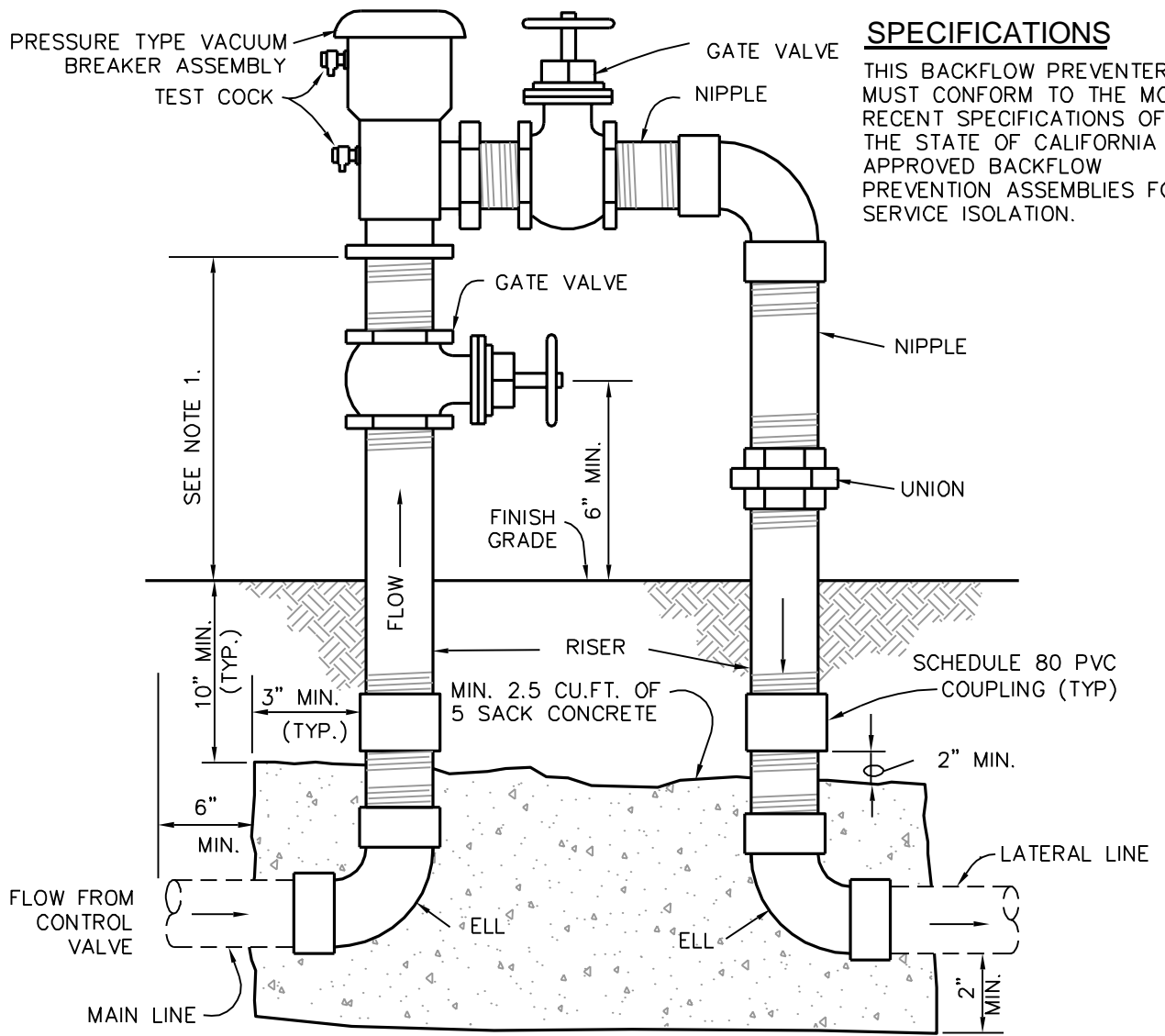
THIS BACKFLOW PREVENTER MUST CONFORM TO THE MOST RECENT SPECIFICATIONS OF THE STATE OF CALIFORNIA APPROVED BACKFLOW PREVENTION ASSEMBLIES FOR SERVICE ISOLATION.



ATMOSPHERIC TYPE 2" AND SMALLER

1. ATMOSPHERIC TYPE VACUUM BREAKERS SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE HIGHEST OUTLET OR FLOOD LINE, WHICHEVER IS HIGHER AND ON THE DOWNSTREAM SIDE OF VALVE ONLY.
2. DEVICES AND INSTALLATION SHALL MEET FRESNO COUNTY DEPARTMENT OF HEALTH AND CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS REGULATIONS AND REQUIREMENTS.
3. CLOSE NIPPLES SHALL NOT BE USED.
4. APPROVED PLASTIC TAPE (1/2") WIDE SHALL BE USED ON ALL THREADED CONNECTIONS.
5. ALL PIPE SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE UNLESS OTHERWISE SPECIFIED. ALL BURIED GALVANIZED PIPE SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.
6. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
7. ALL VALVES SHALL BE PROVIDED WITH RESILIENT SEATS AND LOCKABLE.
8. BACKFLOW ASSEMBLY SHALL BE COVERED WITH A PROTECTIVE ENCLOSURE.

