Town of Smyrna Water System Standard Specifications:
Revised Specifications Updates- 2024-2025

1. Water Spec Details

A. -W-2.0-Trench Backfiling (Paved Areas) Detail **(pg.97);** revised 06-17-24
-4. Repairs in roadways shall include milling and resurfacing a minimum of 20-ft. past the trench edge in each direction.

B. -W-6.6- Master Meter Pit Detail (1 of 2) (**pg.116);** revised 04-28-24
- Revised the meter (Neptune instead of octave)
- Created more labels for the parts that will be needed for assembly

-W-6.7- Master Meter Pit Detail (1 of 2) **(pg.117);** revised 04-28-24
-1. Ultrasonic meters manufactured by Neptune Meters shall be used....
-7. ... The vault hatch shall be bolted to the concrete vault. The hatch shall have 2" thick weather proof and water resistant insulation glued to the bottom of the lid. The glue and/or adhesive shall be weather proof and water resistant.

C. -W-6.8- 2" Meter Pit Detail (1 of 2) **(pg.118);** revised 04-28-24
-New revised detail using brass piping, curb stops and depicting Neptune meter

- W-6.9- 2" Meter Pit Detail (2 of 2) **(pg.119);** revised 04-28-24
-1. Ultrasonic meters manufactured by Neptune Meters shall be used....
-4. ... The vault hatch shall be bolted to the concrete vault. The hatch shall have 2" thick weather proof and water resistant insulation glued to the bottom of the lid. The glue and/or adhesive shall be weather proof and water resistant.
-8. ...The vault shall be installed with 6" bedding of gravel (crush stone No. 67) on the bottom of the concrete vault. The vault shall be installed 3" to 6" above final grade with good soil/dirt, which shall be sloped away from the vault on each of its sides.

D. Gang Water Meter Vaults; **(pg.120-125);** revised 04-28-24
-New detail for four(4) to six(6) ¾" water meter gang vault and four(4) 1" water meter gang vault; it includes part numbers.
-W-6.10 to W-6.15

2. Blasting Policy
-Section 2- Preliminary Work **(pg. 40);** revised 08-20-24
-2.06 **BLASTING POLICY-** The **CONTRACTOR** shall have existing water, sewer, and gas mains located before blasting the construction site. The **minimum** distance that can be blasted from existing natural gas, water or wastewater lines is **25 feet** with an allowable weight in explosive pounds of ¾ pound. For increased weight in pounds of

explosives, see the chart below from the Tennessee Blasting Standards Act (Tennessee Code 68-105-104) for the distance in feet from existing utilities:

**ALLOWABLE MAX POUNDS OF EXPLOSIVES PER DAILY CALCULATIONS**
**For Distances Up to 300 Feet**

| Distance (ft.) | Weight (lbs.) | Distance (ft.) | Weight (lbs.) | Distance (ft.) | Weight (lbs.) |
|---|---|---|---|---|---|
| 0-10 | 1/8 | 70 | 6.00 | 190 | 21.00 |
| 11-15 | 1/4 | 80 | 7.25 | 210 | 23.50 |
| 16-20 | 1/2 | 90 | 8.50 | 230 | 26.00 |
| 21-25 | 3/4 | 100 | 9.75 | 250 | 28.50 |
| 26-30 | 1.00 | 110 | 11.00 | 270 | 31.00 |
| 40 | 2.25 | 130 | 13.50 | 290 | 33.50 |
| 50 | 3.50 | 150 | 16.00 | 300 | 34.75 |
| 60 | 4.75 | 170 | 18.50 | | |

**For Distances 301-ft.to 5000-ft.**
$W(lbs.) = (d(ft.)/55)^2$

**For Distances 5001-ft. and Up**
$W(lbs.) = (d(ft.)/65)^2$

The developer/contractor will need to submit a blasting plan to Smyrna Utilities showing their pounds of explosives per hole.

3. Water Service Installations (Part Numbers)
-Section 3- Materials **(pg.48-50)**; revised 08-20-24 & 03-03-25
-3.12 Service Installations
... The corporation stop shall be of solid bronze suitable for a compression flange on the service pipe and for tapping into the water main at a vertical angle. This corp stop shall be similar to Ford FB 1000 series and/or approved equal. The threads on the corporation stop shall be Mueller.

