

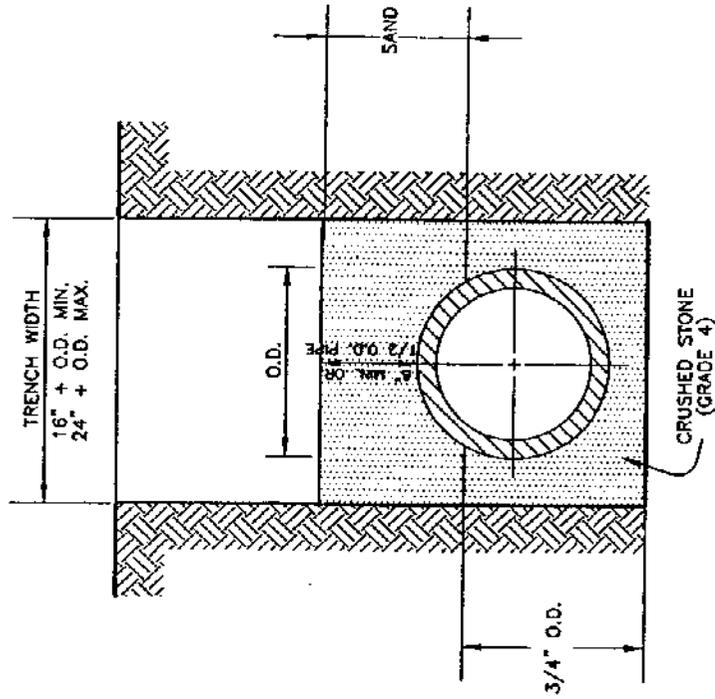
WATER INDEX

GENERAL NOTES.....	SD-W01
WATER MAIN BACKFILL.....	SD-W02
EMBEDMENT DETAILS.....	SD-W03
THRUST BLOCK.....	SD-W04
THRUST BLOCK.....	SD-W05
CREEK CROSSING.....	SD-W06
VALVE SETTING & BDX.....	SD-W07
VALVE BOX WITH EXTENSION.....	SD-W08
VALVE EXTENSIONS.....	SD-W09
VERTICAL VALVE INSTALLATION.....	SD-W10
AIR & VACUUM-AIR RELEASE VALVE INSTALLATION.....	SD-W11
BUTTERFLY VALVE.....	SD-W12
2" BLOW OFF WITH METER BOX.....	SD-W13
BLOW OFF VALVE.....	SD-W14
FIRE HYDRANT INSTALLATION.....	SD-W15
FIRE HYDRANT GUARD POST.....	SD-W16
FIRE HYDRANT REFLECTOR INSTALLATION.....	SD-W17
SERVICE CONNECTION WITH METER BOX.....	SD-W18
REINFORCED CONCRETE CYLINDER PIPE DETAILS.....	SD-W19
METER VAULT.....	SD-W20
METER VAULT.....	SD-W21
DETECTOR CHECK VALVE.....	SD-W22
DETECTOR METER VAULT.....	SD-W23
CONCRETE STREET REPAIR, ASPHALT STREET REPAIR.....	SD-W24
TYPICAL WATER/SANITARY SEWER SERVICE LOCATION.....	SD-W25

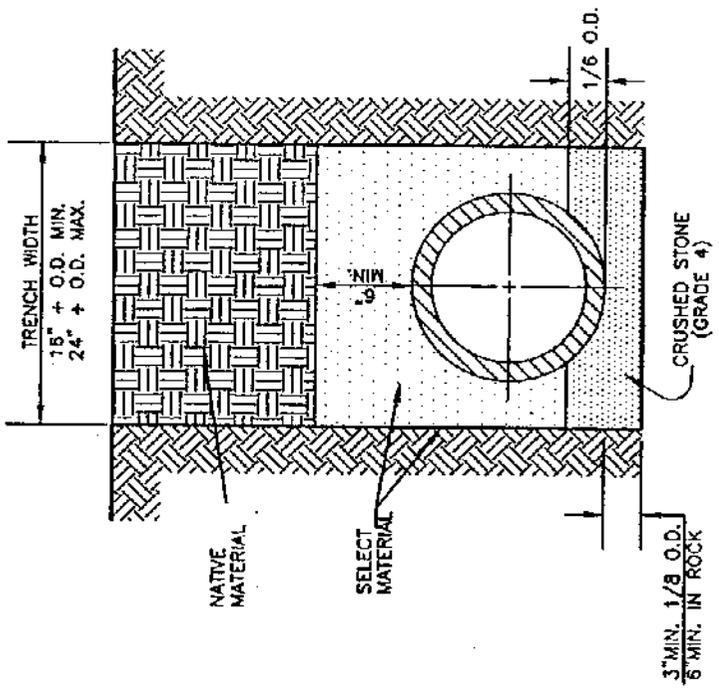
GENERAL NOTES

1. ALL MATERIALS AND PRACTICES SHALL BE AS SPECIFIED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WITH MOST RECENT AMENDMENTS).
2. ALL CAST IRON AND DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT OR SLIP JOINT FOR C.I. PIPE AND D.I. PIPE OR MECHANICAL JOINT, SLIP JOINT OR BELL AND SPIGOT FOR P.V.C. WATER PIPE.
3. ALL WATER MAINS SHALL HAVE THE FOLLOWING MINIMUM COVER OR SUFFICIENT COVER TO CLEAR OTHER UTILITIES:
 - 8" - 48" COVER
 - 10" AND 12" PIPE - 54" TO 60" COVER
4. REMOVE ALL BLEEDER LINES UPON COMPLETION OF TESTING.
5. ALL DUCTILE IRON OR CAST IRON PIPE AND OR FITTING SHALL BE POLYWRAPPED.
6. WHERE CONFLICTS OCCUR WARP WATER LINE AROUND INLETS TO OBTAIN 1' MIN CLEARANCE.
7. DOUBLE STRAPPED BRONZE SADDLES SHALL BE USED FOR MAKING 2" OR SMALLER TAPS.
8. ADHERE TO MOST RECENT VERSION OF TNRC REQUIREMENTS REGARDING WATER/SEWER SEPARATION. THESE INCLUDE REQUIREMENTS PERTAINING TO NEW PIPE BEING INSTALLED NEAR EXISTING PIPE.
9. FIRE HYDRANTS SHALL BE OF THE WATEROUS TYPE.
10. MAIN LINE VALVE AT ALL FIRE HYDRANT INSTILATION.
11. 2" BLEEDER'S IN CUL-DE-SACS; OUTSIDE THE CURB FOR END OF WATERLINE FLUSHING.
12. I-SAW CUT ON CURB FOR WATER SERVICE.
13. II-SAW CUT ON CURB FOR SEWER SERVICE.
14. WATERLINE TO BE 5' FROM BACK OF CURB.
15. FIRE HYDRANTS TO BE 3' MIN. FROM BACK OF CURB.
16. 1" WATER SERVICE TYPE K SOFT COPPER.
17. NO WET BORES WILL BE ALLOWED.
18. MINIMUM WATER MAIN SIZE SHALL BE 8".

	GENERAL NOTES	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W01



TYPICAL BACKFILL WATER MAIN
P.V.C. WATER PIPE
 NTS



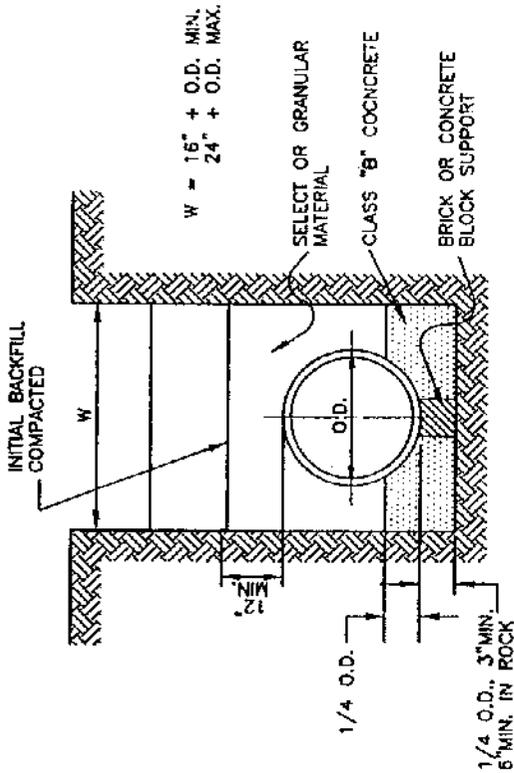
CLASS "C" EMBEDMENT
 TYPICAL BACKFILL WATER MAIN
DUCTILE IRON OR PCCP
 NTS

WATER MAIN BACKFILL

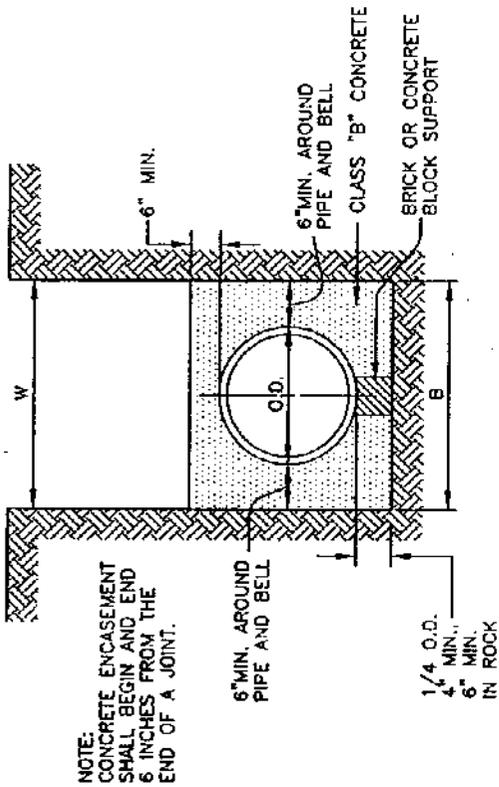
STANDARD CONSTRUCTION DETAILS
 WATER

DATE:
 1999

SHEET:
 SD-W02



CONCRETE CRADLE
CLASS "A" EMBEDMENT
NTS



CLASS "C" EMBEDMENT
NTS

TABLE OF QUANTITIES OF MATERIAL IN CUBIC YARDS PER 100 LINEAR FEET				
INSIDE DIAMETER OF PIPE	TRENCH WIDTH IN IN.	TRENCH WIDTH IN FEET	CONCRETE	
			CLASS "A" EMBED.	CLASS "C" EMBED.
14"	17.25"	34"	2.83	6.37
16"	19.38"	36"	3.00	7.49
18"	21.78"	38"	3.17	8.77
20"	23.78"	40"	3.33	10.00
24"	27.75"	44"	3.67	12.66
REINFORCED CONCRETE CYLINDER PIPE				
				CRUSHED STONE
				CLASS "C" EMBED.
				CLASS "C" EMBED.
				5.91
				7.46

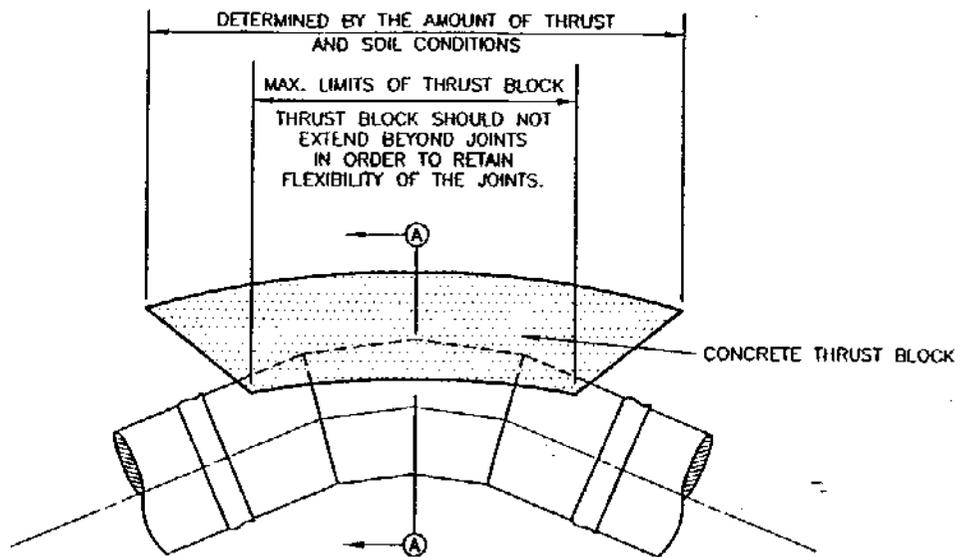
NOTE:
ALL COMPACTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