REVISION DATE	CITY OF MENDOTA	Std. Dwg.
9-25-07	VACUUM BREAKER ASSEMBLY	W-10
		1 OF 2

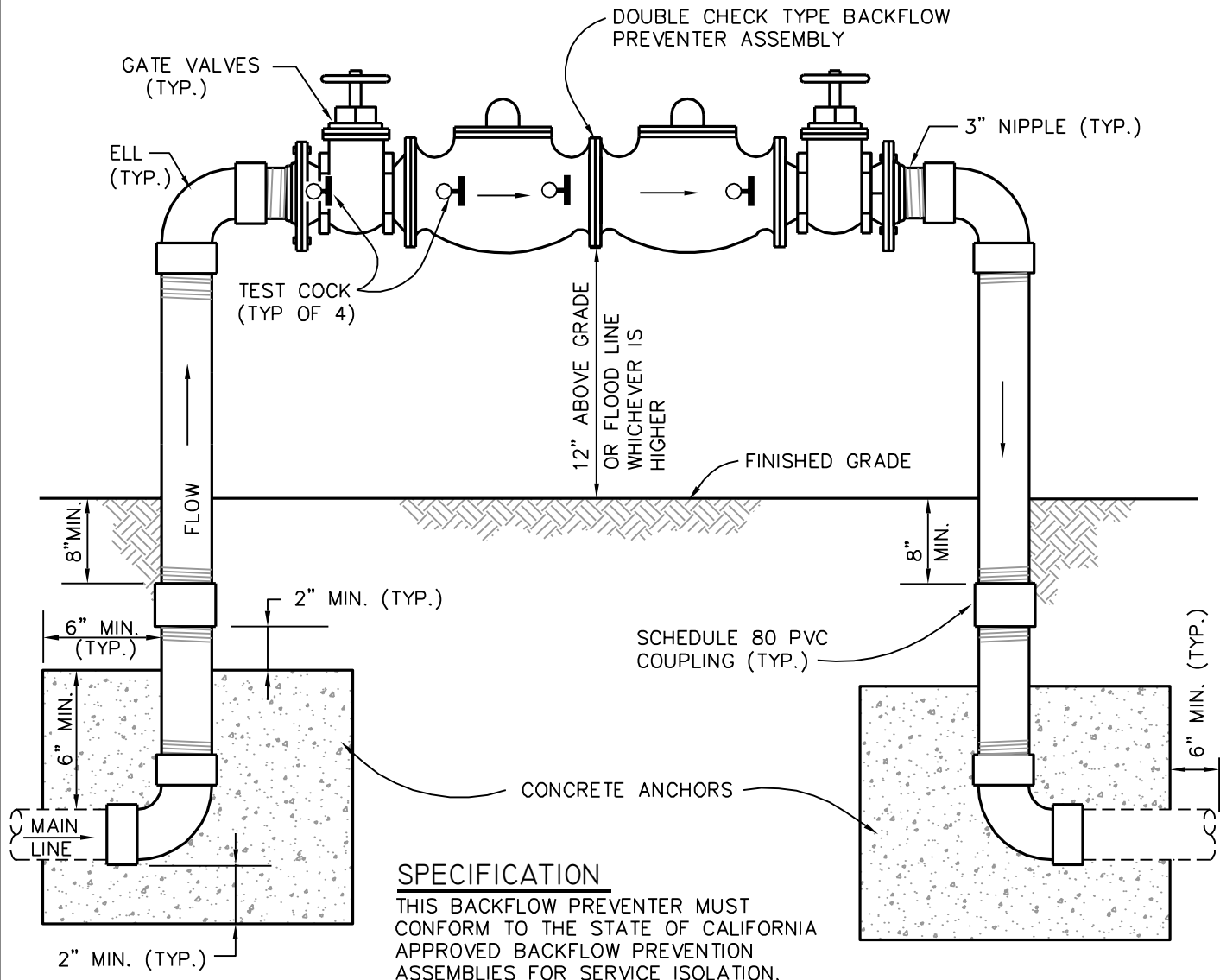


PRESSURE TYPE 2" AND SMALLER

NOTES:

1. PRESSURE TYPE VACUUM BREAKERS SHALL BE INSTALLED A MINIMUM OF 12" ABOVE THE HIGHEST OUTLET OR FLOOR LINE, WHICHEVER IS HIGHER.
2. PRESSURE TYPE VACUUM BREAKERS SHALL NOT BE SUBJECTED TO BACK PRESSURE OR DRAINAGE.
3. DEVICES AND INSTALLATION SHALL MEET FRESNO COUNTY DEPARTMENT OF HEALTH AND CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS REGULATIONS AND REQUIREMENTS.
4. CLOSE NIPPLES SHALL NOT BE USED.
5. DISSIMILAR METALS SHALL BE SEPARATED BY AN APPROVED DIELECTRIC COUPLING.
6. PLASTIC PIPE SHALL NOT BE USED ABOVE FINISHED GRADE.
7. ALL PIPE SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE UNLESS OTHERWISE SPECIFIED. ALL BURIED GALVANIZED PIPE SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.
8. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
9. ALL VALVES SHALL BE PROVIDED WITH RESILIENT SEATS AND LOCKABLE.
10. BACKFLOW ASSEMBLY SHALL BE COVERED WITH A PROTECTIVE ENCLOSURE.