... Meter yokes/setters 5/8-inch x 3/4-inch with compression fittings shall be Mueller 234B24118R5---N (or Ford VBHH42-7WR-NL or approved equal) with a Ford C38-23-2.5-NL ¾-inch tailpiece. Meter yokes/setter for 1-inch meters shall be Mueller 389B24118R5N (or Ford or approved equal) and the tailpiece shall be Ford C38-44-2-625NL. Meter yokes for 1½-inch shall be Mueller 063B2424--5N (or Ford or approved equal), and 2-inch shall be Mueller 087B2424--5N (or Ford or approved equal). Note, the 1½-inch and 2-inch meter yokes must not have a bypass line. Each assembly shall include a meter check valve. Each meter yoke/setter shall have an integral angle stop and provisions for locking.

... Meter box lids shall have a hole in it to house an Itron AMI endpoint. Also, when the meter box is set, it should be installed with enough space around the meter to where an Itron leak sensor device can be attached to the water service pipe.

... Curb stops shall be as manufactured by Ford or approved equal. The ¾-inch shall be Model B43-232WR-Q-NL, 1-inch shall be Model B43-344WR-Q-NL and the 1½-inch and 2-inch shall be Model BF13-666W-NL and BF43-777WR-Q-NL.

... Smith Blair tapping saddles, or approved equal, shall be used for PVC pipes. A single band stainless steel, or approved equal. It shall be threaded to accept the corporation cock specified above. No taps larger than 1 inch shall be made in any size pipe without

approval by the A/E. On ductile iron pipe (DIP), the service line shall be a direct tap on the main unless otherwise specified by the Town's affiliate.

3.12.1- Gang Water Meter Vaults

A. Concrete Vault

Gang water meter vaults are a Holton concrete vault or an approved equal. The vault concrete shall have a minimum of 4,000-psi strength and cured for 28-days. Each vault shall have a two (2) inch drain at the base of the vault. The concrete vault is to meet the current requirements of ASTM C857 and C858 for structural design and loadings.

The vault hatch shall be a Halliday Model aluminum lid or approved equal. The hatch shall have a two (2) inch thick weather proof and water resistant insulation adhere underneath the hatch. The glue/adhesive shall be weather proof and water resistant. The lid shall be bolted to the concrete vault.

An antenna hole shall be cut for each individual meter for AMI (advanced meter infrastructure) meter reading device installation needs.

B. Water Service

The gang meter vault main shall be a four (4) inch Class 350 ductile iron pipe (DIP), which is to be tied into the proposed water main with a fitting and/or mechanical joint sleeve. Each water service shall be a direct tapped into the main by a corporation stop (3/4-in. Ford FB-1600-3NL or approved equal; 1-in. Ford FB1600-45-NL or approved equal).

The corporation stop is connected to the meter setter by a brass meter coupling of the correct size, which is to be installed on the meter setter on the downstream and upstream sides. The brass meter couplings are to be a Ford or an approved equal (3/4-in. C38-23-2-5-NL; 1-in. C38-44-2-625-NL). On the upstream (customer) side of the setter, there shall be an 18-in. brass nipple. This brass pipe shall be encased in a two (2) inch Schedule 40 PVC sleeve that is six (6) inches long through the concrete vault wall on the upstream (customer) side of the vault. The plastic casing pipe shall be great foamed or mudded at the insides and outsides of the vault. All water service assemblies shall be installed an even amount of assemblies starting from the center of the concrete vault to its edge.

The water service assembly shall be hydrostatically tested at factory at 100-psi per service for two (2) hours, and it shall be accompanied with a certification of test. This will be reviewed by the Town's construction inspector(s) before installation of the vault to the water system in any manner.

C. Installation

All gang meter vault shall be installed after the testing on domestic water main. Each vault shall have its own valve on the water main for its operational needs. If the gang meter vault is used for commercial uses, then each water meter service shall have a reduce pressure backflow preventer install on the upstream (customer) side of the service outside of the vault.

The gang meter vault shall be installed by the CONTRACTOR with the proper supervising inspection by the Town's construction inspector. The vault connections shall only use either a mechanical jointed sleeve or a mechanical jointed fitting. The mechanical jointed fitting shall be no greater than a $45^0$ degree fitting. No $90^0$ degree fittings are allowed. If gang meter vault has to change elevation vertically, then two (2) fittings only can be used to adjust the height of the vault.

If two (2) meter vaults are to be used together for water services, then they shall be installed in series while using a mechanical jointed sleeve of the proper size to connect the two (2). At the end of the carrier pipe outside the vault, a mechanical jointed cap shall be used, and a concrete thrust block shall be pour to secure the cap. The concrete shall have the strength of 3000-psi and poured from a concrete truck.

