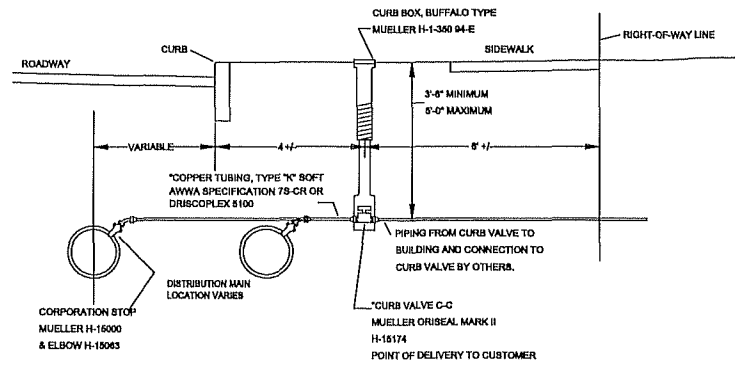
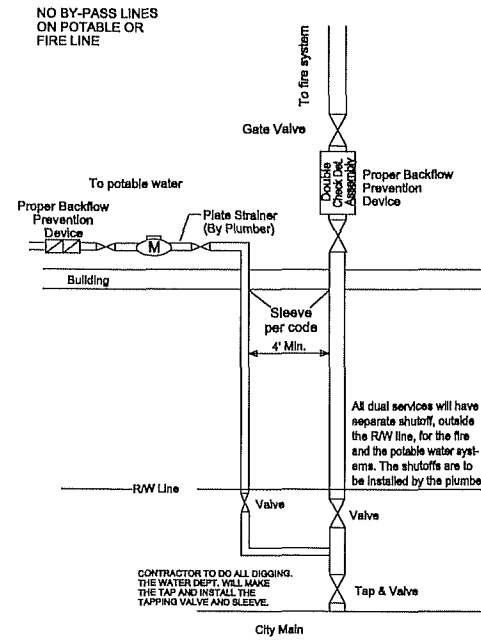


TYPICAL WATER SERVICE (C94)



* FOR STANDARD 50' ROADWAY
 A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
 ROADWAY BOXES, MUELLER H-10366 144-R, MUST BE USED IN PLACE OF CURB BOXES WHEN LOCATED IN ROADWAYS OR WALKS.
 CURB VALVE AND CORPORATION STOP MAY HAVE FLARED OR COMPRESSION ENDS.
 CORPORATION STOP TO BE INSERTED AT APPROXIMATELY 45 DEG. ANGLE
 APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

TYPICAL DUAL SERVICE (C109)

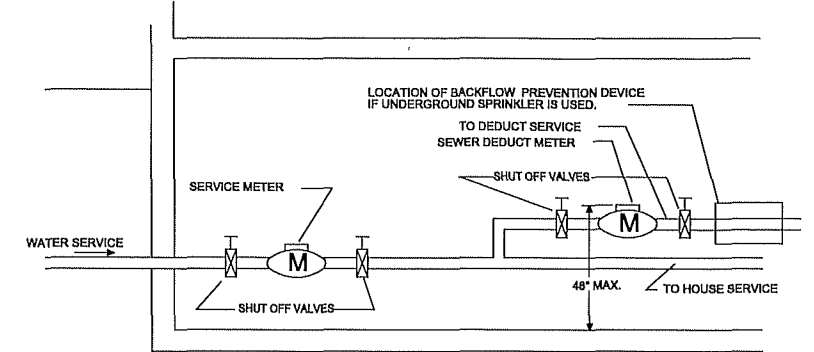


NO BY-PASS LINES ON POTABLE OR FIRE LINE

All dual services will have a separate shutoff, outside the RW line, for the fire and the potable water systems. The shutoffs are to be installed by the plumber.