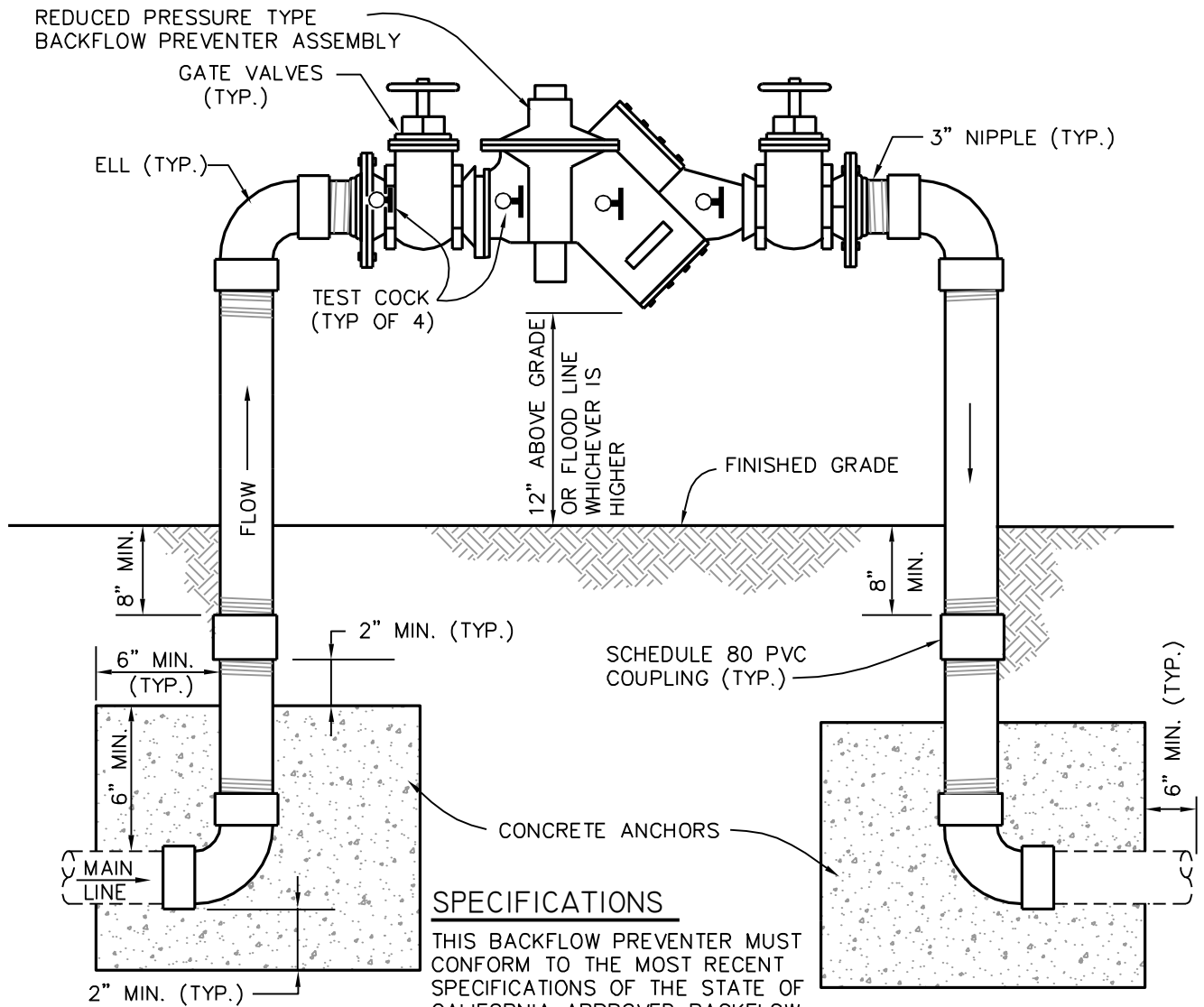
REVISION DATE		CITY OF MENDOTA	Std. Dwg.
9-25-07			VACUUM BREAKER ASSEMBLY
			W-10 2 OF 2



NOTES:

1. ALL PIPE FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL UNLESS OTHERWISE SPECIFIED. ALL BURIED GALVANIZED PIPE SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.
2. CONCRETE SHALL BE 5 SACK.
3. THE BACKFLOW PREVENTER DEVICES AND INSTALLATIONS SHALL BE APPROVED BY THE FRESNO COUNTY DEPARTMENT OF HEALTH SERVICES AND CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS.
4. VALVE ASSEMBLIES MAY HAVE SCREWED FITTINGS OR FLANGED. IF SCREWED FITTINGS ARE USED UNIONS SHALL BE INSTALLED ON EACH SIDE OF ASSEMBLY ABOVE GROUND. ALL VALVES SHALL BE PROVIDED WITH RESILIENT SEATS AND SHALL BE LOCKABLE.
5. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
6. APPROVED PLASTIC TAPE, 1/2" WIDE, SHALL BE USED ON ALL THREADED CONNECTIONS.
7. DISSIMILAR METALS SHALL BE SEPARATED BY AN APPROVED DIELECTRIC COUPLING.
8. PLASTIC PIPE SHALL NOT BE USED ABOVE FINISHED GRADE.
9. BACKFLOW ASSEMBLIES 3" OR SMALLER SHALL BE COVERED WITH A PROTECTIVE ENCLOSURE.