The bedding of gravel, crush stone no. 67, shall be a minimum of six (6) inches on the bottom of the vault. The concrete vault shall be installed 3-in. to 6-in. above final grade with good soil/dirt, which is to be sloped away from the vault on each of its sides. The meter vault shall have a minimum distance of two (2) feet from a paved area. No meter vault is to have landscape with plants and /or trees in this two (2) feet area. The meter vault shall have a minimum of two (2) feet clearance from any other utilities (electrical, sanitary sewer, communications, etc.)

4. All Thread Rods

-Section 6- Installation of Water Pipe and Accessories **(pg. 68);** revised 09-05-24

-6.05 Thrust Blocks or Restraints

Poured in place concrete thrust blocks must be provided at all points of unbalanced pressure where the pipeline could pull apart. Thrust blocks shall conform to details and minimum bearing areas as shown on the drawings and shall bear against the undisturbed trench face. Contractors may elect to use an approved type of locked flexible joint extending on each side of bend as per standard drawings.

Where over bends (downward bends) cannot be avoided the fitting must be held in place by one of the following methods:

1. Poured concrete under a pipe of sufficient volume to counteract unbalanced force with steel clamp and anchor bolts to hold fitting to concrete as per standard drawings.

2. Approved type of locked flexible joint extending on each side of bend as per standard drawings.

When using all thread rods for restraint purposes, the number of rods used shall be a minimum of half the pipe's size (Ex. 8" water main will have four (4) all thread rods.) The all thread rods shall be used in conjunction with mega-lug joint restraints that are the

same size as the pipe size that is being restrained. The all thread rods shall be stainless steel and/or have a coating to protect the rods from rusting.

AMOUNT OF ALL THREAD RODS PER PIPE SIZE

| Pipe Size(s) | Number of Rods Needed |
|---|---|
| 4” | 2 |
| 6” | 4 |
| 8” | 4 |
| 10” | 6 |
| 12” | 6 |
| 14” | 8 |
| 16” | 8 |
| 18” | 10 |
| 20” | 10 |
| 24” | 12 |
| 30” | 16 |
| 36” | 18 |
| 42” | 22 |
| 48” | 24 |

5. Fire Hydrant Meters & Construction Site Water Usage
-Section 8- Special Conditions **(pg. 87);** revised 11-06-24
-8.13 Fire Hydrant Meters & Construction Site Water Usage-
The Town of Smyrna Ordinance 18-124 states that “the Town of Smyrna **will not** render or cause to be rendered any free water and/or sewer services of any nature, nor will any preferential rates be established for users of the same class”. **Therefore, the Town of Smyrna does not provide “free” domestic/potable water and/or reclaim/reuse water.**

If water is needed for a construction site, then the **CONTRACTOR** shall obtain a hydrant meter from the Town. Hydrant meters are **only** for a **CONTRACTOR’S** construction use **only.** On a commercial construction site, hydrant meters shall be used when water is need for construction purposes on a construction site. The meter can be obtained by visiting the Smyrna Utilities Department and gong through the proper protocols to obtain a hydrant meter. On a subdivision construction site, after the water main has been tested and accepted by the Town’s Utilities Department, a water meter can be installed on a water service line. This water service can be used for construction purposes, and it shall be billed to the **CONTRACTOR and/or BUILDER.** This use of the water service for construction purposes **shall be done after the tap fees have been paid for on the project.**

6. Section 7- Testing and Disinfection- Water Mains
-7.02 Hydrostatic Tests **(pg. 70);** revised 04-24-25
A. Pressure Test
... Slowly fill each valved section of pipe with water, and apply the specified test pressure (based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gauge) with a pump connected to the pipe in a manner

satisfactory to the Town of Smyrna. The **CONTRACTOR** shall furnish the pump, pipe, connections, gauges, and all necessary apparatus for pressure testing.

-7.03 Disinfection **(pg.70- 80);** revised 04-29-25

**A. BASIC DISINFECTION PROCEDURE FOR NEW WATER MAINS**

The basic disinfection procedure consists of the following:

1. Inspecting materials to be used to ensure their integrity.

2. Preventing contaminating materials from entering the water main during storage, construction, and/or repair and noting potential contamination at the construction site.

3. Removing, by flushing or other means, those materials that may have entered the water main and/or appurtenances.

4. Preventing contamination of existing water mains from cross-connection during flushing, pressure testing, and disinfection.