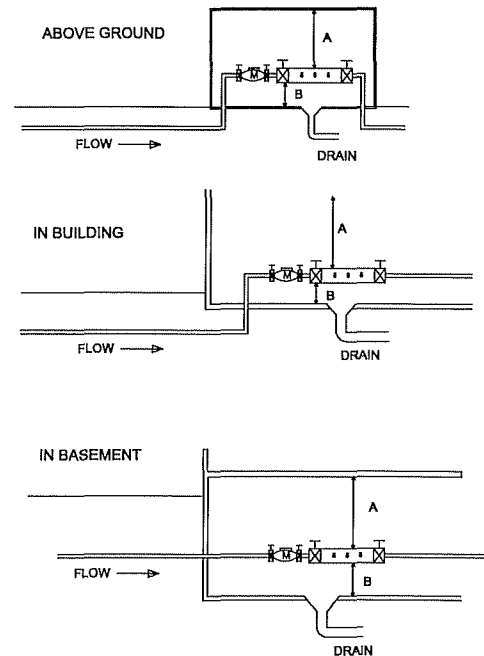
CONTRACTOR TO DO ALL DIGGING. THE WATER DEPT. WILL MAKE THE TAP AND INSTALL THE TAPPING VALVE AND SLEEVE.

STANDARD SEWER DEDUCT METER INSTALLATION (C97)



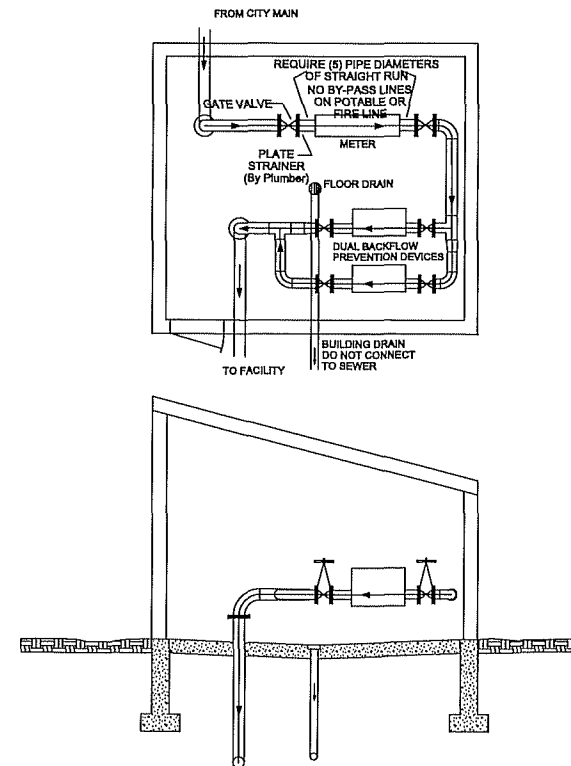
NOTE:
 The service meter and the sewer deduct meters must be placed in a meter yoke.

STANDARD RP UNIT INSTALLATION (C87)



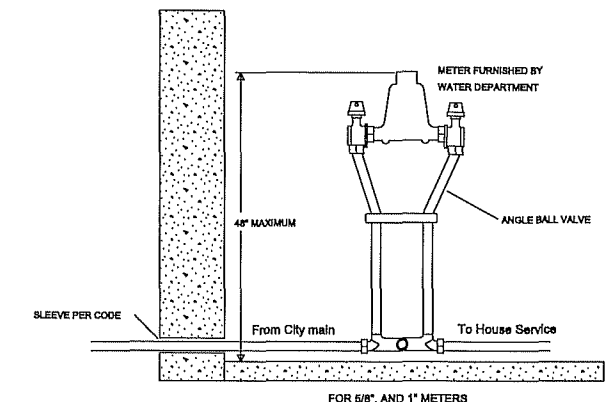
A = ADEQUATE CLEARANCE ABOVE UNIT FOR OPERATION OF VALVES OR REPAIR.
 B = MINIMUM CLEARANCE 12", MAXIMUM CLEARANCE 30".
 ALL METERS LARGER THAN 1" REQUIRE A BY-PASS ON METER
 ALL METERS AND RP UNITS MUST BE PROTECTED FROM FREEZING

METER AND BACKFLOW PREVENTION HOUSE (C172)