REVISION DATE	CITY OF MENDOTA	STD.DWG.
	DOUBLE CHECK VALVE BACKFLOW PREVENTER	W-II



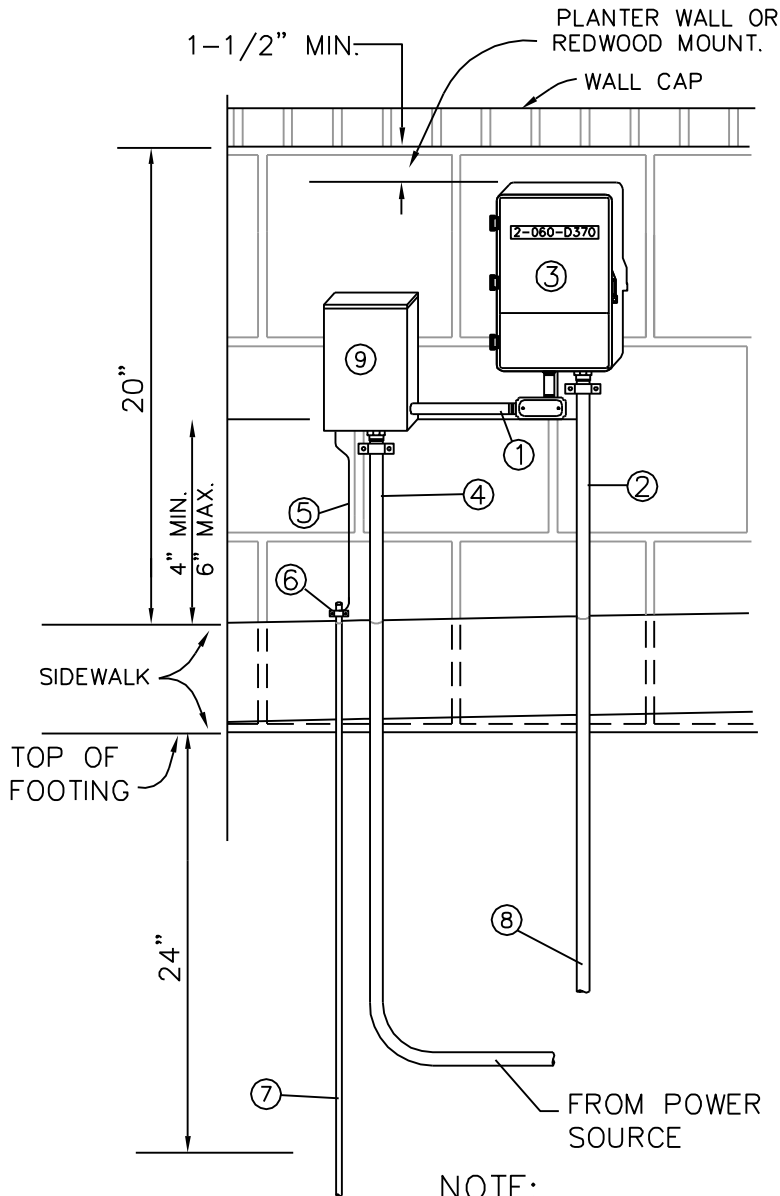
SPECIFICATIONS

THIS BACKFLOW PREVENTER MUST CONFORM TO THE MOST RECENT SPECIFICATIONS OF THE STATE OF CALIFORNIA APPROVED BACKFLOW PREVENTION ASSEMBLIES FOR SERVICE ISOLATION.

NOTES:

1. ALL PIPE FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL UNLESS OTHERWISE SPECIFIED. ALL BURIED GALVANIZED PIPE SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.
2. CONCRETE SHALL BE 5 SACK.
3. THE BACKFLOW PREVENTER DEVICES AND INSTALLATIONS SHALL BE APPROVED BY THE FRESNO COUNTY DEPARTMENT OF HEALTH SERVICES AND CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS.
4. VALVE ASSEMBLIES MAY HAVE SCREWED OR FLANGED FITTINGS. IF SCREWED FITTINGS ARE USED, UNIONS SHALL BE INSTALLED ON EACH SIDE OF ASSEMBLY ABOVE GROUND. ALL VALVES SHALL BE PROVIDED WITH RESILIENT SEATS AND SHALL BE LOCKABLE.
5. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
6. APPROVED PLASTIC TAPE, 1/2" WIDE, SHALL BE USED ON ALL THREADED CONNECTIONS.
7. DISSIMILAR METALS SHALL BE SEPARATED BY AN APPROVED DIELECTRIC COUPLING.
8. PLASTIC PIPE SHALL NOT BE USED ABOVE FINISHED GRADE.
9. BACKFLOW ASSEMBLIES 3" OR SMALLER SHALL BE COVERED WITH A PROTECTIVE ENCLOSURE.

REVISION DATE		CITY OF MENDOTA		STD.DWG.
9-25-07		REDUCED PRESSURE BACKFLOW PREVENTER		W-12



- ① ONE 1/2" O.L.R. CONDUIT AS REQUIRED (KILLARK OLR-1 OR EQUAL). FLEX CONDUIT NOT ACCEPTABLE.
- ② 1-1/4" P.V.C. SCH. 80 CONDUIT AND LOW VOLTAGE CONTROL CONDUCTORS AS REQUIRED.
- ③ IRRIGATION CONTROLLER AS REQUIRED, IDENTIFICATION NUMBERS TO BE ASSIGNED BY THE CITY ENGINEER IDENTIFICATION NUMBERS TO BE PROVIDED AND INSTALLED BY CONTRACTOR. BOX MUST BE LOCKABLE.
- ④ 1-1/4" P.V.C. SCH. 80 CONDUIT W/ 2#8-1#8 THWN COPPER CONDUCTORS SHALL BE IDENTIFIED AS PER NEC 210-5 (A) & (B). A PVC CONDUIT IS PREFERRED.
- ⑤ #8 SOLID COPPER ARMORED GROUND PER NEC 250-91.
- ⑥ ARMORED GROUND CLAMP PER NEC 250-115.
- ⑦ 5/8" x 8' GALV. GROUND ROD PER NEC 250-83.
- ⑧ TO SPRINKLER CONTROL VALVE.
- ⑨ 30 AMP SINGLE PHASE NEMA/3R WITH TWO CIRCUIT DISTRIBUTION PANEL WITH (2) 20-AMP CIRCUIT BREAKERS (SQUARE D OR EQUAL). SUBMIT SPECIFICATIONS TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. BOX MUST BE LOCKABLE.

NOTE:

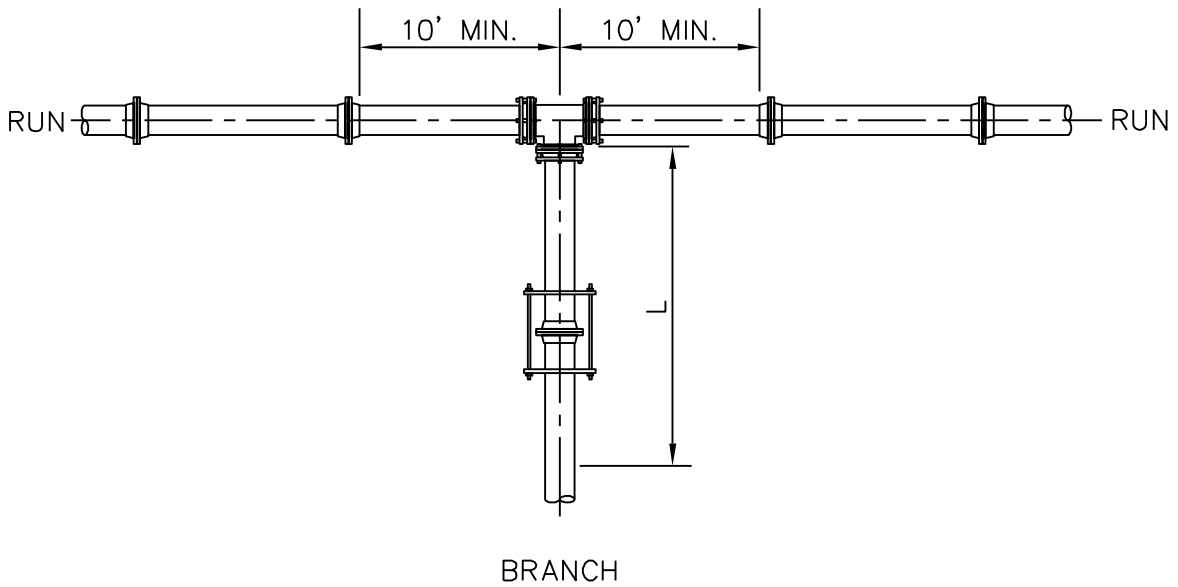
WALL MOUNT CONTROLLER AND BREAKER BOX TO PLANTER WALL OR MOUNT PANEL PER MANUFACTURURERS RECOMMENDATIONS.