5. Pressure testing the water main to ensure the main meets the purchaser's allowable leakage rate. Hydrostatic pressure tests should be conducted with potable water.

6. Chlorinating and adequately documenting the process used for disinfection.

7. Flushing the chlorinated water from the main. Refer to ANSI/AWWA C655 Field Dechlorination for dechlorinating procedures if dechlorinating is required.

8. Determining the bacteriological quality of water samples collected from the pipe by laboratory test after disinfection.

9. Final connecting of the newly disinfected water main to the active distribution system without sacrificing sanitary practices and conditions.

The use of 65% granular calcium hypochlorite conforming to NSF/ ANSI/ AWWA B300 and 12% bleach are the only forms of chlorination authorized by the Town of Smyrna.

**B. PREVENTIVE AND CORRECTIVE MEASURES DURING NEW CONSTRUCTION**

**General.** Heavy particulates generally contain bacteria and prevent even very high chlorine concentrations from contacting and killing these organisms. Therefore, the procedures of this section must be observed to ensure that a water main and its appurtenances have been thoroughly cleaned for the final disinfection by chlorination. Also, any connection of a new water main to the active distribution system before the receipt of satisfactory bacteriological samples may constitute a cross-connection.

Therefore, the new main must be isolated until bacteriological tests described in this specification are satisfactorily completed.

**Keeping pipes clean and dry.** The interiors of pipes, fittings, and valves shall be protected from contamination.

**Openings in pipelines**. Openings in the pipeline shall be closed with water-tight plugs when pipe installation has stopped at the close of the day's work or for other reasons, such as rest breaks or meal periods. Rodent-proof plugs may be used when watertight plugs are not practicable and when thorough cleaning will be performed by flushing or other means.

**Stringing pipes.** Pipes delivered for construction shall be strung to minimize the entrance of foreign material.

**Delays.** Delay in placement of delivered pipe invites contamination. The more closely the rate of delivery is correlated to the rate of pipe laying, the lower the risk of contamination.

**Joints.** Joints of pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall remain in place until the trench is free of standing water and mud that may enter the pipe.

**Packing materials.** Yarning or packing material shall consist of molded or tubular rubber rings, rope of treated paper, or other approved materials. Materials such as jute or hemp shall not be used. Packing material shall be handled in a manner that avoids contamination.

**Sealing materials.** No contaminated material or any material capable of supporting growth of microorganisms shall be used for sealing joints. Sealing material or gaskets shall be handled in a manner that avoids contamination. The lubricant used in the installation of sealing gaskets shall be suitable for use in potable water meeting the requirements of NSF/ANSI 61 and shall not contribute odors. It shall be delivered to the job in closed containers and shall be kept clean and applied with dedicated clean applicators.

**Cleaning and swabbing.** If dirt enters the pipe, it shall be removed and the interior pipe surface swabbed with a minimum 1 percent free chlorine disinfecting solution. If, in the opinion of the purchaser, the dirt remaining in the pipe will not be removed using the flushing operation, the interior of the pipe shall be cleaned using mechanical means, such as a hydraulically propelled foam pig (or other suitable device acceptable to the purchaser) in conjunction with the application of a minimum 1 percent free chlorine disinfecting solution. The cleaning method used shall not force mud or debris into the interior pipe-joint spaces and shall be acceptable to the purchaser.

**Wet-trench construction.** If it is not possible to keep the pipe and fittings dry during installation, a scour flush at 2.5 ft/sec or greater for a minimum of three pipe volumes

(see Table II) followed by slug or continuous-feed chlorination and bacteria testing before release is required. For larger mains, pigging or other suitable method acceptable to the purchaser is an option in place of high-velocity flushing.

**Flooding by storm or accident during construction.** If the main is flooded during construction, it shall be cleared of the floodwater by draining and flushing with potable water until the main is clean. The section exposed to the floodwater shall then be filled with a chlorinated potable water that, at the end of a 24-hr holding period, will have a free chlorine residual of not less than 25 mg/L. The chlorinated water may then be drained or flushed from the main. If chemical contamination occurs, such as a hydraulic oil leak or petroleum product spill, the pipe sections exposed to the contamination should be replaced and not reused for potable water applications. After construction is completed, the main shall be disinfected using the continuous-feed, slug, or spray methods.