EMBEDMENT DETAILS

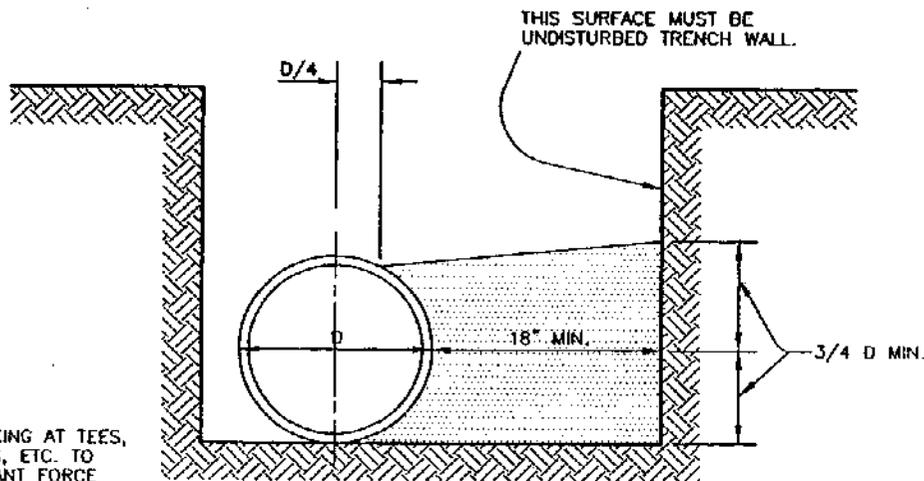
STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

SHEET:
SD-W03



PLAN VIEW



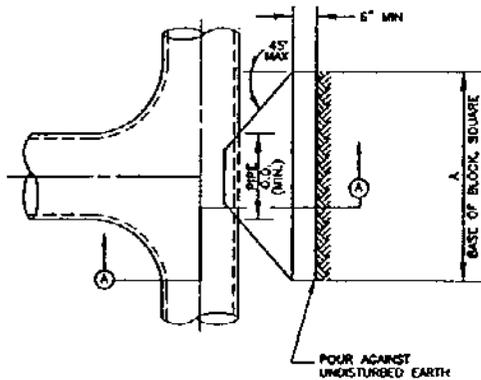
PROVIDE ADEQUATE BLOCKING AT TEES, WYES, BENDS, DEAD ENDS, ETC. TO COUNTERACT THE RESULTANT FORCE DUE TO INTERNAL PRESSURES.

SECTION A-A

THRUST BLOCK DETAIL

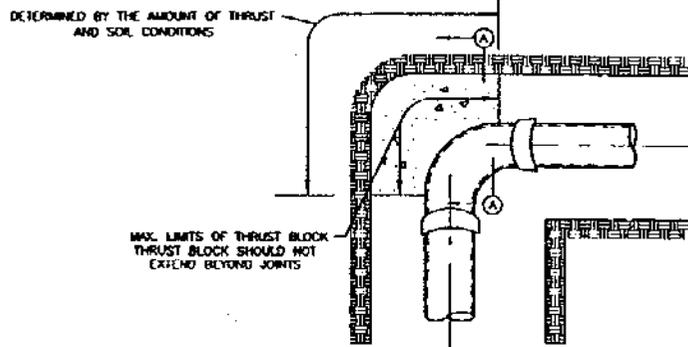
NTS

	THRUST BLOCK	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W04



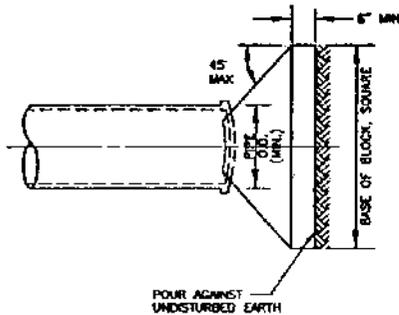
PLAN OF TEE THRUST BLOCK

NTS



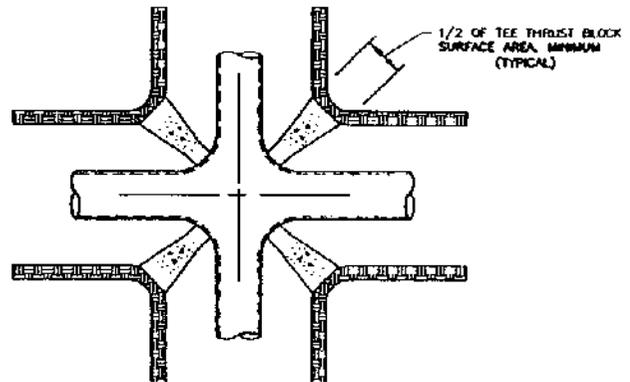
PLAN OF 90° THRUST BLOCK

NTS



PLAN OF PLUG THRUST BLOCK

NTS



PLAN OF CROSS THRUST BLOCK

NTS

GENERAL DATA FOR BLOCKING STANDARD FITTINGS

PIPE SIZE	MINIMUM SURFACE AREA OF CONCRETE BLOCK AGAINST UNDISTURBED EARTH (S.F.)					
	PLUG	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
6"	2.50	2.3	3.00	2.00	1.00	1.00
8"	4.00	4.00	5.50	3.00	1.50	1.00
10"	6.00	6.00	8.50	5.00	2.50	1.50
12"	9.00	9.00	12.5	7.00	3.50	2.00
14"	12.0	12.0	16.5	9.00	5.00	2.50
16"	15.5	15.5	22.0	12.0	6.00	3.00
18"	19.5	19.5	27.5	15.0	8.00	4.00
20"	24.0	24.0	34.5	19.0	10.0	5.00

GENERAL NOTES:

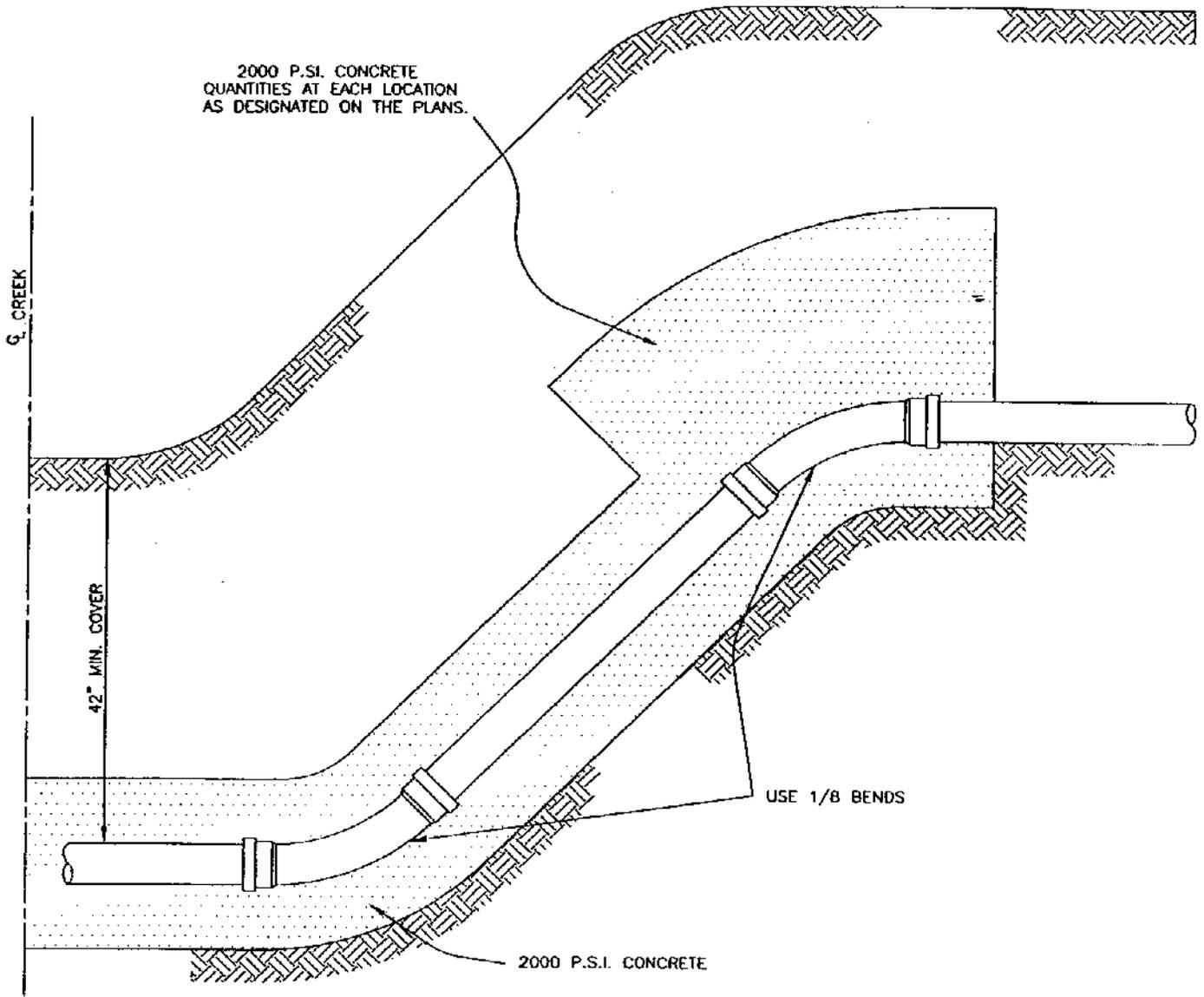
1. ALL CALCULATIONS ARE BASED ON TOTAL INTERNAL PRESSURE OF 150 P.S.I.
2. ALLOWABLE SOIL BEARING PRESSURES MUST BE AT LEAST ONE TON PER SQUARE FOOT FOR THE THRUST BLOCKS SHOWN. IN SOILS OF LESSER CAPACITY, INCREASE SIZE AND BEARING AREA PROPORTIONATELY. VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED AND THE CORRESPONDING WEIGHT OF THE CONCRETE (AT 4000#/C.Y.) EQUALS THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND. ALL BEARING SURFACES OF THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
3. CONCRETE FOR BLOCKING SHALL BE 2,000 P.S.I. CONCRETE.
4. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER, BUT SHALL NOT BE LESS THAN THE DIMENSIONS SHOWN HERE.
5. ALL ANCHOR FITTINGS TO BE CONCRETE THRUST BLOCKED. ALL DUCTILE OR CAST IRON FITTINGS AND OR PIPE TO BE POLYWRAPPED.