IRRITROL MC - 4 PLUS-B IRRIGATION CONTROLLER

IRRIGATION CONTROLLER DETAIL

N.T.S.

REVISION DATE	CITY OF MENDOTA	STD.DWG.
	LANDSCAPE IRRIGATION CONTROLLER	W-13



PVC TEE RESTRAINT/RUN SIZE

		4	6	8	10	12	14	16	18
BRANCH SIZE	4	*	*	*	*	*	*	*	*
	6	X	*	*	*	*	*	*	*
	8	X	X	3	*	*	*	*	*
	10	X	X	X	14	*	*	*	*
	12	X	X	X	X	27	14	3	*
	14	X	X	X	X	X	38	27	16
	16	X	X	X	X	X	X	50	39
	16	X	X	X	X	X	X	X	61

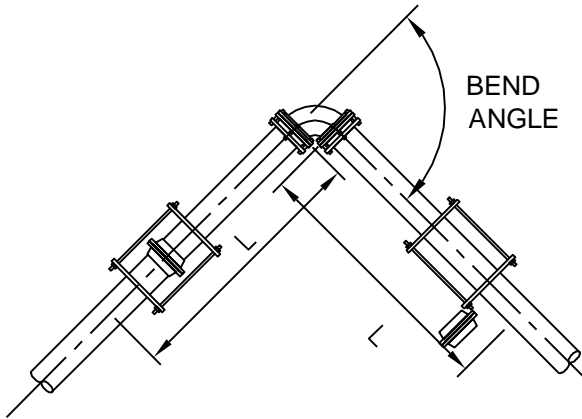
* — FOR THIS CONDITION NEED ONLY RESTRAIN THE BRANCH OUTLET OF THE TEE.

RESTRAINED LENGTHS "L" (IN FEET)

1. RESTRAIN THE TWO MECHANICAL JOINTS ON THE RUN SIDES OF THE TEE. THERE SHOULD BE A MINIMUM OF 10' OF JOINT FREE PIPE INSTALLED ON EACH SIDE OF THE RUN. IF THE 10' MINIMUM CANNOT BE INSTALLED, PROVIDE A THRUST BLOCK AT THE TEE.
2. ALL JOINTS WITHIN THE LENGTH "L" ON THE BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER SPECIFICATIONS.
3. CALCULATIONS BASED UPON SOIL TYPE ML PER ASTM D-2487, TRENCH COMPACTION MINIMUM 90% RELATIVE PER ASTM D-1557 AND D-2937, 1.5 SAFETY FACTOR, 100 PSI TEST PRESSURE, PIPE COVER 3 FT. MINIMUM. FOR OTHER CONDITIONS, INCREASE LENGTH "L" PER JOINT RESTRAINT MANUFACTURER REQUIREMENTS.

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		PVC TEE RESTRAINTS	1 OF 3

TREAT COMPOUND/COMBINATION BENDS AS NEXT LARGEST SINGLE FITTING.



BEND ANGLE	NOMINAL PIPE SIZE							
	4"	6"	8"	10"	12"	14"	16"	18"
90	12	17	21	25	30	33	37	41
45	5	7	9	11	13	14	16	17
22.5	3	4	5	5	6	7	8	9
11.25	2	2	3	3	3	4	4	4

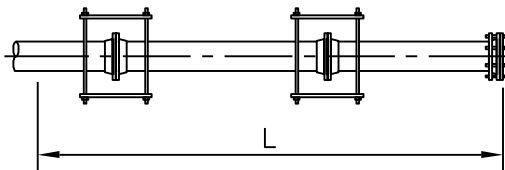
RESTRAINED LENGTHS "L" (IN FEET)

HORIZONTAL BEND

GENERAL NOTES ON USE OF RESTRAINED JOINT LENGTHS & HORIZONTAL BEND

THESE RESTRAINED LENGTH CALCULATIONS ARE BASED ON THE FOLLOWING DESIGN CRITERIA.

1. ALL JOINTS WITHIN THE LENGTH "L" ON EACH BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER SPECIFICATIONS.
2. CALCULATIONS BASED UPON SOIL TYPE ML PER ASTM D-2487, TRENCH COMPACTION MINIMUM 90% RELATIVE PER ASTM D-1557 AND D-2937, 1.5 SAFETY FACTOR, 100 PSI TEST PRESSURE, PIPE COVER 3 FT. MINIMUM. FOR OTHER CONDITIONS, INCREASE LENGTH "L" PER JOINT RESTRAINT MANUFACTURER REQUIREMENTS.



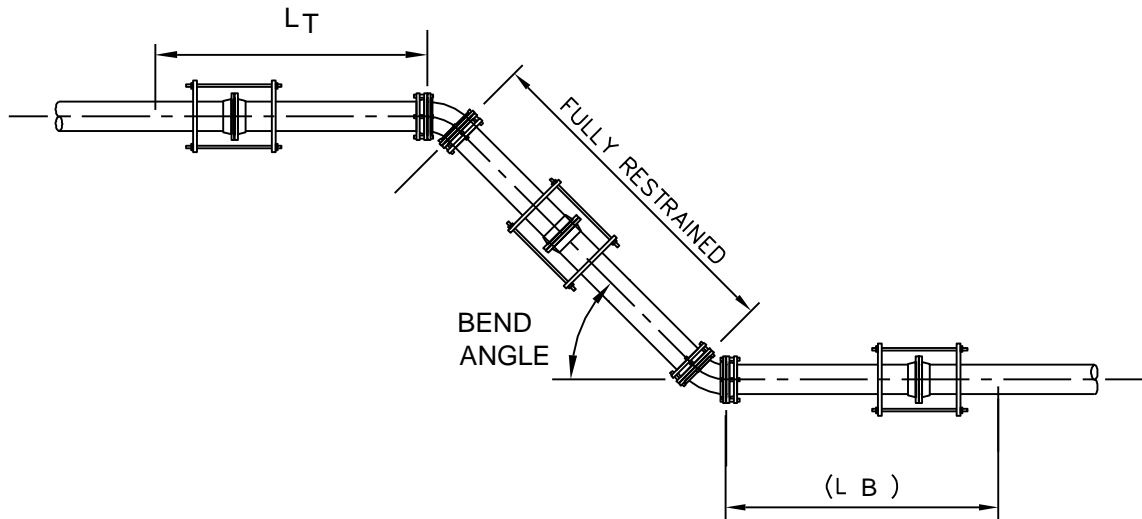
DEAD END - PVC PIPE SIZE

4	6	8	10	12	14	16	18
35	50	65	77	91	104	117	129

RESTRAINED LENGTHS "L" (IN FEET)