**Backflow protection.** The new water main shall be kept isolated from the active distribution system using a physical separation until satisfactory bacteriological testing has been completed and the disinfection water flushed out. Water required to fill the new main for hydrostatic pressure testing, disinfection, and flushing shall be supplied through a temporary connection between the distribution system and the new main or other supply source approved by the purchaser. The temporary connection shall include a reduced pressure backflow preventer and shall be disconnected (physically separated) from the new main during the hydrostatic pressure test. It will be necessary to reestablish the temporary connection after completion of the hydrostatic pressure test to flush out the disinfectant water prior to final connection of the new main to the distribution system. Note: Exposure to high levels of chlorine or high pH can cause severe irritation to customers. Also, the chlorinated water can be high in disinfection by-products.

If dirt or other foreign material that has gotten into a pipe will not, in the opinion of the Town of Smyrna, be removed by flushing, clean the interior of the pipe, and swab with a disinfecting solution of 5% hypochlorite.

**Placement of calcium hypochlorite granules during construction.**
Calcium hypochlorite granules shall be placed at the upstream end of the first section of pipe, at the upstream end of each branch main, and at 500-ft (150-m) intervals. The quantity of granules at each location shall be as shown in Table 1.

Make water flow from the existing distribution system or some other source approved by the A/E into the newly-laid/proposed pipeline shall have a reduce pressure backflow preventer on the existing water main to fill the newly-laid/proposed water main. The newly-installed/proposed water main shall be disinfected to a minimum of 50mg/L of available chlorine. If this is not obtain, then continuous chlorinated water into the new water main with a 24 hour detention of no less than 50 ppm, which is the preferred method for new lines. To ensure that this concentration is maintained, measure the chlorine residual at regular intervals.

**Filling and contact time.** When installation has been completed, the main shall be filled with water such that the velocity is no greater than 1 ft/sec (0.3 m/sec). Fill rate must be carefully controlled to ensure granules do not get flushed to the very end of the pipe. Precautions shall be taken to ensure that air pockets are eliminated. Water used to fill the new main shall be supplied through a temporary connection and shall include an appropriate cross-connection control device.

**Continuous-Feed Method of Chlorination.** The continuous-feed method consists of completely filling the main with potable water, removing air pockets, then flushing the completed main to remove particulates, and refilling the main with potable water that has been chlorinated to 25 mg/L. After a 24-hr holding period in the main there shall be a free chlorine residual of not less than 10 mg/L

**Preliminary flushing.** Piping shall be filled with potable water to eliminate air pockets and flushed to remove particulates. The flushing velocity in the main shall not be less than 2.5 ft/sec unless the purchaser determines that conditions do not permit the required flow to be discharged to waste. Table II shows the rates of flow required to produce a velocity of 2.5 ft/sec in commonly used sizes of pipe. (Note: flushing is no substitute for preventive measures during construction. Certain contaminants, such as caked deposits, resist flushing at any feasible velocity. Pigging of the main, or other suitable method acceptable to the purchaser, may be required.) Where such flow rates are not possible, flushing at the maximum expected flow rate for the line for 2–3 volumes may be acceptable. For larger mains, pigging (or other suitable method acceptable to the purchaser) is an option in place of high velocity flushing.

For 24-in. (600-mm) or larger diameter mains, an acceptable alternative to flushing is to broom-sweep the main, carefully removing sweepings prior to filling and chlorinating the main. Warning: OSHA requirements for confined space need to be addressed before entering a pipeline. Refer to AWWA standard C651 for additional information.

## C. PROCEDURE FOR CHLORINATING WATER MAINS

The procedures for chlorinating water mains are as followed:

1. Potable water shall be supplied from a temporary backflow-protected connection to the existing distribution system or other supply source approved by the purchaser. The flow shall be at a constant, measured rate into the newly installed water main. In the absence of a meter, the rate may be approximated using a Pitot gauge in the discharge, or measuring the time to fill a container of known volume. The main should undergo hydrostatic testing prior to disinfection.

2. At a point not more than 10 ft (3 m) downstream from the beginning of the new main, water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will have not less than 25 mg/L free chlorine. To ensure that an appropriate concentration is achieved, the free chlorine concentration shall be measured at regular time intervals in accordance with the procedures described in Standard

Methods for the Examination of Water and Wastewater or AWWA Manual M12, or using appropriate chlorine test kit.

