

Town of Scituate



Water Division Specifications

March 15, 2022

SCITUATE WATER DIVISION SPECIFICATIONS

DISTRIBUTION SYSTEM MAINTENANCE AND IMPROVEMENTS

1. All work shall be subject to the most current editions of AWWA & DEP Standards for water works design, materials, construction and scheduling as required for uninterrupted system O & M. All material shall be American made. Design shall comply with current state and federal standards for good engineering practice. Construction shall comply with OSHA standards. DPW Director will make final decision on all design, construction, scheduling and proposed substitutions in accordance with most recent revisions to these standards.
2. **Only Water Division Employees** are to operate valves or hydrants, violations will result in a suspension from work in Scituate. The contractor may be allowed to use water without charge for construction purposes if local water supply permits. Express approval of the superintendent shall be obtained before water is used. Waste of water shall be sufficient cause for withdrawing the privilege of unrestricted use. If no water is available the contractor shall supply his own water. Connections to the existing system shall be made live if possible. Three days notice required if localized system shut down is necessary.
3. All materials shall be installed to the manufacturer's specifications, approved design and / or standards. No pipes or appurtenances on public or private property shall be backfilled before being inspected by an authorized agent of the Department.
4. All water main shall be ductile iron class 52, cement lined with push-on style joints. Mains, valves, fittings and hydrants shall be polyethylene encased. See detail
5. Fittings shall be ductile iron with mechanical joints. All mechanical joints shall be fitted with Mega lug style joint restraints. Transition couplings shall not be allowed.
6. Valves shall be Mueller resilient-seated Model 2360 200 PSI gate valves, alternate will be Clow AFC-2500 DI gate valve, mechanical joint with a 2 (two) inch operating nut, open left. Valves shall be every 1000' or at every other fire hydrant. Valve clusters will be built with Forster MJ adapters.
7. Hydrants shall be Mueller Super Centurion traffic model A-423 250 PSI, open left, yellow with silver bonnet, alternate will be American Darling B-62-B. Hydrants shall be 500' in locations shown on the approved design or at an alternate location if approved by the Superintendent. See detail
8. Service brass shall be lead free Mueller or Ford compression and meet NSF and AWWA standards. Stiffeners shall be used with poly tubing.

9. Service & Gate boxes shall be buffalo slide style and cover identified as **WATER**.
10. Service lines shall be 1" Type K copper or poly (CTS) tubing rated for 200 PSI. 12 gauge tracer wire shall be installed with poly pipe as a continuous run from curb stop to the water meter. Curb stop should be approximately 5' on to owner's property. **All effort should be taken to keep service lines out of driveway areas.**
11. Service taps shall be at 2(two) or 10(ten) o'clock positions with appropriate goose neck.
12. Tapping sleeves shall be stainless steel. Saddles shall have stainless steel flat bands. Direct taps 2" and under are required on DI.
13. Water line tracer tape shall be placed between 12(twelve) and 18(eighteen) inches below final grade.
14. A service drawing identifying the installation is required to be supplied before the service is activated. The drawing shall include appropriate ties.
15. Maintain 10 feet minimum spacing between water and sewer mains. Where minimum spacing is not possible water main shall be constructed with mechanical joints or be sleeved. Water main shall be installed in accordance with construction detail at all water-sewer crossings. See detail. See detail
16. Construction in town roads requires a DPW street opening permit and a trench permit. All construction will be during normal Water Division work hours. Excavation, backfill and compaction shall be in accordance with the typical water trench detail. Temporary and permanent pavement requirements shall be in accordance with the street opening permit. Street opening permit may require excavatable flowable fill and shall supersede the typical detail.
17. Water meters shall be mounted horizontally at the point that service line enters the foundation with a ball valve before and after the meter, meter horns are not permitted. Meters are supplied by the town after the connection fee is paid. Master meters are not allowed and all units/apartments shall be individually metered. Superintendent will make final decision on metering requirements.
18. Fire lines shall have $\frac{3}{4}$ " stainless steel threaded rod anchored horizontally and vertically at foundation penetration, with adequate thrust blocking. See detail