THRUST BLOCK

STANDARD CONSTRUCTION DETAILS
WATER

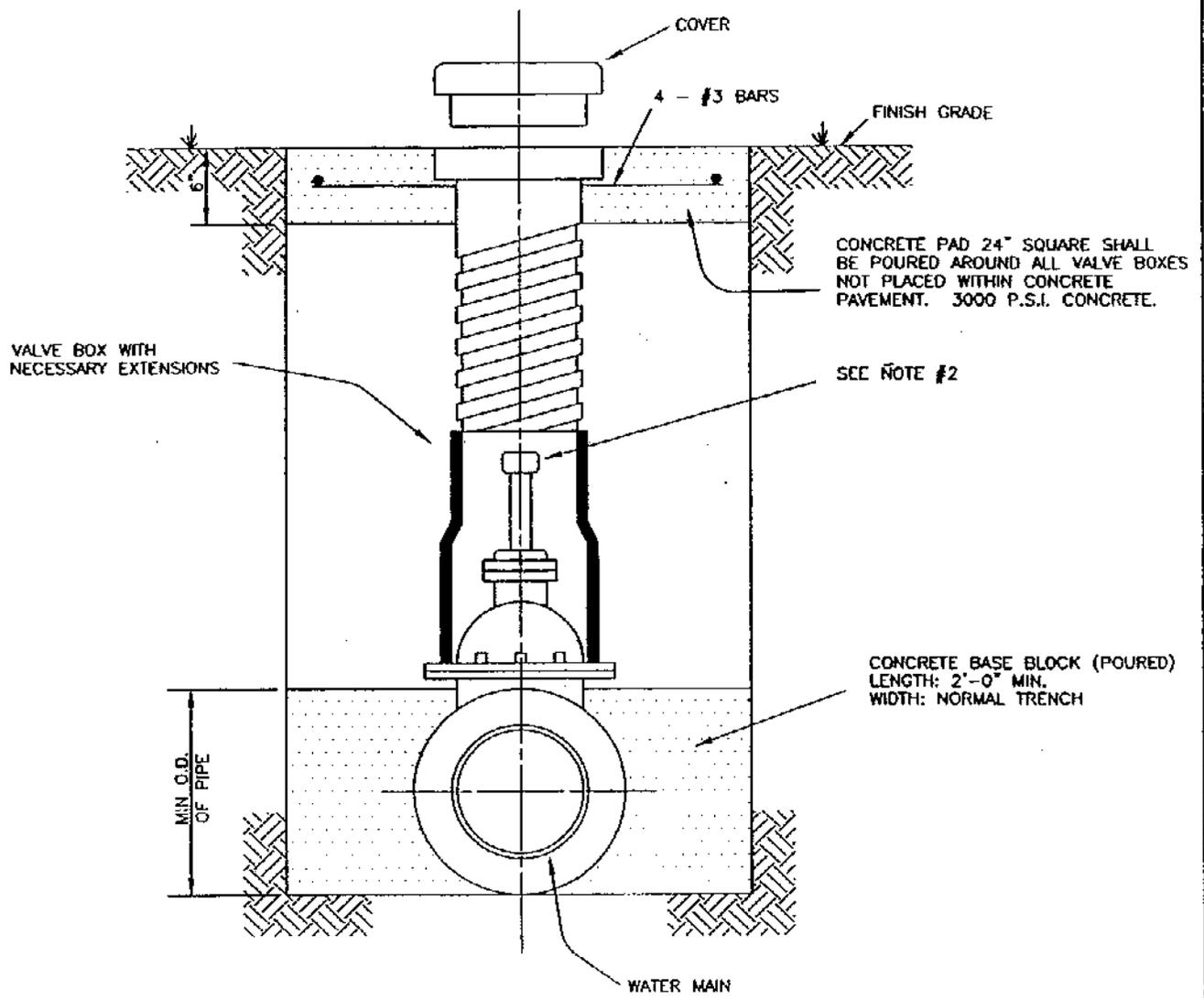
DATE:
1999

SHEET:
SD-W05



HALF-SECTION
TYPICAL CREEK CROSSING
 NTS

	CREEK CROSSING	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W06



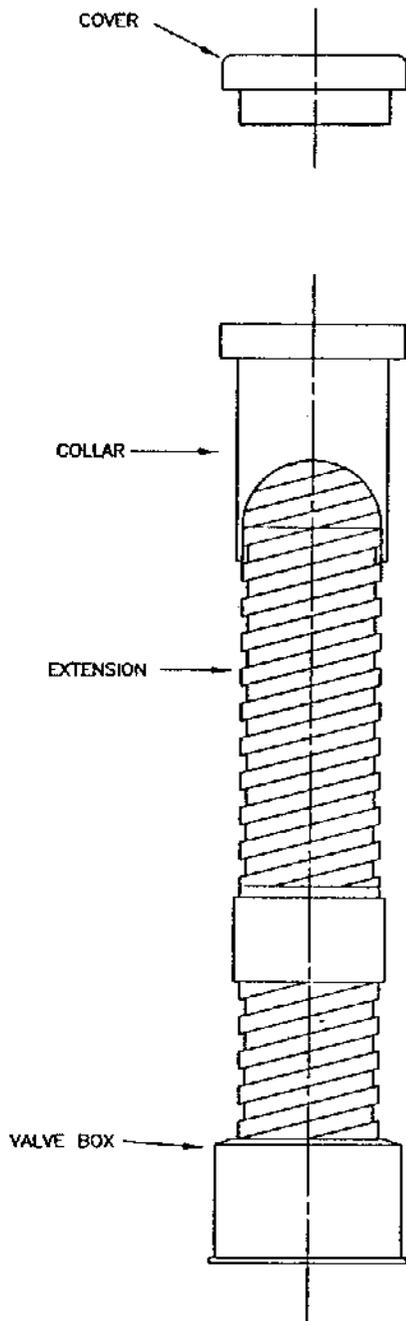
NOTE:

1. 4"-12" R.S. GATE VALVES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C-509
2. ALL VALVES SHALL BE FITTED WITH AN EXTENSION OF SUFFICIENT LENGTH TO ENSURE THAT THE TOP IS WITHIN 12" OF THE VALVE BOX LID.
3. DUCTILE IRON OR C-800 PVC PIPE SHALL BE USED FOR VALVE STACKS WITH TWO PIECE ADJUSTABLE (SHORTY) VALVE BOXES.
4. SEE SD-W25 FOR CURB FACE MARKINGS.

TYPICAL VALVE SETTING AND BOX

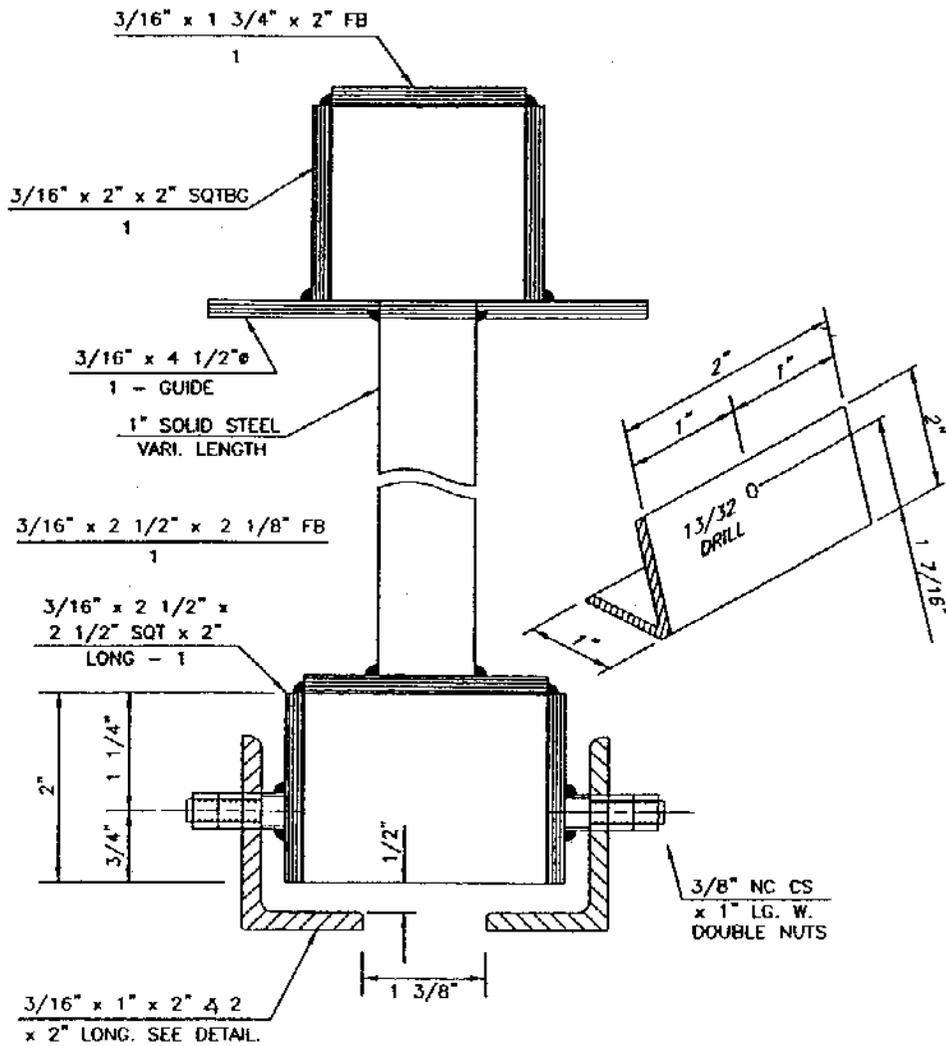
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	VALVE SETTING & BOX	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W07



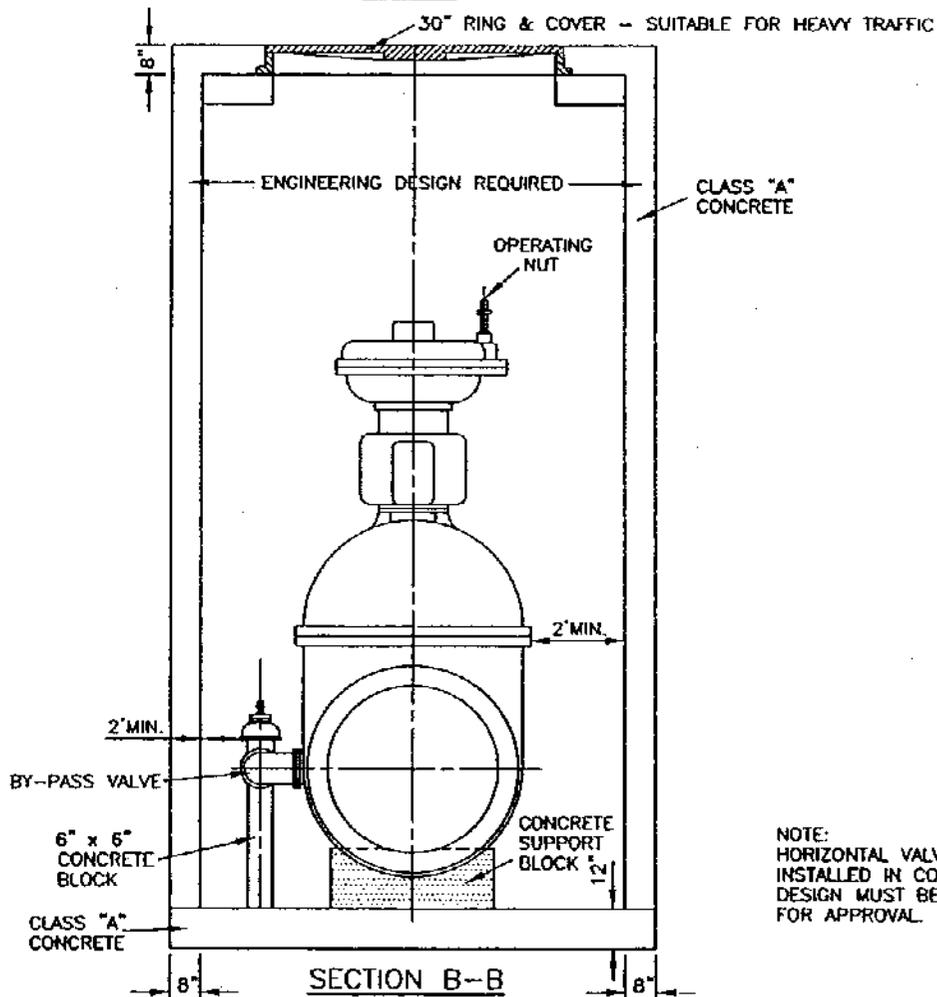
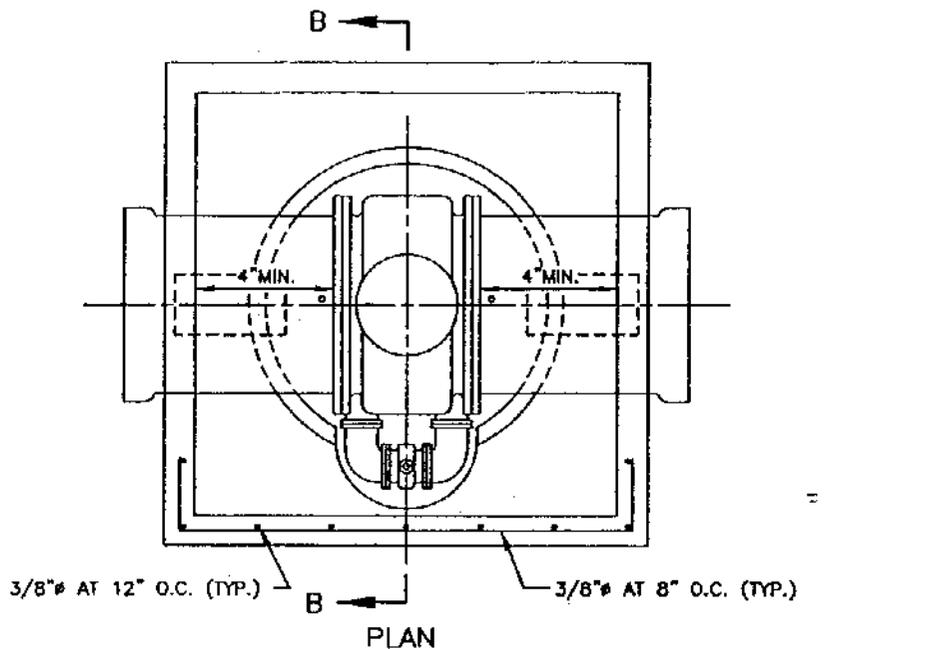
VALVE BOX WITH EXTENSION
NTS