DEAD END FOR PVC PIPE

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VERTICAL BEND/OFFSET

BEND ANGLE	SIZE							
	4	6	8	10	12	14	16	18
45	15 (3)	21 (5)	27 (6)	32 (7)	38 (8)	43 (9)	49 (10)	54 (11)
22.5	7 (2)	10 (2)	13 (3)	16 (4)	19 (4)	21 (5)	24 (5)	26 (6)
11.25	4 (1)	5 (1)	7 (2)	8 (2)	9 (2)	11 (3)	12 (3)	13 (3)

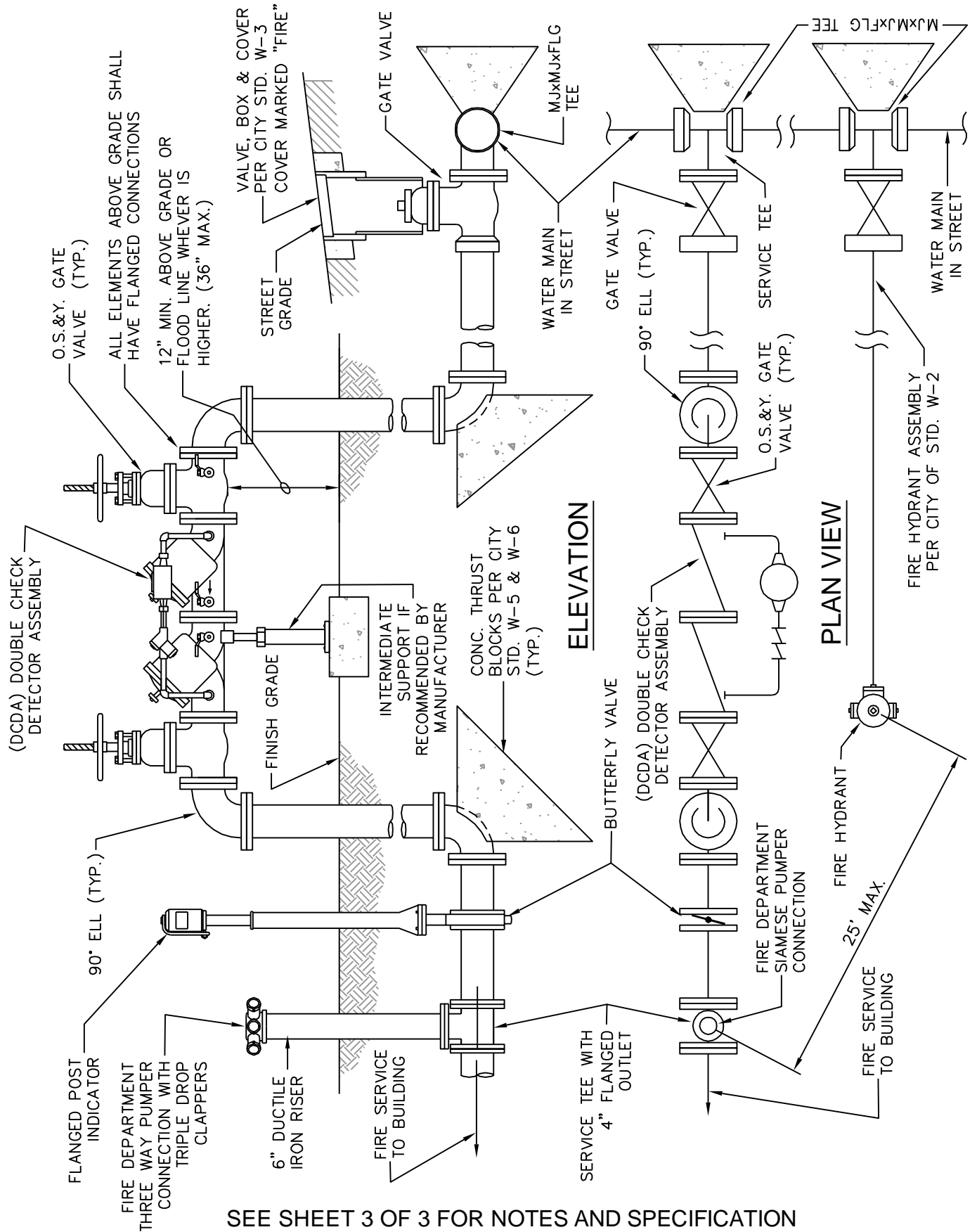
RESTRAINED LENGTHS "L_T" (IN FEET)

RESTRAINED LENGTHS (L_B) (IN FEET)

1. ALL JOINTS WITHIN THE LENGTH L_T AND L_B MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER SPECIFICATIONS.

2. CALCULATIONS BASED UPON SOIL TYPE ML PER ASTM D-2487, TRENCH COMPACTION MINIMUM 90% RELATIVE PER ASTM D-1557 AND D-2937, 1.5 SAFETY FACTOR, 100 PSI TEST PRESSURE, UPPER PIPE COVER 3 FT. MINIMUM, LOWER PIPE COVER 5 FT. MINIMUM. FOR OTHER CONDITIONS, INCREASE LENGTH L_T OR L_B PER JOINT RESTRAINT MANUFACTURER REQUIREMENTS.