**TABLE 1**

**WEIGHT OF CALCIUM HYPOCHLORITE GRANULES TO BE PLACED AT THE BEGINNING OF A WATER MAIN AND AT EACH 500-ft (150 m) INTERVALS FOR THE MINIMUM CONCENTRATION OF 50 mg/L.**

| Pipe Diameter (d) | | Calcium Hypochlorite Granules | |
|---|---|---|---|
| in. | (mm) | oz | (g) |
| 4 | (100) | 3.4 | (97) |
| 6 | (150) | 7.6 | (216) |
| 8 | (200) | 13.4 | (380) |
| 10 | (250) | 21 | (596) |
| 12 | (300) | 30.2 | (857) |
| 14 & larger | (350 & larger) | D2 × 30.2 | D2 × 857 |

*Where D is the inside pipe diameter, in feet D = d/12

## D. FINAL FLUSHING FOR NEW WATER MAINS

**Clearing the main of heavily chlorinated water.** After the applicable retention period, heavily chlorinated water should not remain in prolonged contact with the pipe. In order to prevent damage to the pipe lining or to prevent corrosion damage to the pipe itself, the heavily chlorinated water shall be flushed from the main fittings, valves, and branches until chlorine measurements show that the concentration in the water leaving the main is no higher than that generally prevailing in the distribution system or that is acceptable for domestic use.

**Disposing of heavily chlorinated water.** The environment to which the chlorinated water is to be discharged shall be inspected. If there is any possibility that the chlorinated discharge will cause damage to the environment, a neutralizing chemical shall be applied to the water to be wasted to thoroughly neutralize the residual chlorine (see ANSI/AWWA C655 for neutralizing chemicals). Where necessary, federal, state, local, or provincial regulatory agencies should be contacted to determine special provisions for the disposal of heavily chlorinated water.

**Final connections to existing mains.** Water mains and appurtenances must be completely installed, flushed, disinfected, and satisfactory bacteriological sample results received prior to permanent connections being made to the active distribution system. Sanitary construction practices must be followed during installation of the final connection so that there is no contamination of the new or existing water main with foreign material or groundwater.

**Connections to existing water mains shall equal to or less than one pipe length (generally less than or equal to 20 ft).** The new pipe, fittings, and valve(s) required for the connection may be spray disinfected or swabbed with a minimum 1 percent solution of chlorine just before being installed if the total length of the connection from the end of a new main to the existing main is equal to or less than 20 ft. (6 m)

E. New Water Line Disinfection and Sampling Procedures

New water line disinfection procedures are conducted following a modified version of the AWWA Standard for Disinfecting Water Mains C651 and the bacteriological sampling procedure is conducted in accordance with Division Rule 0400-45-.17(8)(b). Continuous feed method with 25 mg/L and a 24-hour detention time of no less than 10 mg/L is the preferred method for new water lines.....

1. The use of 65% granular calcium hypochlorite conforming to NSF/ ANSI/ AWWA B300 and 12% bleach are the only forms of chlorination authorized for new lines by the Town of Smyrna. Due to the slow dissolving nature of tablet chlorination it has been determined not to be a practical option for repaired or new water lines and is prohibited. **Do not use calcium hypochlorite intended for swimming pool disinfection, as this material has been sequestered and is extremely difficult to eliminate from the pipe. The use of any chlorine mixture that contains pesticides or algaecides is prohibited.**

2. As an optional procedure (if specified), water used to fill the new main shall be supplied through a temporary connection that includes an appropriate cross-connection control device. **These temporary connections shall be adequately sized to achieve 2.5 fps (feet per second) for proper flushing as stated in Table II of this section.**

F. Disinfection Procedure After Cutting into or Repairing Existing Water Lines (Refer to WTP Disinfection SOP located in the WTP Bacteriological Monitoring plan.)

The purpose of this SOP is to maintain the integrity of all water lines in the Smyrna Water System. The primary disinfectant is 65% calcium hypochlorite (HTH) that is NSF or ANSI approved for use in drinking water according to AWWA standards. **Chlorine that is intended for use in pools and spas containing algaecides and other additives is strictly prohibited**

-7.04 Bacteriological Tests **(pg. 80);** revised 04-29-25

2. Collect these samples in sterile bottles treated with sodium thiosulfate. **Do not use a hose to collect samples**. Contact the Utilities Department's construction inspectors and/or WTP lab staff for proper collection sample points on proposed and/or tested water mains. One suggested sampling method is to install a standard corporation cock in the line with a copper tube gooseneck assembly; after the samples have been taken, the gooseneck assembly can be removed and retained for later use