	<p>VALVE BOX WITH EXTENSION</p>	<p>STANDARD CONSTRUCTION DETAILS WATER</p>	
		<p>DATE: 1999</p>	<p>SHEET: SD-W08</p>



TYPE - B
VALVE EXTENSION
NTS

	VALVE EXTENSIONS	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W09



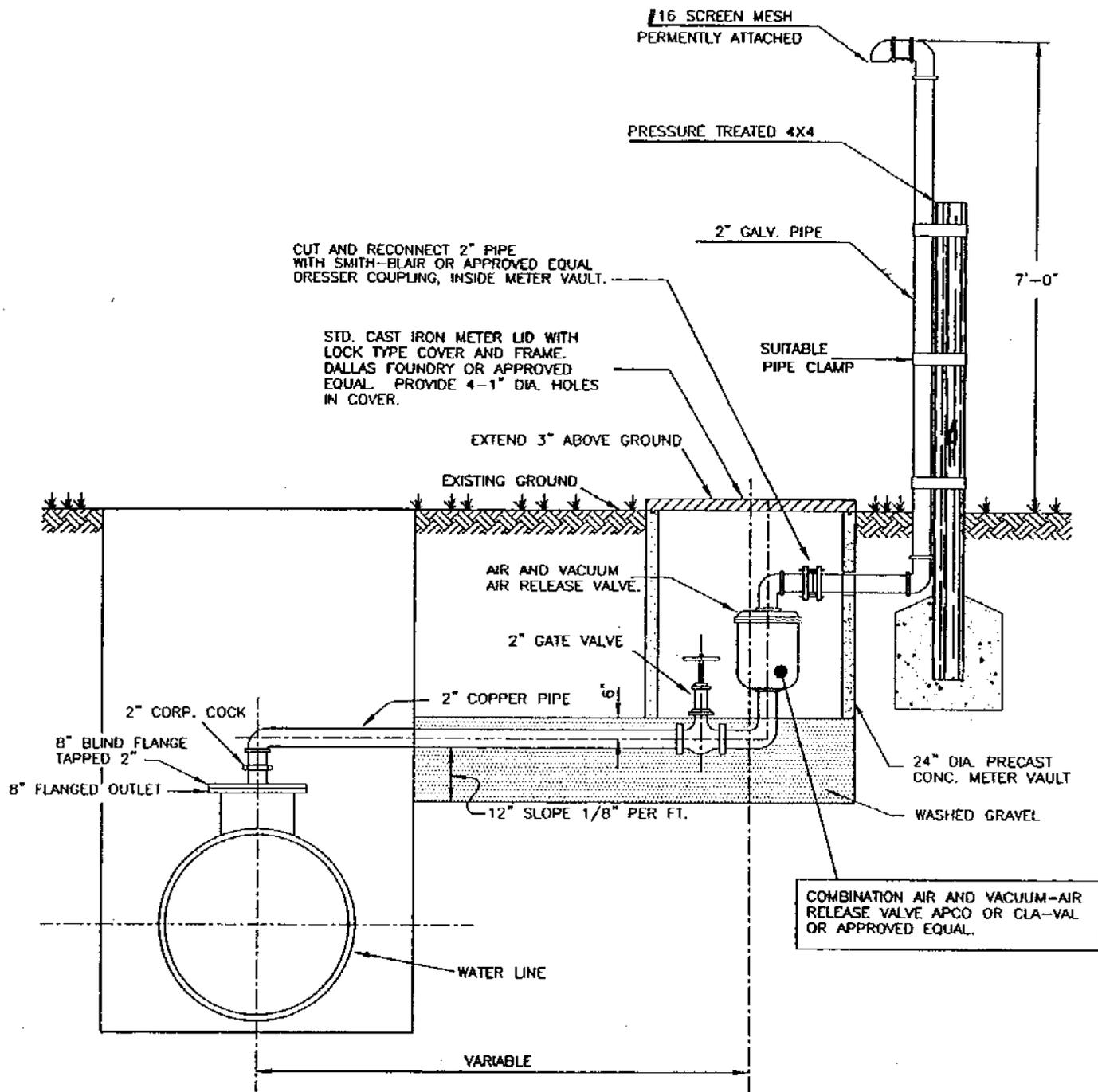
VERTICAL VALVE INSTALLATION
FOR 18", 20" & 24"
 NTS

STANDARD CONSTRUCTION DETAILS
 WATER

VERTICAL VALVE INSTALLATION

DATE:
 1999

SHEET:
 SD-W10



TYPICAL AIR AND VACUUM-AIR RELEASE
VALVE INSTALLATION

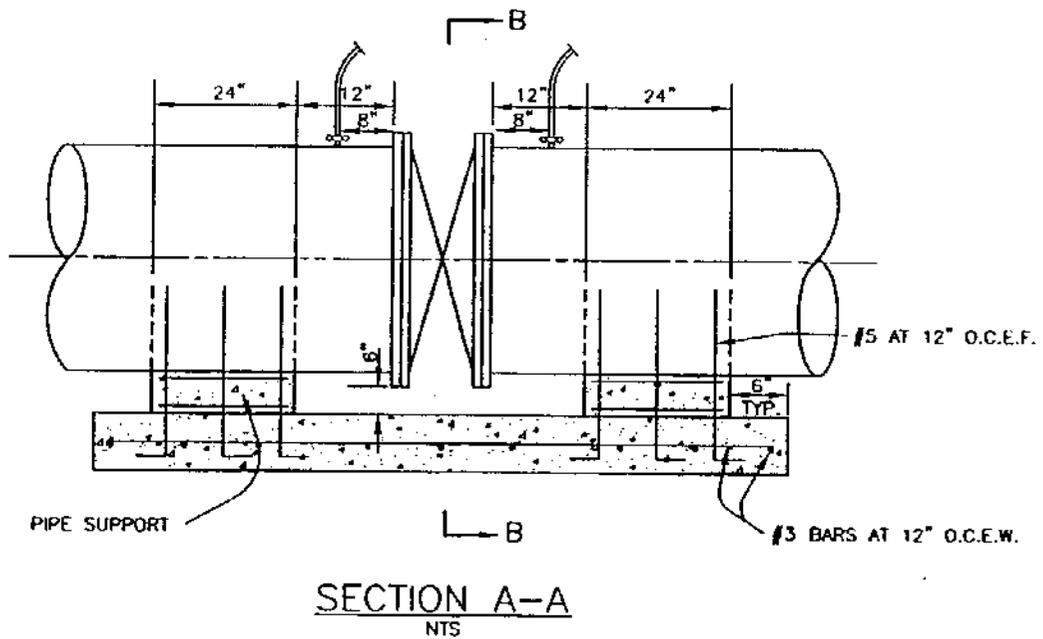
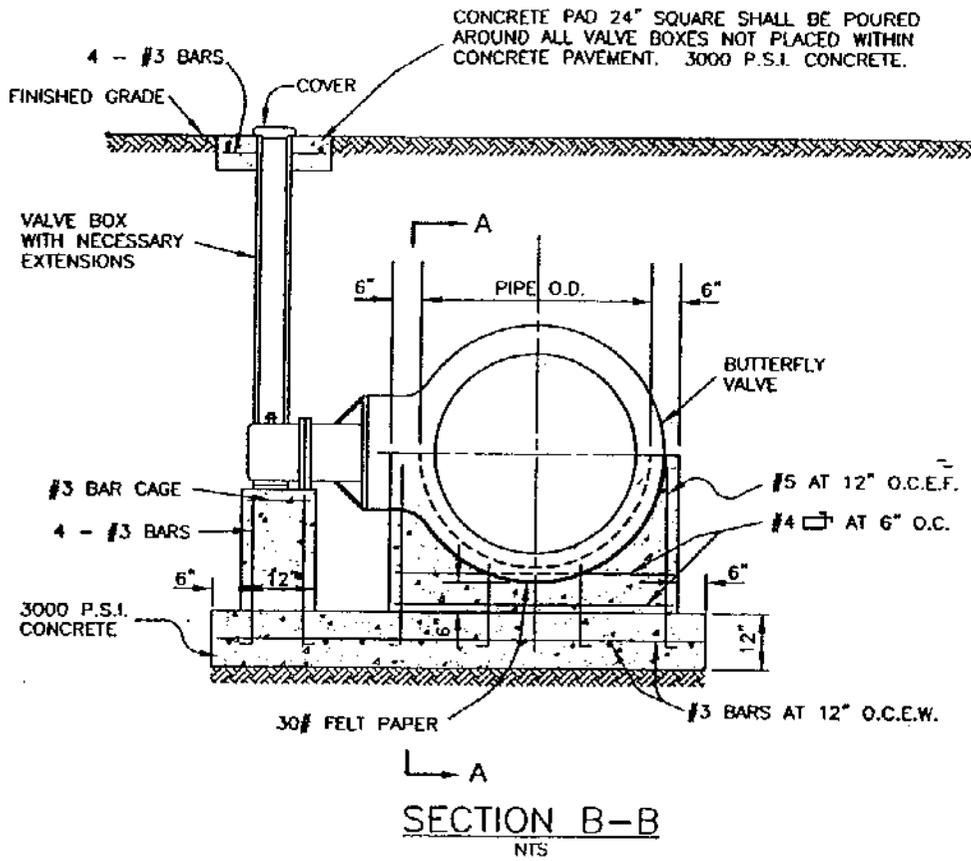
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AIR AND VACUUM-AIR
RELEASE VALVE INSTALLATION

STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

SHEET:
SD-W11

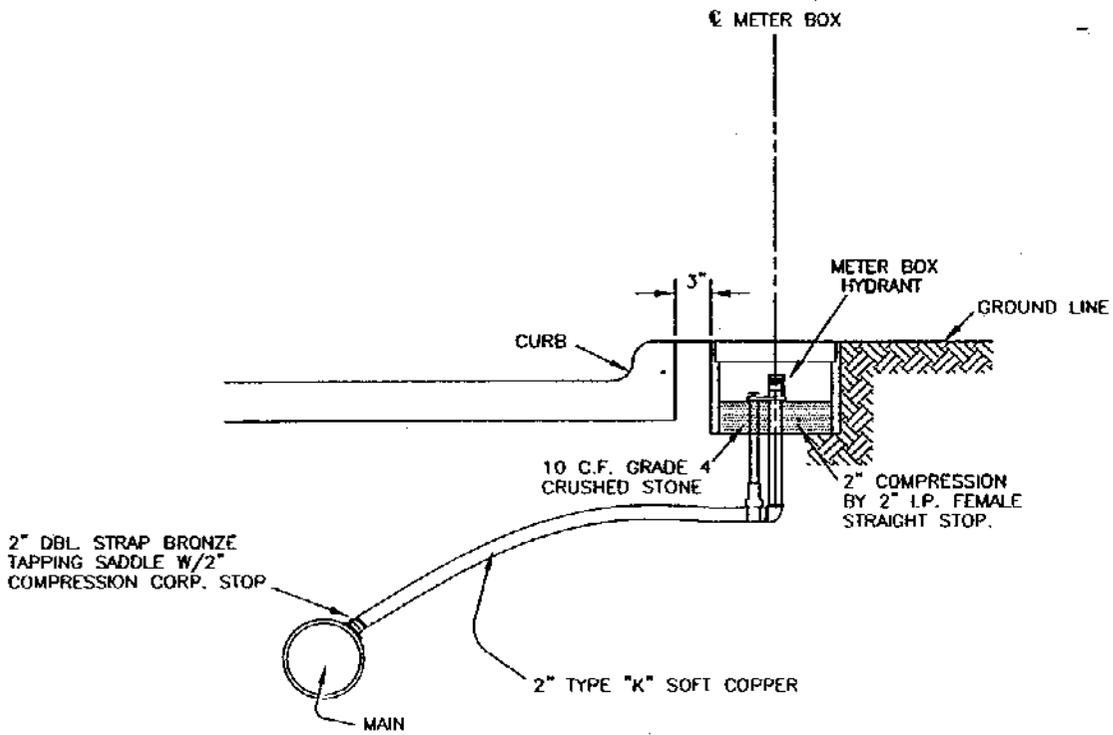


BUTTERFLY VALVE

STANDARD CONSTRUCTION DETAILS
WATER

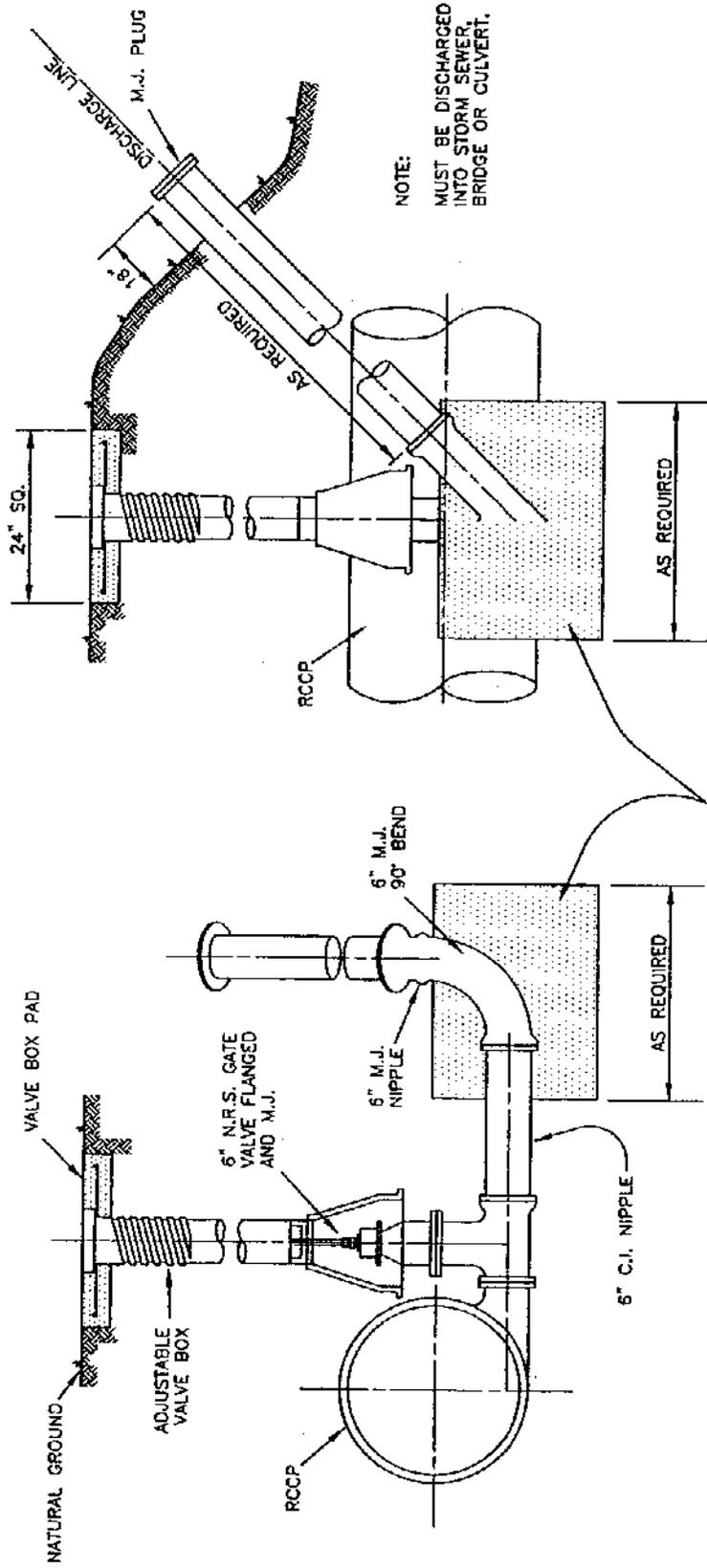
DATE:
1999

SHEET:
SD-W12



2" BLOW OFF
NTS

	2" BLOW OFF WITH METER BOX	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W13



NOTE:
MUST BE DISCHARGED
INTO STORM SEWER,
BRIDGE OR CULVERT.

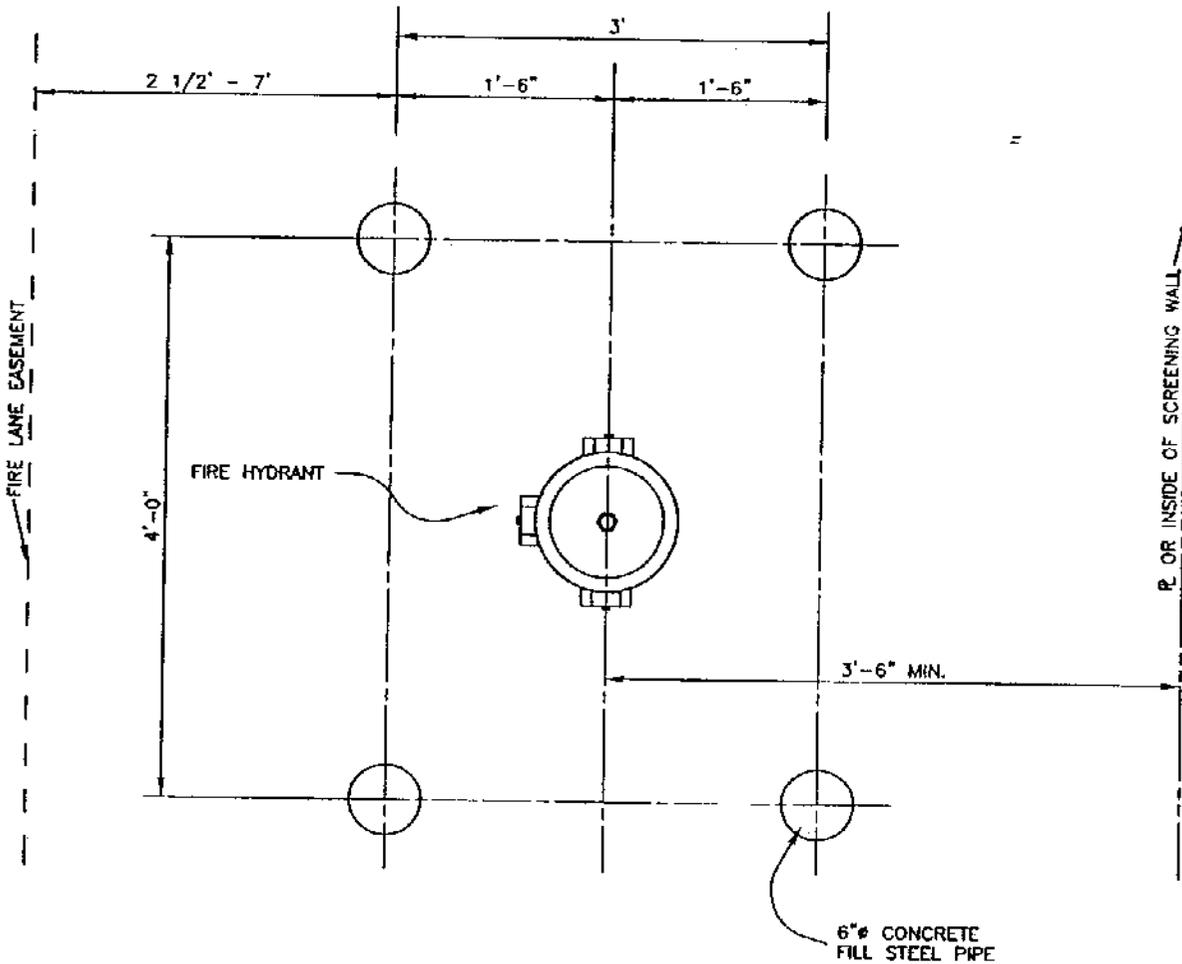
CLASS "B" CONC. THRUST
BLOCK TO BE PLACED ON
UNDISTURBED EARTH.

BLOW OFF VALVE DETAIL

NTS

BLOW OFF VALVE		STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W14

6"Ø STEEL PIPE W/CONCRETE FILL
 6' LENGTH (3' ABOVE PAVING, 3' BELOW
 PAVING) TO BE CASED IN 16"Ø PIER TO
 DEPTH OF 1'-0". BELOW BOTTOM OF
 PIPE USE 2-#6x12" THRU PIPE INTO
 CONCRETE PIER. PIPES TO BE PAINTED
 SAME AS FIRE HYDRANT - ALUMINUM.

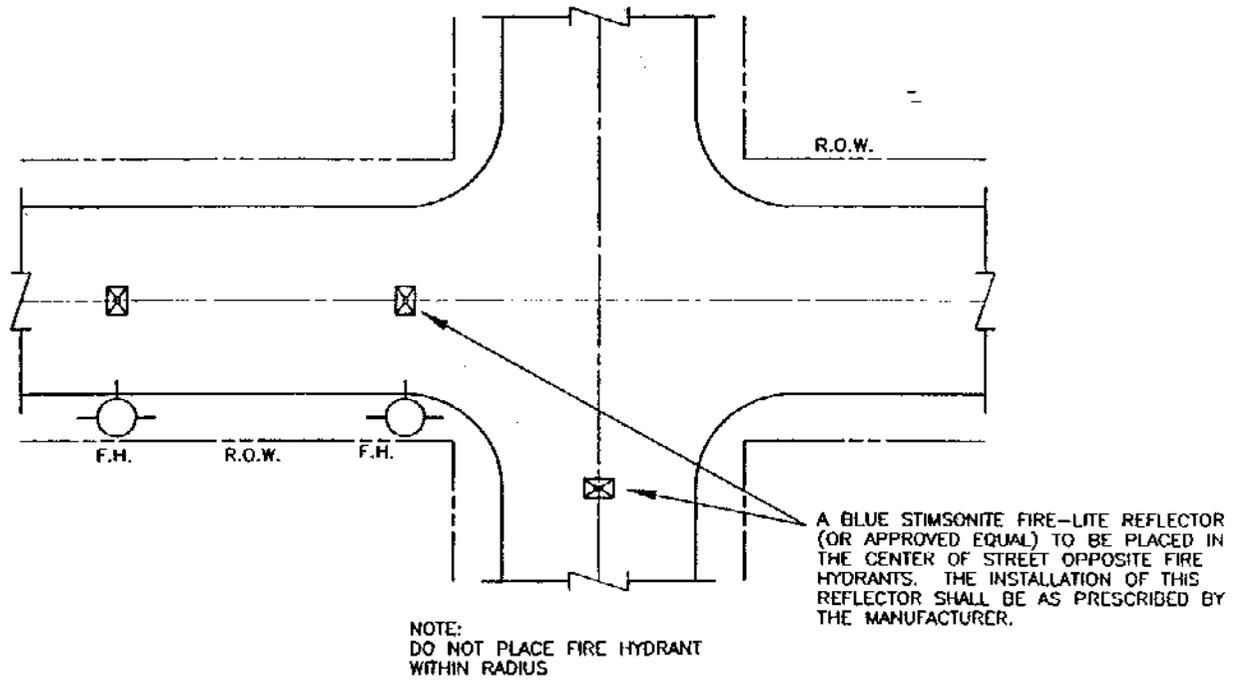


NOTE:
 FOR USE BY PRIOR APPROVAL OF CITY ONLY.

FIRE HYDRANT GUARD POST DETAIL

NTS

	FIRE HYDRANT GUARD POST	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W16



TYPICAL FIRE HYDRANT REFLECTOR INSTALLATION

NTS

FIRE HYDRANT
REFLECTOR INSTALLATION

STANDARD CONSTRUCTION DETAILS
WATER

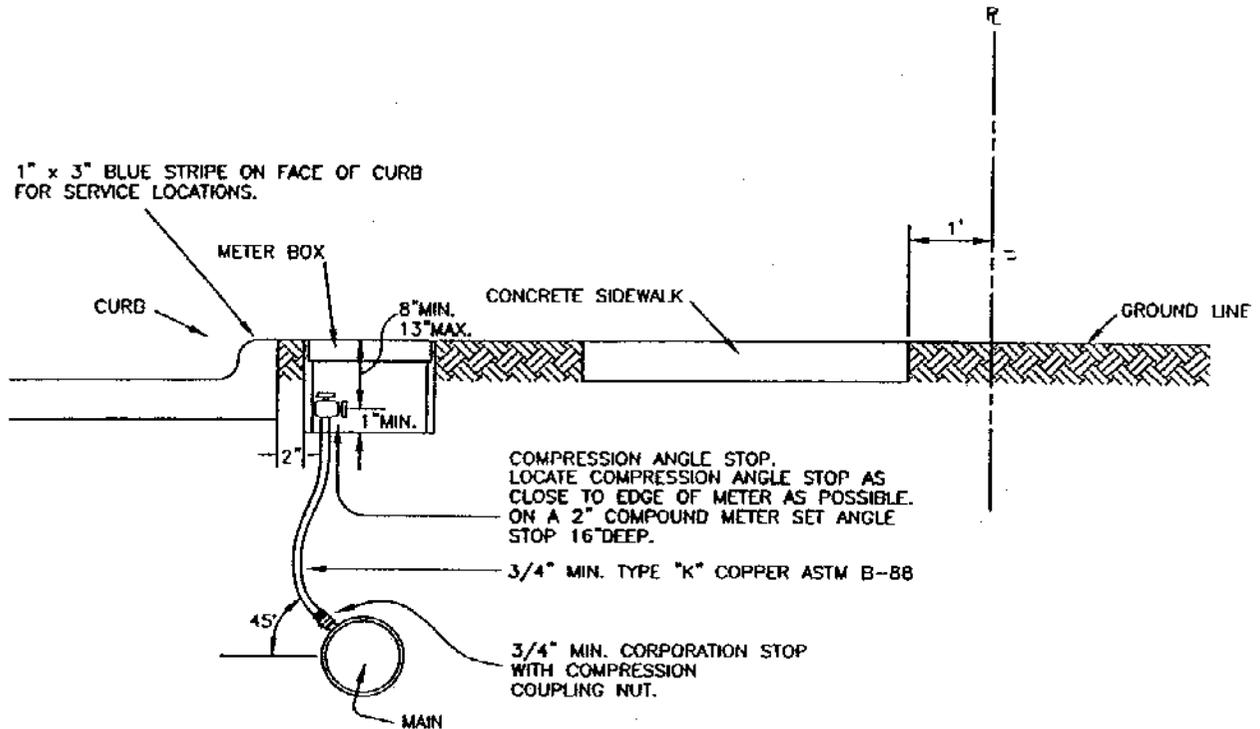
DATE:
1999

REV DATE:

SHEET:
SD-W17

NOTE:

1. WATER SERVICES SHALL NOT BE CONNECTED TO FIRE HYDRANT LINES.
2. ALL SERVICES TO BE EQUIPPED WITH AN APPROVED BACKFLOW DEVICE AND METER YOLK.