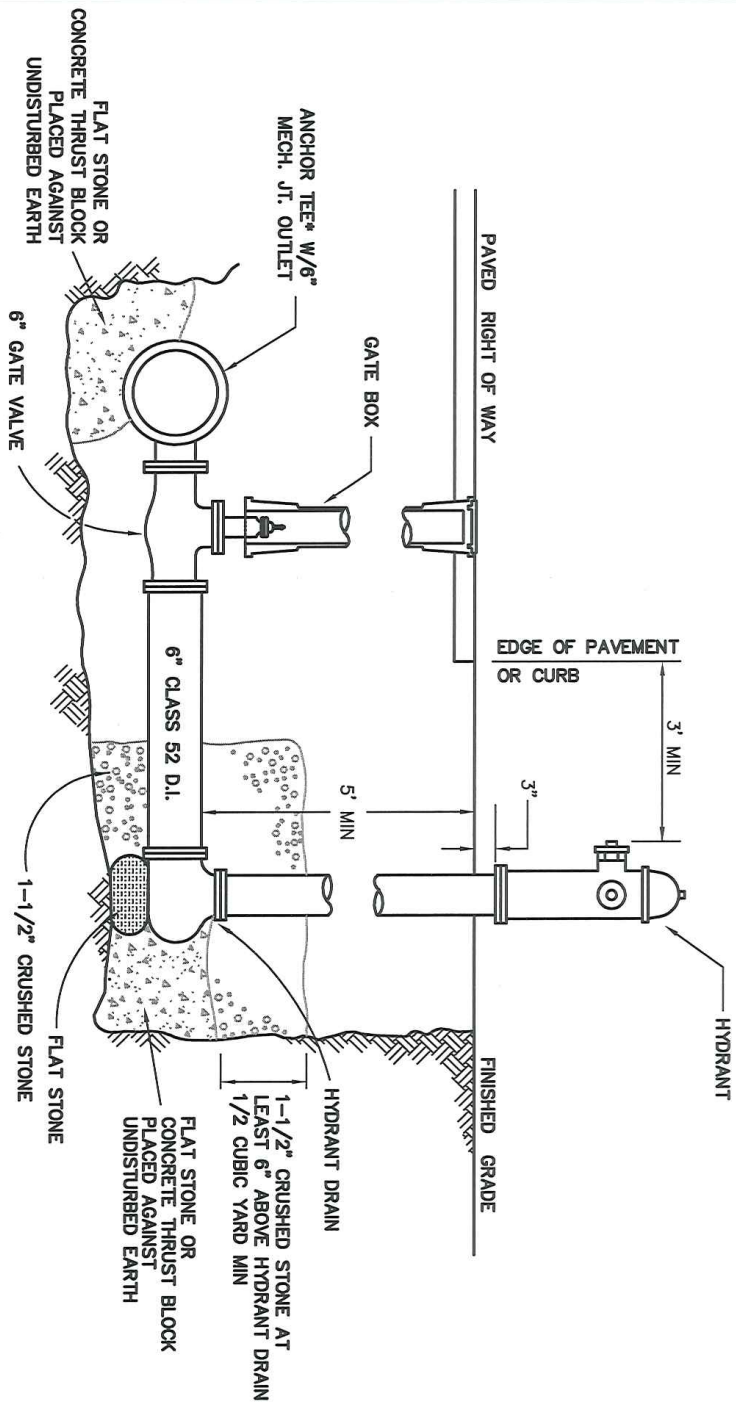
19. All ductile iron is to be tested according to AWWA testing procedures for new water main. See detail
20. Demolition, water services shall be cut and capped 10' outside area of excavation and inspected before a demolition permit is issued. Water services shall be renewed back to the water main at owners cost for all major reconstruction.
21. Contractor shall guarantee all materials and workmanship for a period of one year.

Scituate New Water Main Testing:

1. All testing shall be performed with a Water Division employee or their representative.
2. Chlorination whip shall be 1' from tap gate valve.
3. Sample whip should be at end of main or before last hydrant.
4. Water main is pressure tested at 150 PSI for a minimum of 1 hour.
5. Chlorinate main >50 mg/l.
6. Flush chlorine off after 24 hours. Residual must be >25 mg/l before flushing.
7. 2 samples must be taken for all mains after 16-24 hours of rest.
Chlorine residual must be less than system Residual. Maximum of 1000' per bacteria sample.
8. Take 2nd sample >16 hours from 1st sample time.
9. Sample testing shall include Coliform & HPC.
10. Contractor is responsible for transporting samples to certified lab.
11. DEP reports shall note: **Water Main Construction.** PWS ID# 4264000
12. Results on DEP forms shall be sent to:

Email- elanglan@scituatema.gov
poneil@scituatema.gov

Mail- Scituate Water Division
4 Old Oaken Bucket Rd.
Scituate, MA. 02066



NOTES:

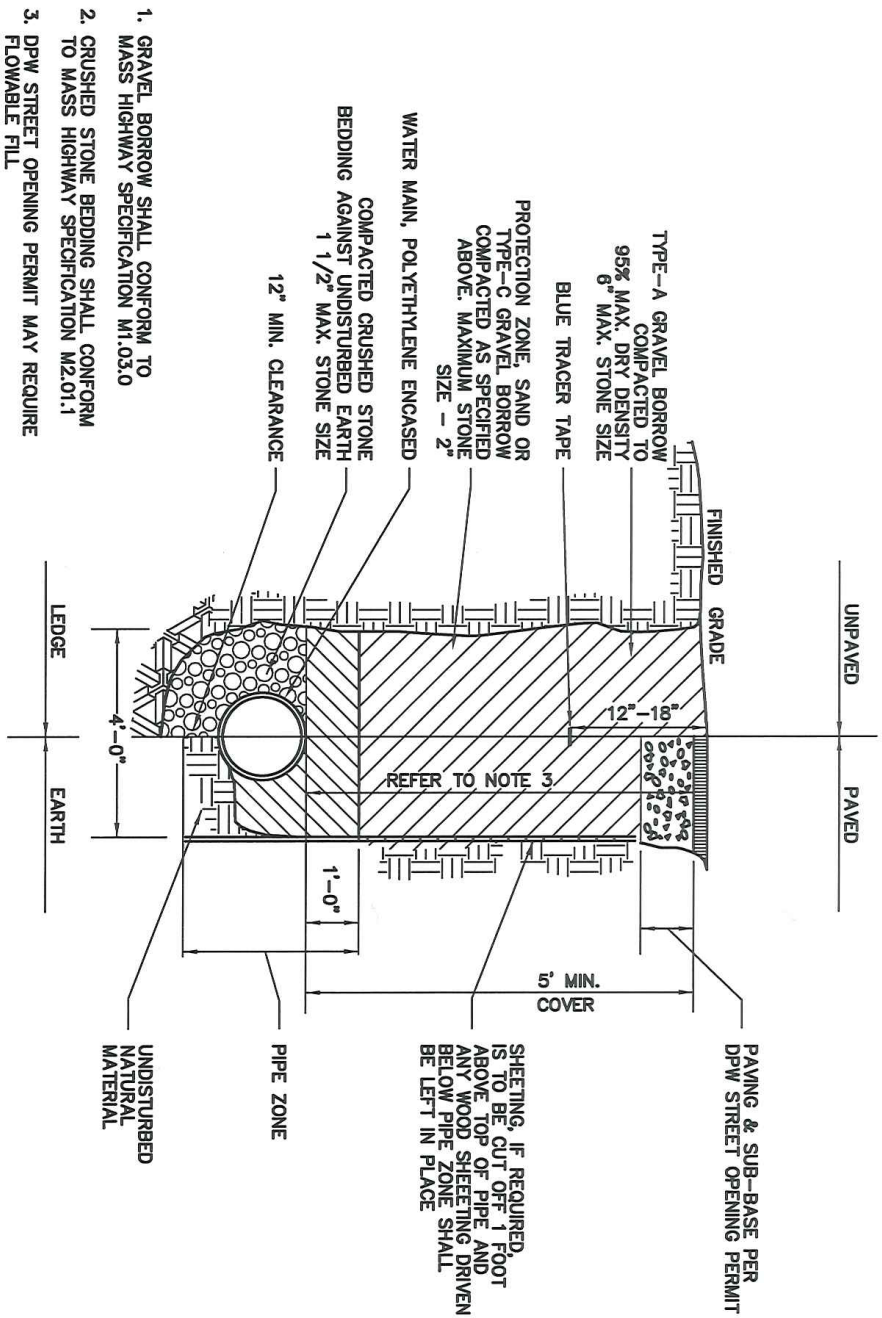
ALL JOINTS SHALL BE RESTRAINED MECHANICAL SEAL