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SEE SHEET 3 OF 3 FOR NOTES AND SPECIFICATION

REVISION	DATE
9-25-07	

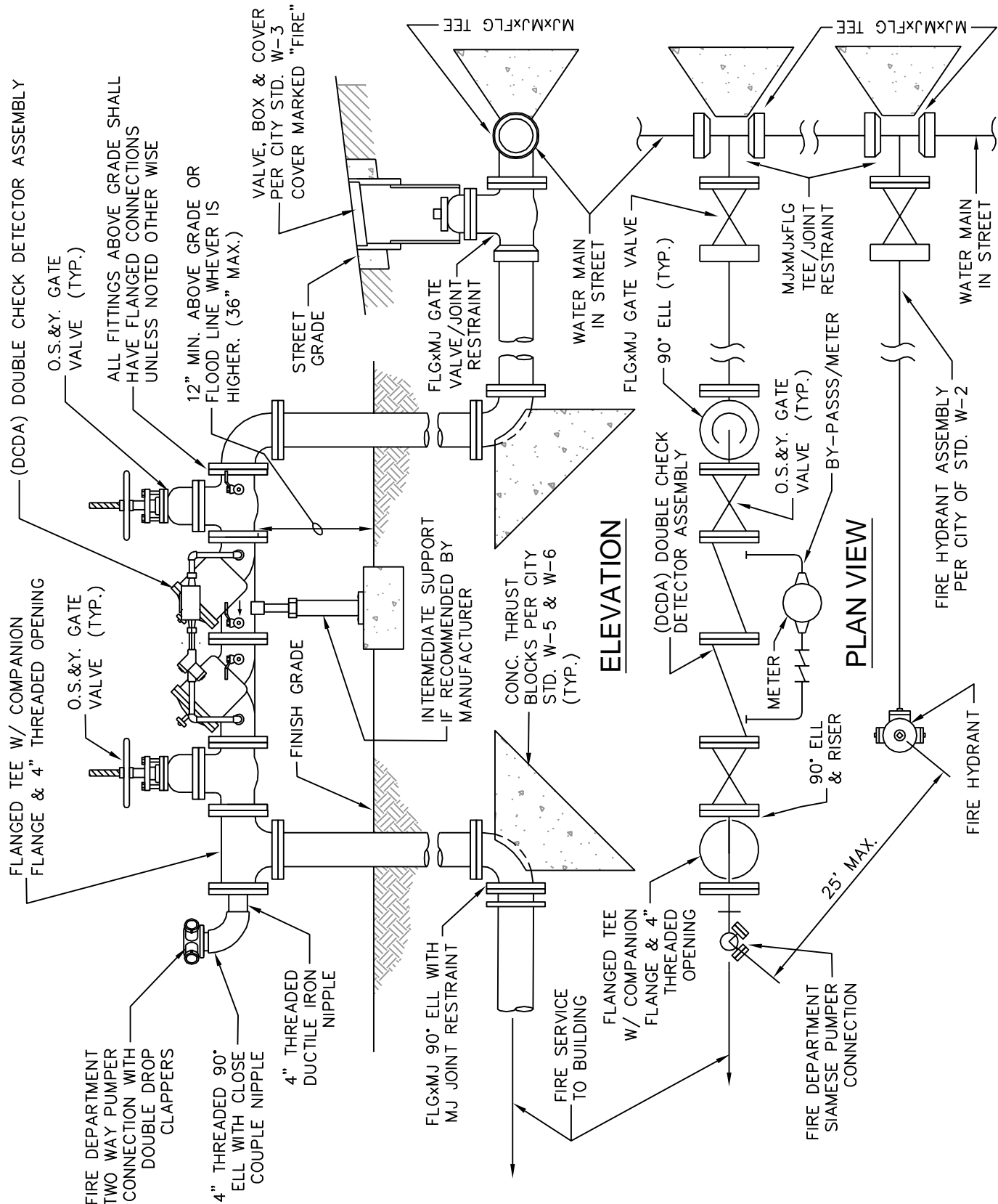
CITY OF MENDOTA

**FIRE SERVICE ASSEMBLY OPTION 1
WITH DETECTOR CHECK VALVE**

STD.DWG.

W-15

SHT. 1 OF 3



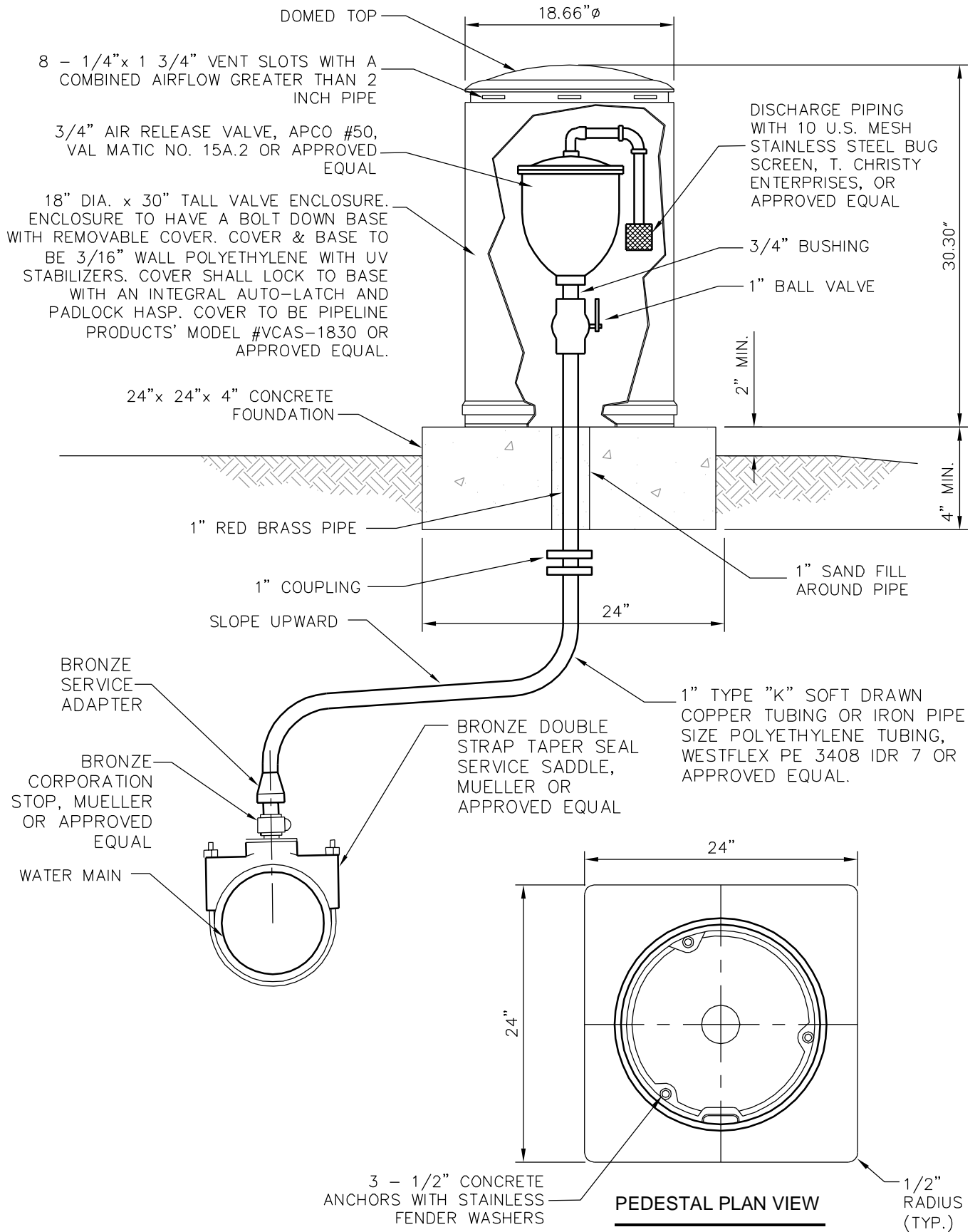
SEE SHEET 2 OF 3 FOR NOTES AND SPECIFICATION