FOR 1" OR SMALLER METER

METER BOX SHALL BE CORRUGATED METAL, 18" DIAMETER, 14" DEEP, SLOTTED FOR SERVICE PIPE FITTED WITH CAST IRON TOP AND LID. LID SHALL BE C.I. BASS & HAYS DOMESTIC MFG. LID WITH #3P HAIRPIN LOCK OR TYLER RING #6200-R & WESTERN IRON WORKS #DWI 92/20. WATER METER SHALL BE PLACED IN CENTER OF LOT WITH SANITARY SEWER HOUSE CONNECTION LOCATED 10 FEET DOWN STREAM. ALL TAPS SHALL BE MADE AT 45° ANGLE TO C OF PIPE.

NOTE: ANY SERVICE LARGER THAN 1" WILL BE COMPOUND METER TO BE SUPPLIED BY CONTRACTOR.

TYPE "K" COPPER SERVICE PIPE SOFT ANNEALED	DOUBLE STRAP BRONZE SERVICE SADDLE WITH C.C. THREADS	BASS & HAYS SLOTTED METER BOX
1 INCH	1 INCH	34AS
1 1/2 INCH	1 1/2 INCH	55AS
2 INCH	2 INCH	55AS

TYPICAL SERVICE CONNECTION WITH METER BOX

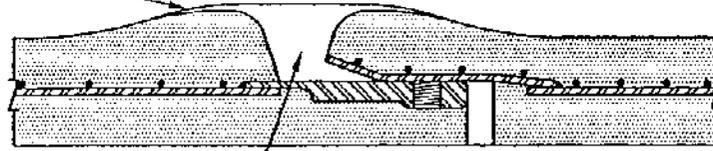
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SERVICE CONNECTION WITH METER BOX	STANDARD CONSTRUCTION DETAILS WATER	
	DATE: 1999	SHEET: SD-W18

NOTE: PROVIDE 1" MINIMUM THICKNESS CONCRETE OR CEMENT MORTAR COATING IN THE FIELD FOR THE PROTECTION OF ALL EXPOSED STEEL SUCH AS FLANGES, CAULKED-JOINTS, THREADED OUTLETS, CLOSURES, ETC. THE CEMENT MORTAR USED SHALL CONSIST OF ONE PART PORTLAND CEMENT TO TWO AND ONE-HALF PARTS OF FINE, SHARP (PLASTER) SAND. WHERE SHOWN COATING IS TO BE REINFORCED WITH WIRE MESH.

BURLAP WRAPPED AS MANUFACTURED BY MAR-MAC CORP OR EQUAL. WIDTH OF WRAPPER TO BE 9" FOR 36" PIPE AND LARGER, 7" FOR 33" AND SMALLER.

STEEL STRAP THREADED THROUGH HEM OF BURLAP WRAPPER, DRAWN TIGHT AND FASTENED.



CEMENT MORTAR, MIXED TO A CONSISTENCY OF THICK CREAM, TO BE POURED IN FIELD.

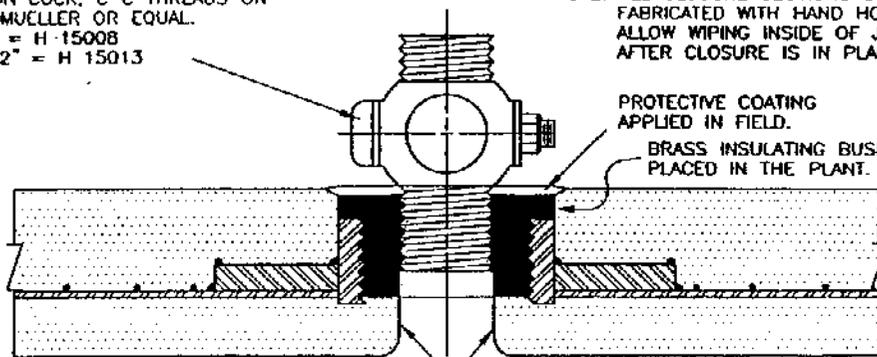
CEMENT MORTAR OF STIFF CONSISTENCY PLACED IN THE FIELD.

STANDARD RUBBER GASKET JOINT

NTS

CORPORATION COCK, C C THREADS ON INLET END MUELLER OR EQUAL.
3/4" - 1" = H 15008
1 1/2" - 2" = H 15013

NOTE: ALL CLOSURE SECTIONS SHALL BE FABRICATED WITH HAND HOLES TO ALLOW WIPING INSIDE OF JOINTS AFTER CLOSURE IS IN PLACE.



PROTECTIVE COATING APPLIED IN FIELD.

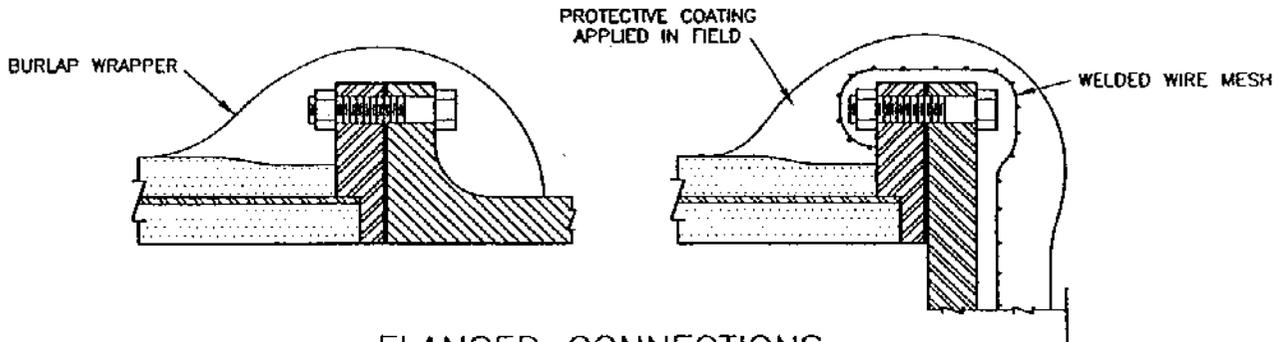
BRASS INSULATING BUSHING PLACED IN THE PLANT.

NOTE: IF CORPORATION COCK IS NOT PROVIDED IN FIELD, THEN STEEL PLUG SHALL BE COVERED WITH CEMENT MORTAR.

LINE IN PLANT TO COVER ALL EXPOSED STEEL.

THREADED CONNECTION

NTS



BURLAP WRAPPER

PROTECTIVE COATING APPLIED IN FIELD

WELDED WIRE MESH

FLANGED CONNECTIONS

NTS

REINFORCED CONCRETE CYLINDER
PIPE DETAILS

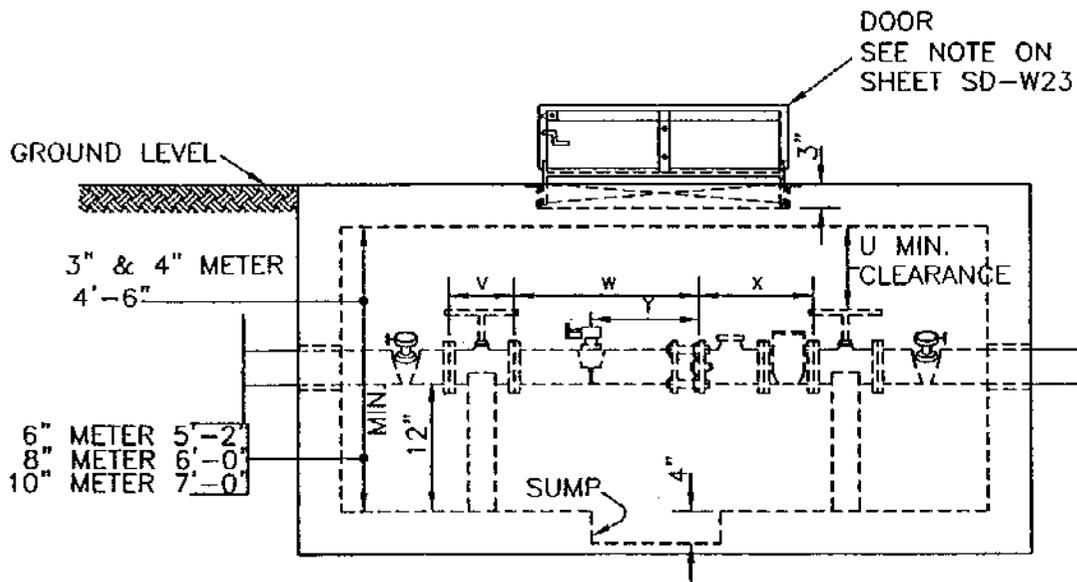
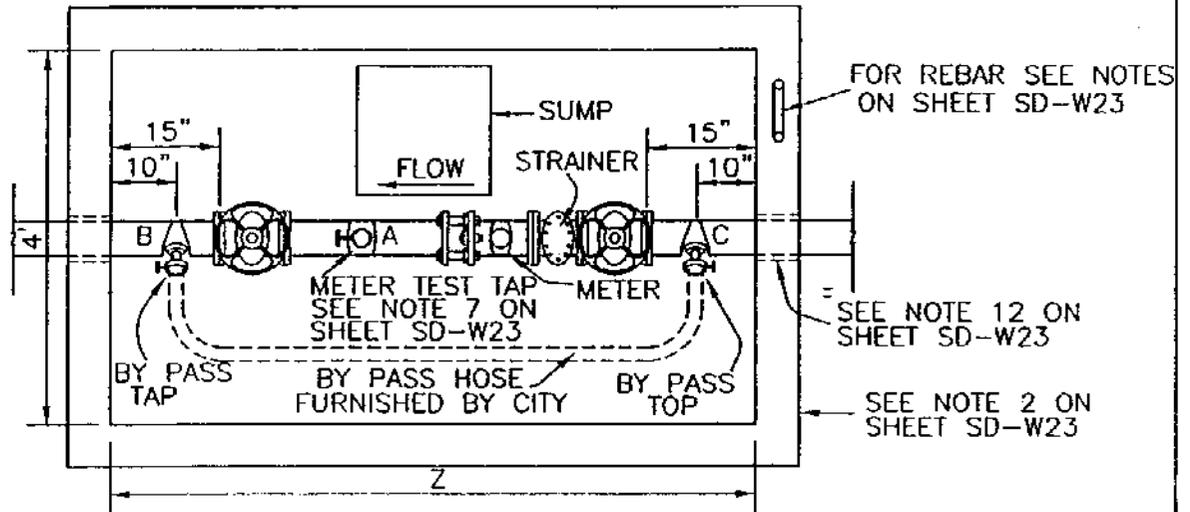
STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

SHEET:
SD-W19

NOTE:

ALL SERVICES TO BE EQUIPPED WITH AN APPROVED BACKFLOW DEVICE.