USE BENDS OR OFFSET ON 6" LATERAL TO ACHIEVE REQUIRED BURIAL DEPTH ELEVATION

ALL PIPE, VALVES AND FITTINGS SHALL BE POLYETHYLENE ENCASED

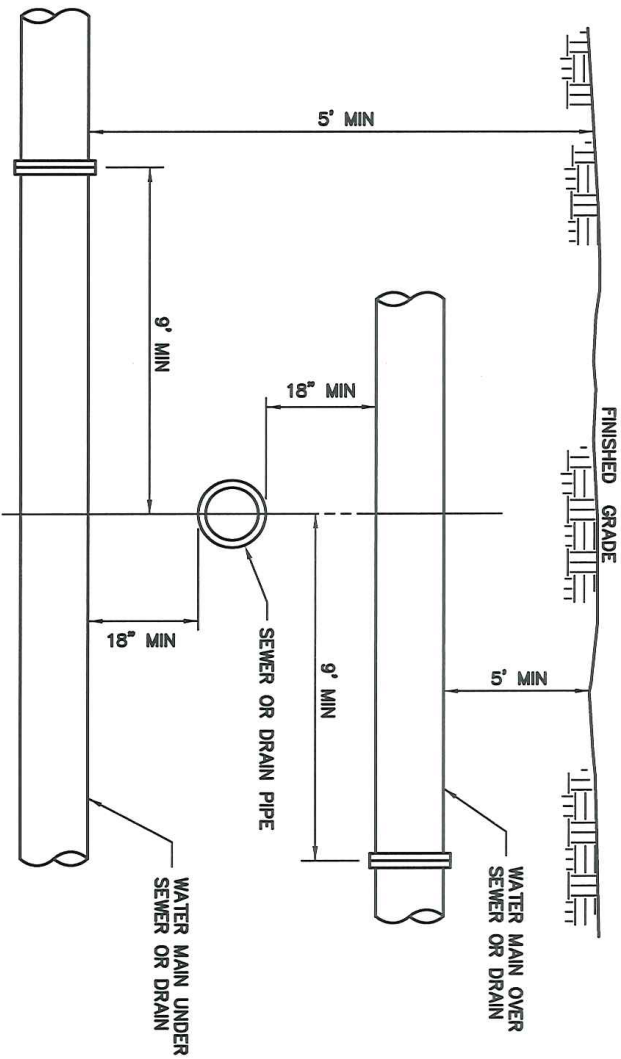
TOWN OF SCITUATE
DEPARTMENT OF PUBLIC WORKS

HYDRANT AND VALVE DETAIL



TOWN OF SCITUATE
DEPARTMENT OF PUBLIC WORKS

TYPICAL WATER TRENCH



NOTES:

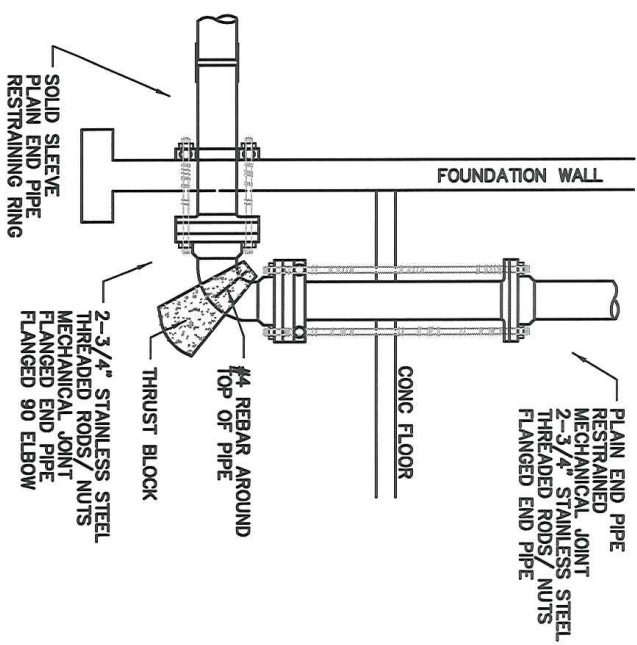
WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER WITH PREFERENCE TO THE WATER MAIN LOCATED ABOVE THE SEWER.

AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

AT CROSSINGS WHERE 18 INCHES VERTICAL SEPARATION IS NOT POSSIBLE WATER PIPE SHALL BE RESTRAINED MECHANICAL SEALS OR SLEEVED.

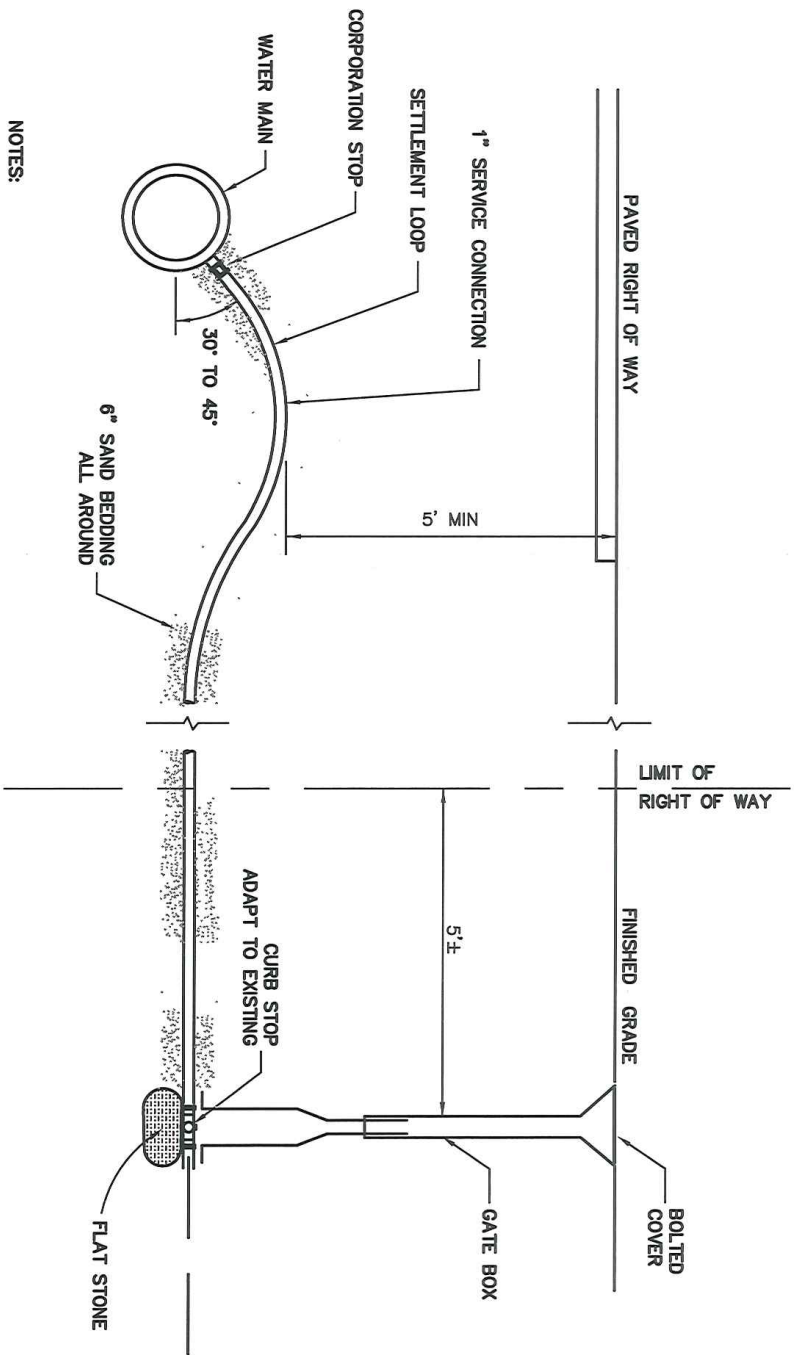
TOWN OF SCITUATE
DEPARTMENT OF PUBLIC WORKS

TYPICAL WATER – SEWER CROSSING DETAIL



TOWN OF SCITUATE
DEPARTMENT OF PUBLIC WORKS

FIRE SERVICE



NOTES:
 PROVIDE SADDLE FOR AC AND PVC WATER
 SERVICES CONNECTIONS 2" OR LARGER

TOWN OF SCITUATE
 DEPARTMENT OF PUBLIC WORKS

WATER SERVICE DETAIL