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9-25-07			W-15
FIRE SERVICE ASSEMBLY OPTION 2 WITH DETECTOR CHECK VALVE		SHT. 2 OF 3	

NOTES & SPECIFICATIONS:

1. ALL PIPE AND FITTINGS SHALL BE FLANGED OR MECHANICAL JOIN WITH JOINT RESTRAINT FOR PVC AND APPROVED BY THE CITY ENGINEER. ALL T-BOLTS AND NUTS SHALL BE CORROSION RESISTANT, COR-BLUE, CERAMIC FILLED, WITH BAKED ON FLUOROCARBON RESIN. ALL FLANGE BOLTS AND NUTS SHALL BE Xylan COATED. GALVANIZED PIPE APPROVED FOR USE IN A BURIED APPLICATIONS SHALL BE WRAPPED WITH 20 MIL PVC PIPE WRAP.
2. CONCRETE SHALL HAVE 5 SACKS OF CEMENT MINIMUM PER CUBIC YARD OF CONCRETE.
3. THE BACKFLOW PREVENTER DEVICES AND INSTALLATIONS SHALL BE APPROVED BY CITY OF MENDOTA DEPARTMENT OF PUBLIC WORKS.
4. VALVE ASSEMBLIES MAY HAVE SCREWED FITTINGS OR FLANGED. IF SCREWED FITTINGS ARE USED UNIONS SHALL BE INSTALLED ON EACH SIDE OF ASSEMBLY ABOVE GROUND.
5. COAT ALL EXPOSED THREADS WITH AN APPROVED RUST INHIBITING SEALANT.
6. APPROVED PLASTIC TAPE, 1/2" WIDE, SHALL BE USED ON ALL THREADED CONNECTIONS.
7. DISSIMILAR METALS SHALL BE SEPARATED BY AN APPROVED DIELECTRIC COUPLING.
8. PLASTIC PIPE SHALL NOT BE USED ABOVE FINISHED GRADE.
9. DOUBLE CHECK DETECTOR ASSEMBLY SHALL BE FEBCO MODEL 856, WILKINS 350ADA, OR APPROVED EQUAL.
10. FLANGED POST INDICATOR VALVE SHALL BE POTTER-ROEMER, INC. MODEL 6223 WITH TAMPER SWITCH AND CONDUIT WITH WIRES TO ALARM PANEL, OR APPROVED EQUAL.
11. FIRE DEPARTMENT CONNECTIONS SHALL HAVE NST THREADS AND LETTERING "AUTO. SPKR."
 - OPTION 1: SHALL BE POTTER-ROMER MODEL 5746-C. THREEWAY WITH TRIPLE CLAPPERS OR APPROVED EQUAL. ON THREADED 6" DUCTILE IRON PIPE RISER. RISER SHALL BE PAINTED WITH 1 COAT PRIMER AND 2 COATS RED ENAMEL.
 - OPTION 2: SHALL BE POTTER-ROMER MODEL 5731-C TWO WAY WITH DOUBLE CLAPPERS OR APPROVED EQUAL ON THREADED 4" CONNECTION.
12. POST INDICATOR VALVE AND FIRE DEPARTMENT CONNECTIONS SHALL MEET THE COUNTY OF FRESNO, FIRE DEPARTMENT STANDARDS. FOR OPTION 2, PROVIDE HEAVY DUTY CHAIN TO LOCK VALVES ON DETECTOR ASSEMBLY. PROVIDE ONE 6 INCH LONG CHAIN SECTION FOR DOUBLE LOCKING WITH CITY AND FIRE DEPARTMENT LOCKS.
13. BACKFLOW ASSEMBLIES 2" OR SMALLER SHALL BE COVERED WITH A APPROVED PROTECTIVE ENCLOSURE AND COVERED WITH A PROTECTIVE FREEZE BLANKET APPROVED BY THE CITY ENGINEER.
14. UNDERGROUND PIPING FOR FIRE LINES SHALL BE TESTED HYDROSTATICALLY AT 200 PSI FOR 2 HOURS AS PER NFPA 13. UNDERGROUND PIPE DURING TESTING SHALL NOT BE BURIED BUT MAY BE CENTERED LOAD BURIED DURING 200 PSI TEST.

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6-23-09			W-16
AIR RELEASE VALVE			ALT 1