METER VAULT

NTS

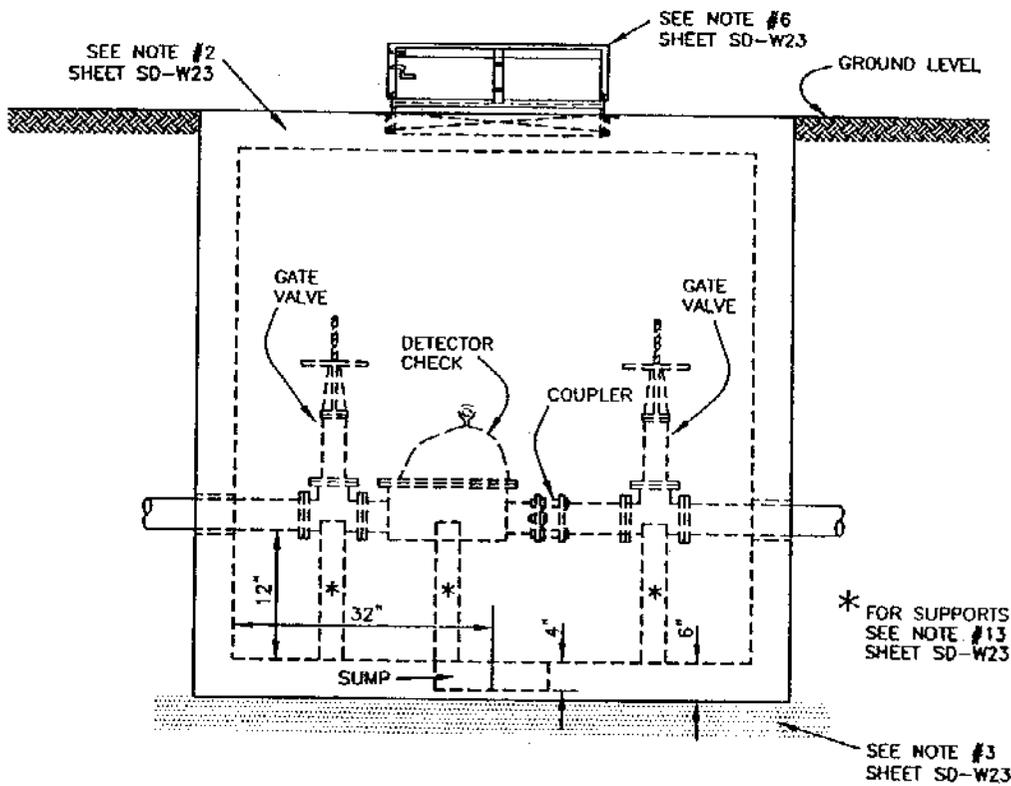
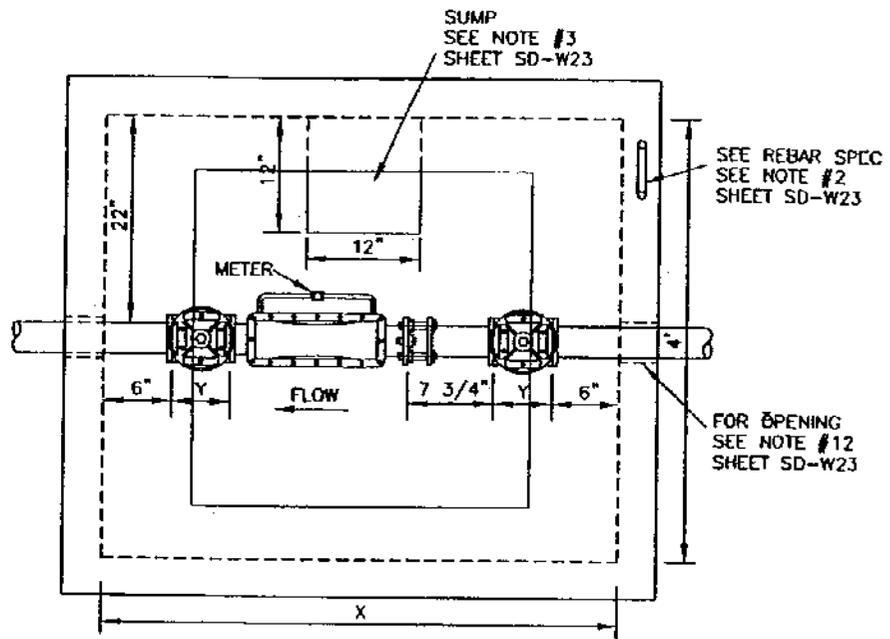
METER VAULT	STANDARD CONSTRUCTION DETAILS WATER	
	DATE: 1999	SHEET: SD-W20

METER VAULT & BY-PASS SPECIFICATIONS

1. NOTIFY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO CONSTRUCTION OF VAULT OR BY-PASS ASSEMBLY.
2. THE METER VAULT CAN BE EITHER POURED IN PLACE OR PREFABRICATED. CONCRETE SHALL BE 6" THICK AND BE 3000 P.S.I. WITH #4 REINFORCEMENT STEEL ON 12" CENTERS EACH WAY IF VAULT IS POURED IN PLACE. PREFABRICATED VAULTS SHALL BE 4" THICK AND BE 4,500 P.S.I. CONCRETE WITH #4 REINFORCEMENT STEEL ON 8" CENTERS EACH WAY. THESE ARE MINIMAL SPECIFICATIONS.
3. THE VAULT WILL NOT BE PUT IN ANY DRIVE OR PARKING AREAS AND MUST BE LOCATED IN A UTILITY EASEMENT.
4. THE VAULT LID SHALL BE A BILCO LID, TYPE Q-4 SINGLE LEAF DESIGN. ANGLE FRAME IS 1/4" STEEL WITH STRAP ANCHORS BOLTED TO THE EXTERIOR. THE LEAF IS 1/4" STEEL DIAMOND PATTERN PLAT, PIVOTING ON TORSION BARS FOR EASY OPERATION. THE MINIMUM LIVE LOAD CAPACITY IS 150 LBS. PER SQUARE FOOT. THE SIZE OF THE LID IS 3' BY 3'.
5. THE LID SHALL BE PAINTED WITH 43-38 TNEMEC DIFFUSED ALUMINUM PAINT OR APPROVED EQUAL.
6. THE CONTRACTOR SHALL MAKE THE BY-PASS AND METER TEST TAP INSIDE THE VAULT. IF THE SERVICE IS USED AS A STRICTLY DOMESTIC/IRRIGATION COMBINATION, TAP A ON THIS DRAWING IS NOT NECESSARY. IF THE SERVICE IS USED STRICTLY FOR IRRIGATION, TAP A IS REQUIRED. TAP A MUST BE AT LEAST TWO PIPE DIAMETERS DOWNSTREAM OF THE METER. TAPS B & C MUST BE MADE AT AN APPROXIMATE 45° ANGLE ON EACH END OF THE PIPE AND CENTERED 10 INCHES AWAY FROM THE WALL. ALL TAPS SHALL BE 2" AWAY FROM THE WALL. ALL TAPS SHALL BE 2" AND THE CONTRACTOR SHALL INSTALL A ROCKWELL NO. 317-045514-000 FOR 3" x 2"; ROCKWELL NO. 317-056314-000 FOR 4" x 2"; ROCKWELL NO. 317-076014-000 FOR 6" x 2" AND ROCKWELL NO. 317-121214-000 SERVICE SADDLES WITH BRASS NIPPLES AND NO. 7500 OHIO BRASS OR APPROVED EQUAL GATE VALVES.
7. THE STRAINER, METER AND FLEXIBLE COUPLING WILL BE PROVIDED AND INSTALLED BY THE CITY OF WYLLIE AT THE CONTRACTOR'S EXPENSE.
8. THE STRAINER, METER AND FLEXIBLE COUPLING WILL NOT BE SET UNTIL THE METER VAULT AND TAPS ARE ACCEPTED BY THE CITY OF WYLLIE, PUBLIC WORKS DEPARTMENT. ALL UTILITIES MUST ALSO HAVE BEEN ACCEPTED AND RELEASED BY THE PUBLIC WORKS ENGINEERING OFFICE PRIOR TO METER INSTALLATION.
9. THE VALVES SHALL BE ANY RESILIENT WEDGE DESIGN VALVE WHICH HAS RECEIVED FORMAL APPROVAL FROM THE CITY OF WYLLIE. ALL VALVES SHALL BE FLANGED BOTH ENDS AND HAVE HAND WHEELS.
10. THE BOTTOM OF THE METER VAULT MUST BE 6" THICK CONCRETE WITH #4 REBAR ON 12" CENTERS AND HAVE A 4" FILL SAND CUSHION UNDERNEATH. A SUMP 4" DEEP AND 12" IN DIAMETER SHALL BE INSTALLED TO ONE SIDE IN THE CENTER OF THE BOTTOM SLAB. IF PRECAST VAULT IS USED, WHERE SIDES JOIN THE BOTTOM, A LAYER OF RAM-NEK SHALL BE USED TO SEAL THE JOINT.
11. CONTRACTOR SHALL HAVE A CHOICE OF EITHER HAVING A LINK SEAL WALL SLEEVE MODEL WS-6-28-S-6 FOR 3" PIPE, MODEL WS-8-32-S-6 FOR 4" PIPE, MODEL WS-10-36-S-6 FOR 6" PIPE AND MODEL WS-14-37-S-6 FOR 10" PIPE, CAST IN THE WALL OF THE VAULT. THE ABOVE MENTIONED WALL SLEEVE SHALL USE THE FOLLOWING LINK SEALS: FOR 3" PIPE AND 5 NO. LS-325-C, FOR 4" PIPE, 5 NO. LS-400-C, FOR 6" PIPE, 7 NO. LS-400-C AND FOR A 10" PIPE, 12 NO. LS-325-C. THE CONTRACTOR MAY HAVE THE VAULT WALL CORED BEFORE INSTALLATION OF VAULT AND PIPING. IF THE WALL IS CORED THE FOLLOWING SPECIFICATION SHALL BE USED: FOR 3" PIPE CORE SIZE SHALL BE 6" AND USE 5 NO. LS-325-C LINK SEALS, FOR 4" PIPE CORE SIZE SHALL BE 8" AND USE 5 NO. LS-400-C LINK SEALS, FOR 6" PIPE CORE SIZE SHALL BE 10" AND USE 7 NO. LS-400-C LINK SEALS AND FOR 10" PIPE CORE SIZE SHALL BE 14" AND USE 11 NO. LS-425-C LINK SEALS. BREAKING OF THE WALL WITH A JACKHAMMER OR USING PRE-CAST KNOCKOUT PANELS IS NOT PERMITTED.
12. UNDER EACH VAULT WILL BE A CONCRETE SUPPORT.
13. DEPTH OF VAULT SHALL BE A MINIMUM OF 4 1/2 FEET.
14. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGED FITTINGS. THE OUTSIDE DIMENSION OF THE PIPING SHALL BE WITHIN THE FOLLOWING RANGES: 3" DUCTILE IRON PIPE - 3.74 - 3.86; 4" DUCTILE IRON PIPE - 4.74 - 4.90; 6" DUCTILE IRON PIPE - 6.871 - 6.96; 8" DUCTILE IRON PIPE - 8.98 - 9.20; 10" DUCTILE IRON PIPE - 11.04 - 11.16; VARIATION FROM THESE DIMENSIONS WILL RESULT IN THE VAULT BEING REJECTED.

METER VAULT													
DOMESTIC							IRRIGATION						
METER SIZE	U	V	W	X	Y	Z	METER SIZE	U	V	W	X	Y	Z
3"	25"	8"	11 1/2"	24"	—	6'-10"	3"	25"	8"	16 1/2"	19"	9"	6'-10"
4"	22"	9"	13 1/2"	29"	—	7'-7"	4"	22"	9"	19 1/2"	23"	10"	7'-7"
6"	26"	10 1/2"	13 1/2"	33"	—	8'-2"	6"	26"	10 1/2"	19 1/2"	27"	13"	8'-2"
							8"	31"	11 1/2"	25 1/2"	30"	17"	9'-1"
							10"	37"	13"	29 1/2"	41"	21"	10'-7"

	METER VAULT	STANDARD CONSTRUCTION DETAILS WATER	
		DATE: 1999	SHEET: SD-W21



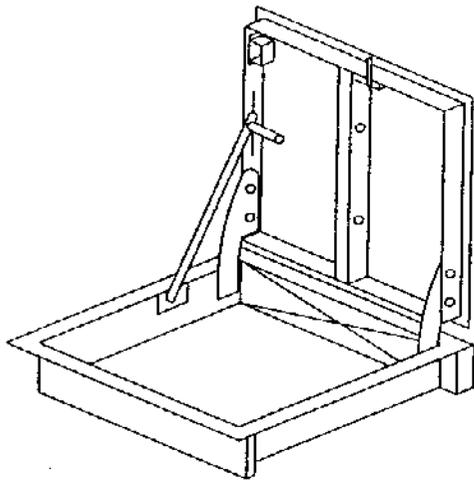
DETECTOR CHECK VALVE
NTS

DETECTOR CHECK VALVE

STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

SHEET:
SD-W22



BILCO LID

DETECTOR CHECK VAULT		
DETECTOR SIZE	"X"	"Y"
4"	4'-7"	9"
6"	5'-4"	10 1/2"
8"	5'-8"	11 1/2"