COMPOUND METERS ONLY
 ** DUAL BACKFLOW PREVENTION DEVICES ARE REQUIRED IF BUILDING REQUIRES UNINTERRUPTED SERVICE
 MINIMUM 30" ABOVE FINISHED FLOOR, FULL ASSEMBLY
 MINIMUM 18" FROM WALL

COPPERSETTER FOR WATER METER (C242)



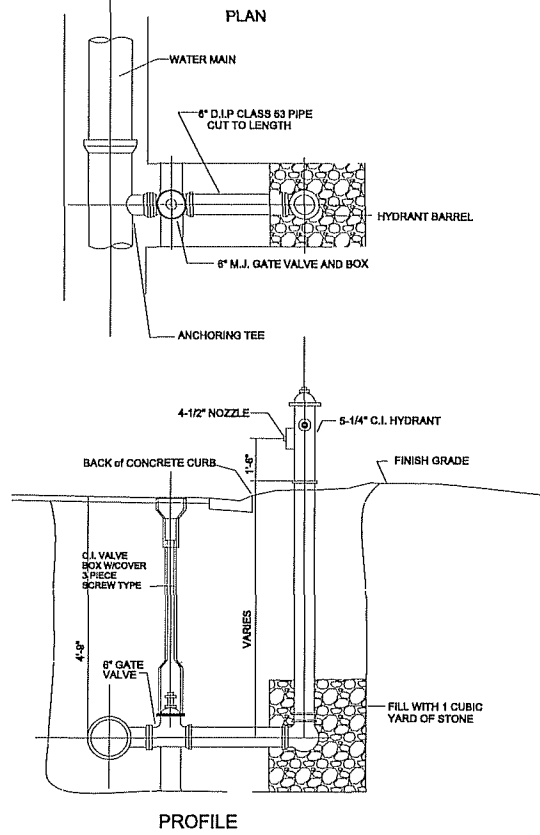
Notes:
 All meters 1 inch and smaller require a coppersetter for proper installation.
 Meters are to be placed in an area which provides easy access to the meter for repairs, replacement, and meter readings. Also require drainage.
 Water meters to be placed and installed by Canton Water Department personnel inside the building.



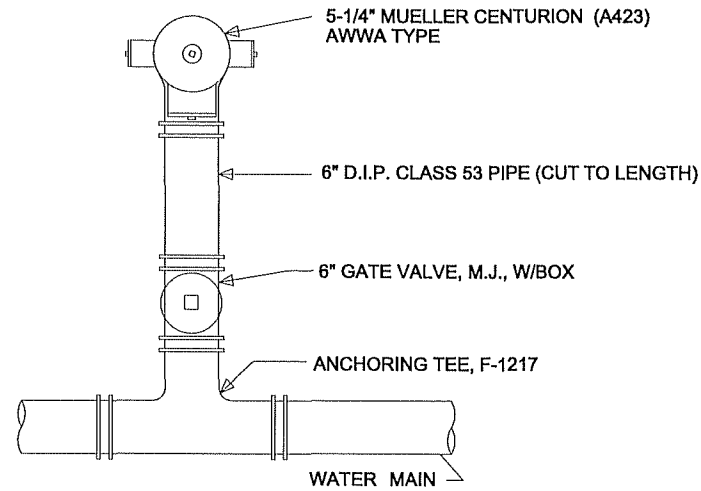
CANTON WATER WORKS		
STANDARD DRAWINGS SHEET 1		
SCALE NONE	DRAWING NO. C-102	
DRAWN BY RJW	CHECKED BY TD	DATE 5-9-89

REVISED 12-1-05 RJW
 REVISED 11-7-02 LAM
 REVISED 1-21-99 RJW
 REVISED 7-14-95 LAM
 REVISED 2-22-93

HYDRANT SETTING (C71)



HYDRANT CONNECTION (C70)