DETECTOR CHECK VAULT SPECIFICATIONS

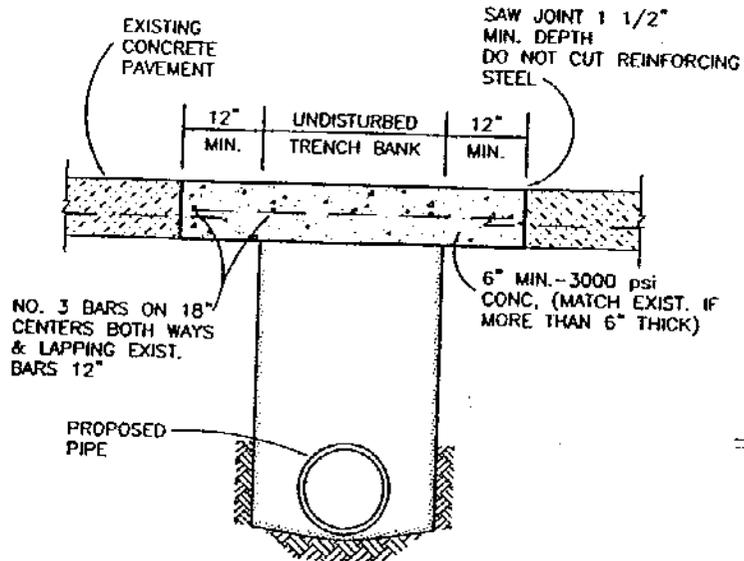
1. NOTIFY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO CONSTRUCTION OF VAULT OR BY-PASS ASSEMBLY.
2. THE VAULT CAN BE EITHER POURED IN PLACE OR PREFABRICATED. CONCRETE SHALL BE 6" THICK AND BE 3000 P.S.I. REINFORCED WITH #4 STEEL BARS ON 12" CENTERS EACH WAY IF THE VAULT IS POURED IN PLACE. PREFABRICATED VAULTS SHALL BE 4" THICK AND BE A 4,500 P.S.I. CONCRETE WITH #4 STEEL BARS ON 8" CENTER. THESE ARE MINIMUM SPECIFICATIONS.
3. THE BOTTOM OF THE VAULT SHALL BE 6" THICK CONCRETE WITH #4 STEEL BARS ON 12" CENTERS BOTH WAYS. A SUMP 4" DEEP AND 12" IN DIAMETER SHALL BE INSTALLED TO ONE SIDE IN THE CENTER OF THE BOTTOM SLAB. A 4" FILL SAND CUSHION SHALL BE INSTALLED UNDER THE SLAB. IF A PRECAST VAULT IS TO BE USED, A LAYER OF RAM-NEK SHALL BE INSTALLED BETWEEN THE WALLS AND BOTTOM.
4. THE VAULT WILL NOT BE PUT IN ANY DRIVE OR PARKING AREAS AND MUST BE LOCATED IN A UTILITY EASEMENT.
5. THE VAULT LID SHALL BE A BILCO LID. TYPE Q-4 LEAF DESIGN. ANGLE FRAME IS 1/4" STEEL WITH STRAP ANCHORS BOLTED TO THE EXTERIOR. THE LEAF IS 1/4" STEEL DIAMOND PATTERN PLATE, PIVOTING ON TORSION BARS FOR EASY OPERATION. THE MINIMUM LIVE LOAD CAPACITY IS 150 LBS. PER SQUARE FOOT. THE SIZE OF THE LID IS 3' BY 3'.
6. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGED FITTINGS. THE OUTSIDE DIMENSION OF THE PIPING SHALL BE WITHIN THE FOLLOWING RANGES: 3" DUCTILE IRON PIPE - 3.74 - 3.86; 4" DUCTILE IRON PIPE - 4.74 - 4.90; 6" DUCTILE IRON PIPE - 6.81 - 6.96; 8" DUCTILE IRON PIPE - 8.98 - 9.20; 10" DUCTILE IRON PIPE - 11.04 - 11.16. VARIATION FROM THESE DIMENSIONS WILL RESULT IN THE VAULT BEING REJECTED.
7. THE DETECTOR CHECK SHALL BE A MUELLER A-2130-6 AND EQUIPPED WITH AN ALL BRASS METER TRIM PACKAGE IN THE FOLLOWING SIZES: FOR A 4" THROUGH 8" DETECTOR CHECK, 1" TRIM PACKAGE; FOR A 10" DETECTOR CHECK, 2" TRIM PACKAGE. THE METER FOR THE TRIM PACKAGE WILL BE FURNISHED BY THE CITY AT THE CONTRACTOR'S EXPENSE. A FLANGED ADAPTER COUPLING WILL ALSO BE FURNISHED BY THE CITY AT THE CONTRACTOR'S EXPENSE.
8. THE GATE VALVES SHALL BE MUELLER NO. A-2078-6 OUTSIDE STEM AND YOKE AND SHALL HAVE AN UNDERWRITERS LABORATORY LISTING.
9. ALL PIPING INSIDE THE VAULT AND THE VAULT ITSELF SHALL HAVE TO BE APPROVED BY THE CITY.
10. CONTRACTOR SHALL HAVE A CHOICE OF EITHER HAVING A LINK SEAL WALL SLEEVE MODEL WS-8-32-S-6 FOR 4" PIPE, MODEL WS-10-36-S-6 FOR 6" PIPE AND MODEL WS-12-37-S-6 FOR 8" PIPE CAST IN THE WALL OF THE VAULT. THE ABOVE MENTIONED WALL SLEEVE SHALL USE THE FOLLOWING LINK SEALS: FOR 4" PIPE, 5 NO. LS-400-C; FOR 6" PIPE, 7 NO. LS-400-C; FOR 8" PIPE, 9 NO. LS-400-C. THE CONTRACTOR MAY HAVE THE WALL CORED BEFORE INSTALLATION OF VAULT AND PIPING. IF THE WALL IS CORED, THE FOLLOWING SPECIFICATION SHALL BE USED: FOR 4" PIPE CORE SIZE SHALL BE 8" AND USE 5 NO. LS-400-C LINK SEALS; FOR 6" PIPE CORE SIZE SHALL BE 10" AND USE 7 NO. LS-400-C LINK SEALS AND FOR 8" PIPE CORE SIZE SHALL BE 12" AND USE 9 NO. LS-400-C LINK SEALS. BREAKING OF THE WALL WITH A JACKHAMMER OR USING PRE-CAST KNOCKOUT PANELS IS NOT PERMITTED.
11. THERE WILL BE A CONCRETE SUPPORT UNDER EACH VALVE AND UNDER THE DETECTOR CHECK.
12. DEPTH OF VAULT SHALL BE A MINIMUM OF 4'-6".

DETECTOR METER VAULT

STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

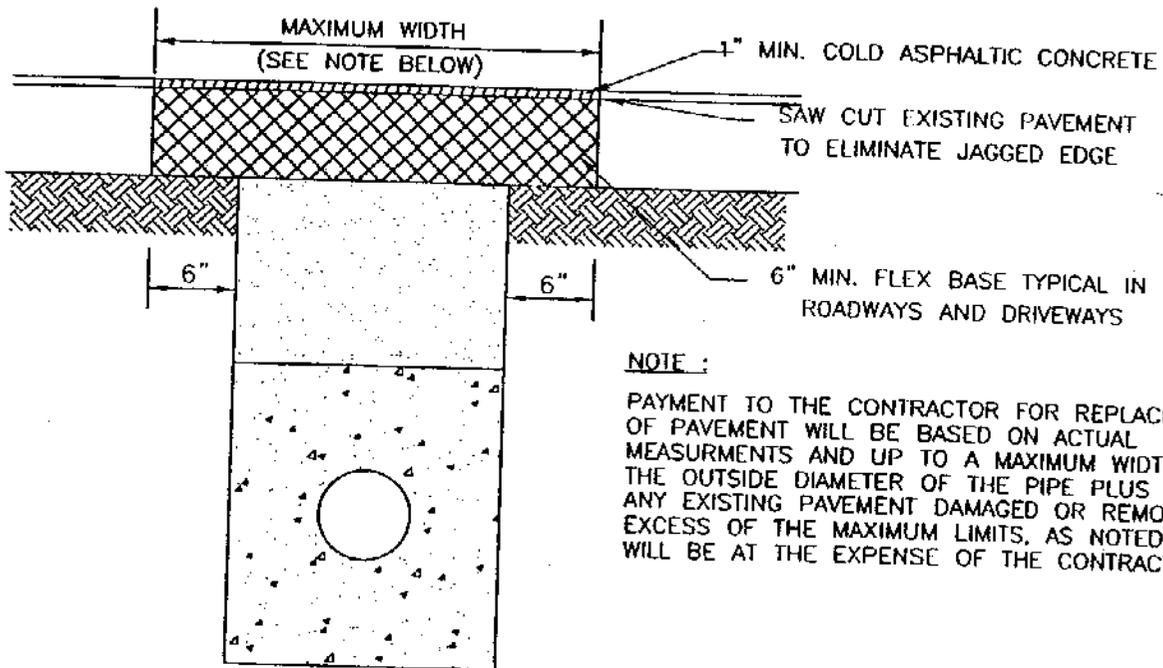
SHEET:
SD-W23



SEE EMBEDMENT FOR TYPE OF PIPE

**CONCRETE STREET
OR DRIVEWAY REPAIR**

N.T.S.



NOTE :

PAYMENT TO THE CONTRACTOR FOR REPLACEMENT OF PAVEMENT WILL BE BASED ON ACTUAL MEASUREMENTS AND UP TO A MAXIMUM WIDTH OF THE OUTSIDE DIAMETER OF THE PIPE PLUS 3". ANY EXISTING PAVEMENT DAMAGED OR REMOVED IN EXCESS OF THE MAXIMUM LIMITS, AS NOTED ABOVE, WILL BE AT THE EXPENSE OF THE CONTRACTOR.

**ASPHALT STREET
OR DRIVEWAY REPAIR**

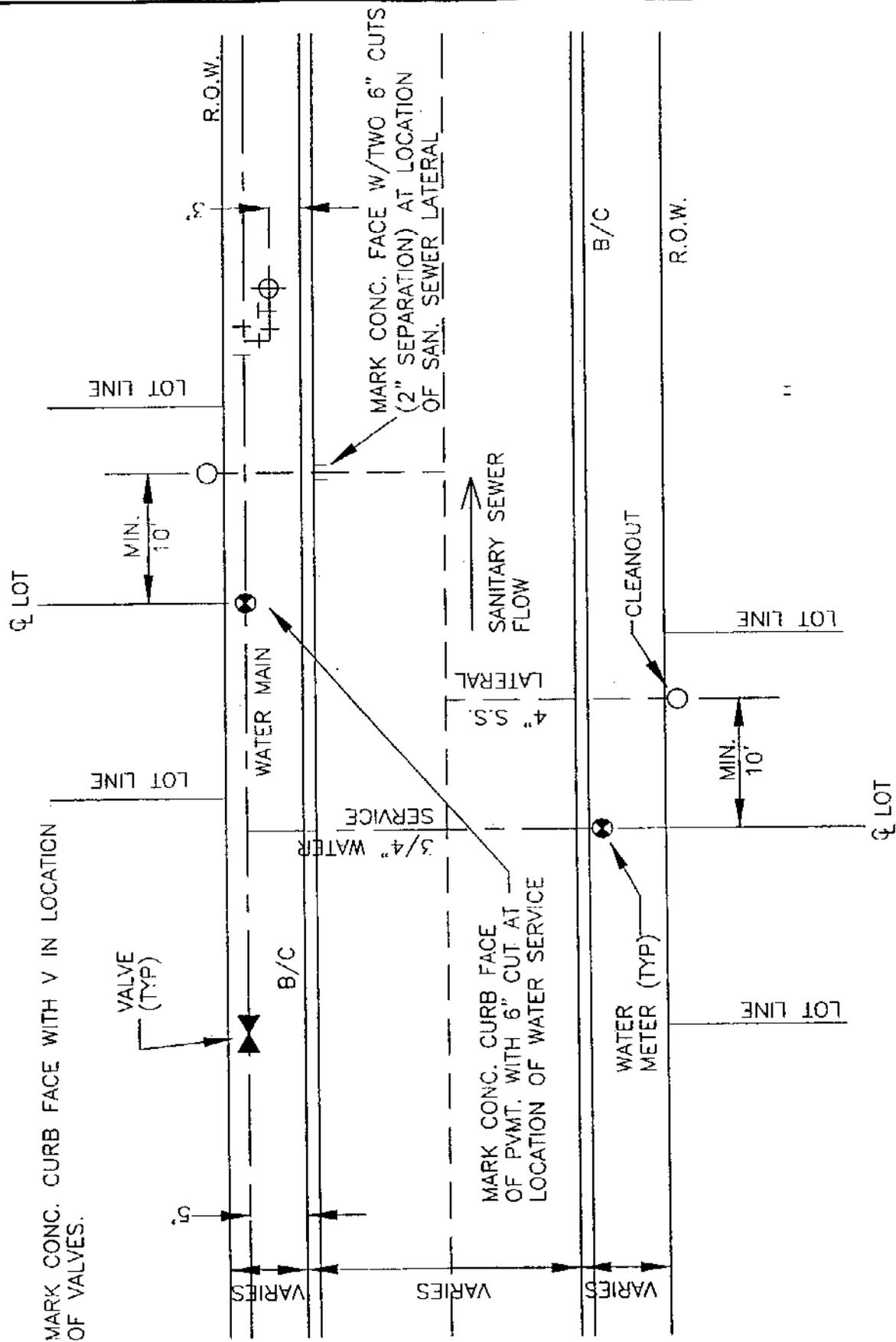
N.T.S.

CONCRETE STREET REPAIR
ASPHALT STREET REPAIR

STANDARD CONSTRUCTION DETAILS
WATER

DATE:
1999

SHEET:
SD-W24



TYPICAL WATER/SANITARY SEWER SERVICE LOCATION

STANDARD CONSTRUCTION DETAILS WATER

DATE:
1999

SHEET:
SD-W25