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

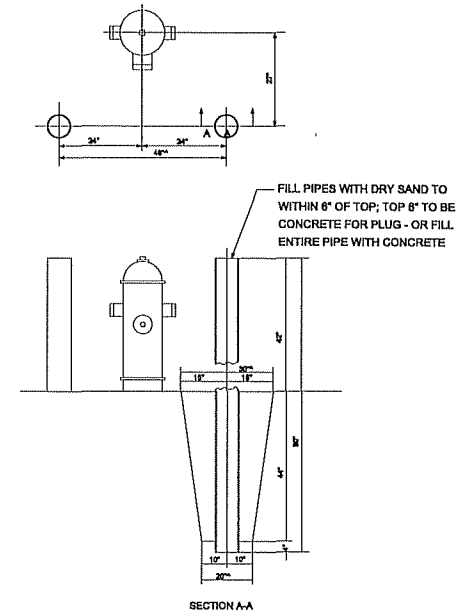
SEE SPECIFICATIONS FOR MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.

IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS WITH NUTS AND WASHERS MUST BE USED.

FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.

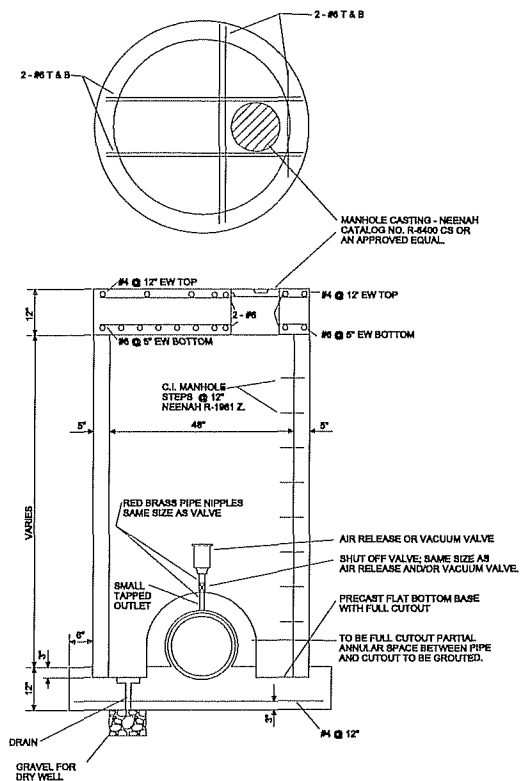
ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

HYDRANT POST GUARDS IF REQUIRED (C87)

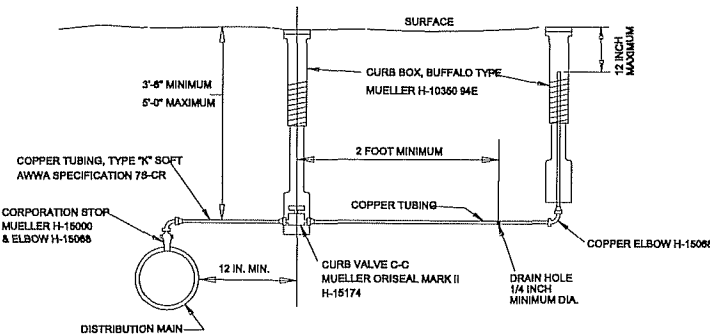


MATERIALS REQUIRED FOR SET OF 2 POSTS	
2EA.	8"x30" UNCOATED STEEL PIPES, MIN. WALL THICKNESS .432"
38CF	1 - 2 - 12 - 5 CONCRETE WITH GRAVEL AGGREGATE
1	COAT REDLEAD PRIMER PAINT
2	COATS ORANGE PAINT

TYPICAL AIR AND VACUUM RELEASE VALVE CHAMBER MAINS SIZE FROM 16 INCHES AND UP (C136)



MANUAL AIR RELEASE VALVE MAIN SIZES UP TO AND INCLUDING 12" (C255)



CAST IRON VALVE BOX W/COVER (3 PIECE SCREW TYPE) MUST BE USED WHEN LOCATED IN ROADWAYS OR WALKS.

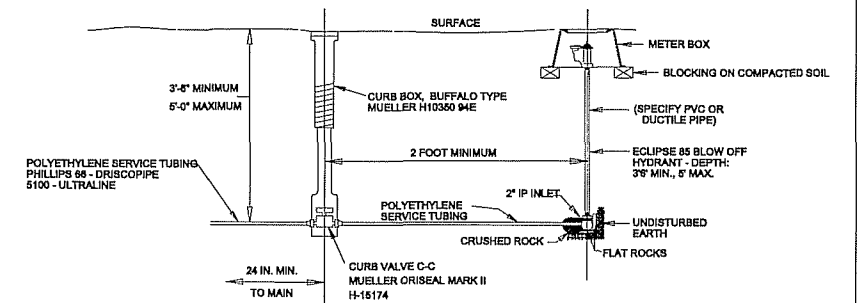
CURB VALVE AND CORPORATION STOP MAY HAVE FLARED OR COMPRESSION ENDS.

CORPORATION STOP TO BE INSERTED AT 90° ANGLE

APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

TO BE USED ON MAINS UP TO AND INCLUDING 12 INCHES

STANDARD BLOW OFF ASSEMBLY ECLIPSE NO. 85 BLOW-OFF HYDRANT (TRAFFIC PROOF) (C135)



Blow-Off Hydrants shall be Eclipse No. 85 Hydrant as manufactured by John C. Kupferle Foundry Company, St. Louis, MO.

Hydrants shall be self-draining, non-freezing, compression type with 2-3/16" main valve opening. Inlet connection shall be (1-1/4"IP, 1-1/2"IP, 2"IP, 2-1/2"IP, 3"IP, 4"IP or 5"IP). Outlet size shall be (any size up to 2-1/2"NST).

Principal interior operating parts shall be brass and removable from the hydrant for servicing without excavating the hydrant.

Hydrants shall be set in 4 cubic feet of crushed stone to allow for proper drainage of the hydrant. Recommendations of the AWWA should be followed for installation of the hydrants.

Blow-offs should be located where the water may drain away without causing flooding.

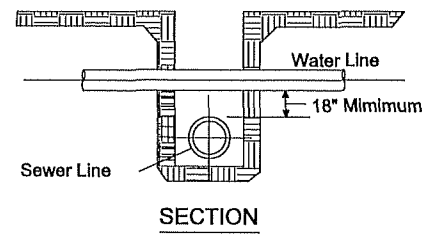


CANTON WATER WORKS STANDARD DRAWINGS SHEET 2

SCALE NONE		DRAWING NO. C-103	
DRAWN BY RJW	CHECKED BY TD	DATE 5-9-89	

REVISED 2-22-93 RJW
REVISED 4-11-94 LAM
REVISED 7-14-95 LAM
REVISED 8-7-96 LAM
REVISED 1-21-00 LAM
REVISED 12-13-04 LAM

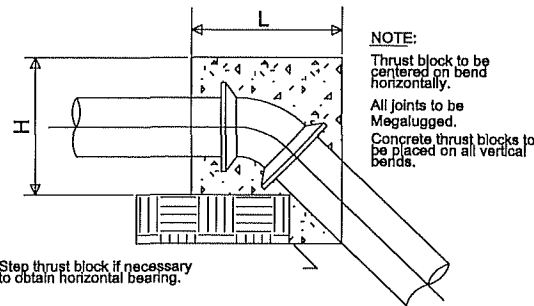
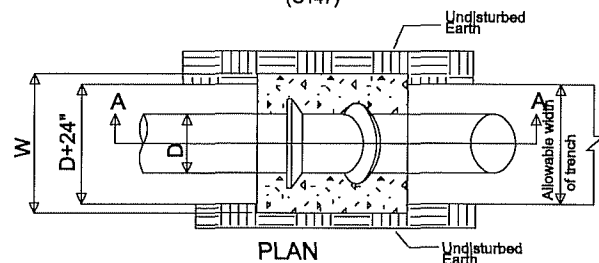
VERTICAL WATER MAIN CLEARANCE
(C186)



NOTES:

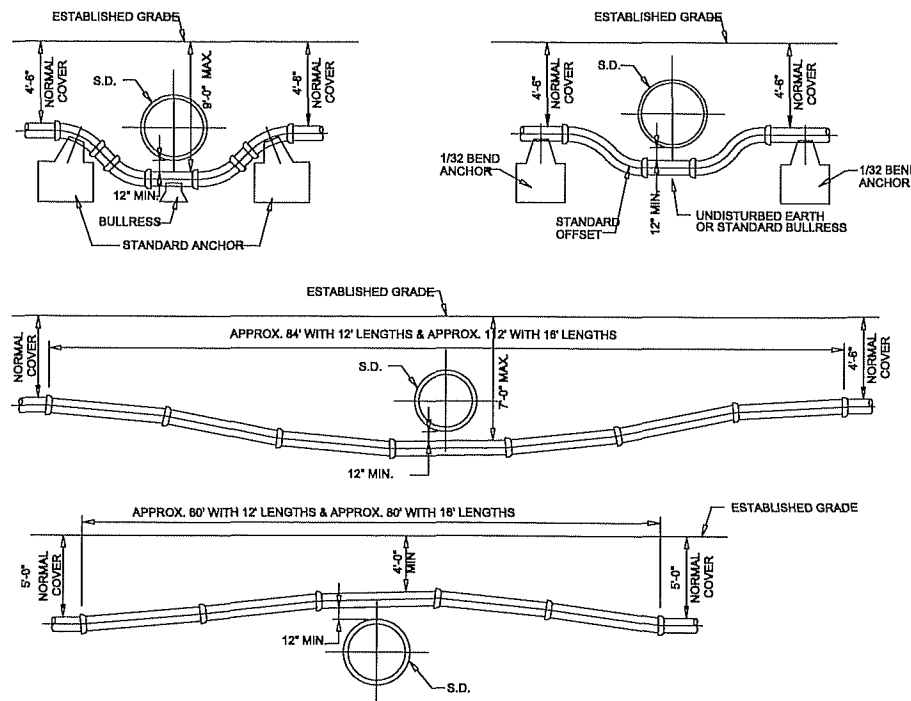
1. If joint on water main is within limits of sewer trench, install mechanical bell joint clamp
2. If clearance is less than 18", encase sewer pipe 6 ft. each side of water main. To be paid at unit price bid per cubic yard of concrete.
3. In no case shall the sewer pipe contact any water main, service line or appurtenance.

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS
POURED IN PLACE (CLASS C)
(C147)

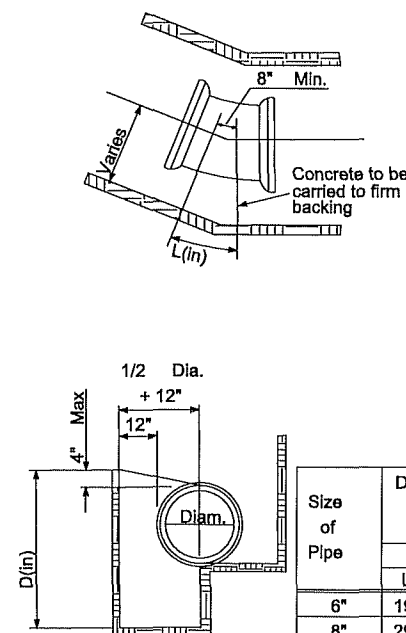


SIZE OF PIPE	DEGREE OF BEND											
	11 1/2				22 1/2				45			
	L	W	H	Vol. yds	L	W	H	Vol. yds	L	W	H	Vol. yds
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4
12"	20	84	36	0.8	37	62	37	1.7	48	62	51	3.1
16"	31	85	38	1.6	60	65	39	3.0	65	65	65	5.6

WATER MAIN CROSSING STORM DRAIN
(C187)

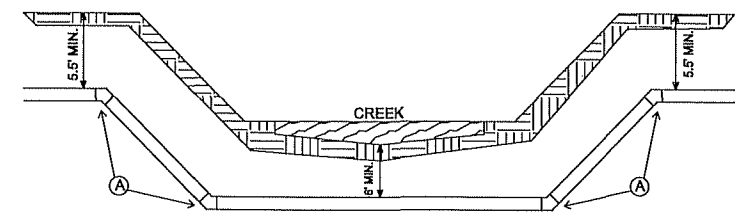


HORIZONTAL THRUST BLOCKS
(C130)



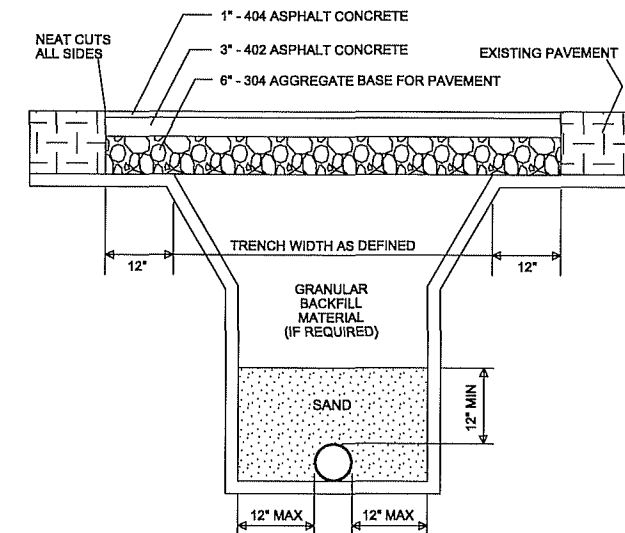
Size of Pipe	Degree of Bend 45°		Degree of Bend 90°	
	L	D	L	D
	6"	19	14	28
8"	29	16	40	24
12"	44	24	56	40
16"	60	36	76	56

CREEK CROSSING DETAIL
(C252)



- 4 VERTICAL BEND CREEK CROSSING**
- (A) MECHANICAL JOINT BENDS - RETAINER GLANDS TO BE MEGALUGS 350 PSI RATING W/8 LUGS ON EACH JOINT. ALL 4 BENDS TO BE RODDED TOGETHER WITH 3/4" RODS AND DUC LUGS. ALSO TO HAVE CONCRETE THRUST BLOCKS AT ALL BENDS. (C147)

PAY LIMITS - TRENCH & ROADWAY FOR D.I.P.
(C175)

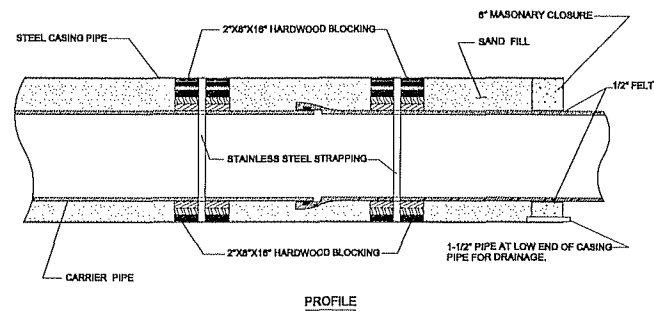
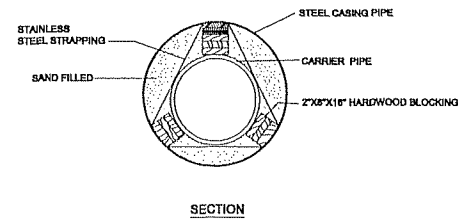


CANTON WATER WORKS
STANDARD DRAWINGS
SHEET 3

SCALE NONE		DRAWING NO. C-237	
DRAWN BY LAM	CHECKED BY	DATE 7-13-95	

REVISED 8-7-96 LAM
REVISED 11-7-02 LAM

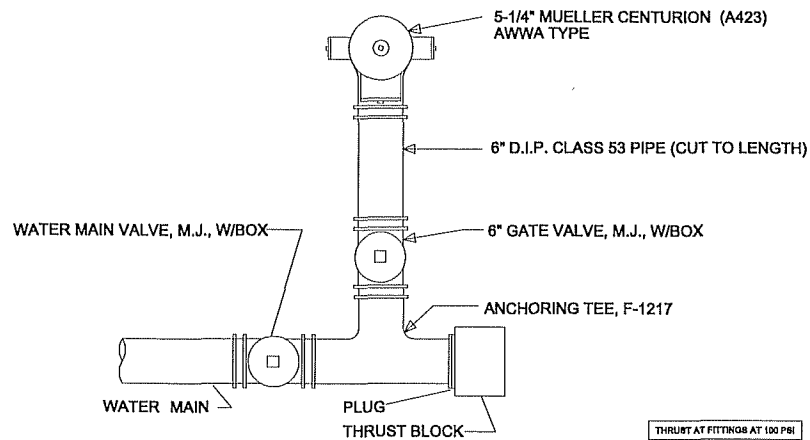
BORING / CASING PIPE DETAIL
 DWG. NO. C378
 REVISED: 8.13.06 LAM



NOTES:

1. THREE SUPPORTS SHALL BE USED ON EACH LENGTH OF CARRIER PIPE. PLACE ONE AT EACH END AND ONE IN THE MIDDLE. THE HARDWOOD BLOCKS SHALL BE FORMED TO FIT THE WALL OF THE CASING PIPE.
2. THE INSIDE DIAMETER OF THE STEEL CASING PIPE SHALL BE AT LEAST 5 INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS.
3. THE STEEL CASING PIPE SHALL BE AT LEAST 3/8 INCH OR 10 GAUGE STEEL.
4. THE ENDS OF THE STEEL CASING PIPE SHALL BE SEALED.
5. ANY PIPE JOINTS WITHIN THE CASING PIPE SHALL HAVE A FIELD-LOK GASKET.

HYDRANT CONNECTION AT END OF MAIN
 DWG. NO. C383



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

SEE SPECIFICATIONS FOR: MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.

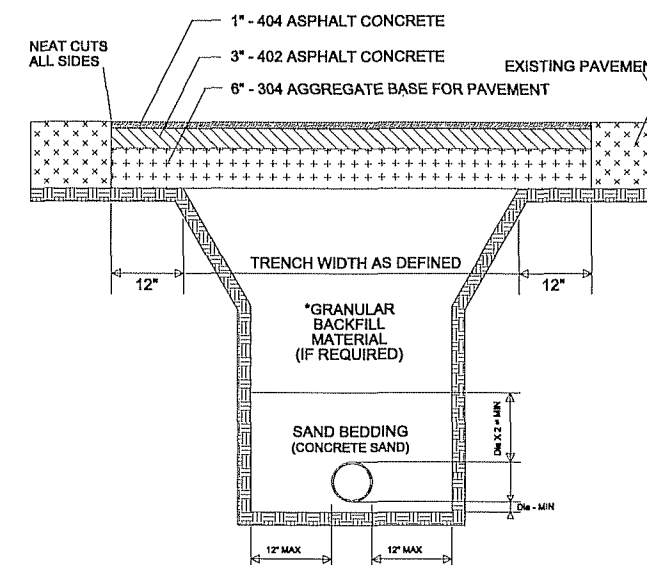
IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) THE RODS AND (4) EYE BOLTS W/ NUTS AND WASHERS MUST BE USED.

FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.

ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

THRUST AT FITTINGS AT 100 PSI	
MAIN SIZE	TOTAL POUNDS
6	3,738
8	6,433
10	9,877
12	13,666
14	18,385
18	23,779
18	29,866
20	36,544
24	62,279

TRENCH DETAIL - C909 PIPE
 DWG. NO. C385



*CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION WITHIN THE RIGHT-OF-WAY REGARDING BACKFILL REQUIREMENTS



CANTON WATER WORKS
 STANDARD DRAWINGS
 SHEET 4

SCALE NONE		DRAWING NO. C-379	
DRAWN BY RJW	CHECKED BY	DATE 5-5-05	

REVISED: 8.13.06 LAM