SECTION S912 - CORPORATION STOP AND CONNECTION; ABANDON EXISTING WATER SERVICE AT TAP (2 INCH AND SMALLER)

S912-1 DESCRIPTION

Work consists of the installation of a new corporation stop or the abandonment of an existing water service as required in the Contract Documents and as directed by the Project Manager.

Work is to be in conformance with the requirements of Section S900 General Water Provisions.

S912-2 MATERIALS

For new service taps: size of tap, corporation stop and service saddle for new water services shall be the same nominal size as the new water service tubing, unless otherwise noted.

S912-2.01 Corporation Stop

For copper water service tubing - corporation stop is to be cast brass ball valve type with inlet being AWWA taper threads and outlet fitted for flared couplings.

For polyethylene water service tubing - corporation stop is to be cast brass ball valve type with inlet being AWWA taper threads and outlet fitted for quick joint compression couplings.

S912-2.02 Water Service Saddle

For water service connecting to iron water main, water service saddle is to be double strap all brass tapping saddle with Buna-N (Nitrile) or EPDM rubber gaskets and AWWA tapered threads.

For water service connecting to PVC/PVCO water main, water service saddle is to be wide strap all brass tapping saddle with Buna-N (Nitrile) or EPDM rubber gaskets and AWWA tapered threads

Taps for HDPE water main shall require the Contractor to submit proposed methods and materials to Bureau of Water for approval.

S912-2.03 Drilling/Tapping Machine and Tools

Tap is to be made with drilling/tapping machine specially designed for the intended work and must be in good working condition. Hand-held drills are not to be used for making taps.

Tapping machine is to be capable of attaching to and cutting through corporation stop, and is to be designed to operate with drilling/cutting tools required for the specific pipe material being tapped. When tapping PVC/PVCO water main pipe, cutting tool is to be a core cutter with minimum of two exit slots, which retains coupon after penetration of water pipe, and also has sufficient throat depth to cut heavy walled water pipe. For PVC/PVCO mains, core cutter sizes shall be as follows:

Tap Size on PVC/PVCO Water Main	Minimum Diameter of Core Cutter
1-inch	7/8-inch
1-1/2-inch	1-3/8-inch
2-inch	1-3/4-inch

S912-3 CONSTRUCTION DETAILS

S912-3.01 General

Tap shall be made with a tapping machine and in accordance with the requirements of ANSI/AWWA C600 for ductile iron pipe and ANSI/AWWA C605 for polyvinyl pipe.

Only equipment specially designed for this purpose and that is in good working condition shall be used.

In no case shall a hand-held drill be used for making taps.

Tap shall be made on the customer's side of the water main at an angle between 5 and 15 degrees up from the horizontal centerline of the main. Tap shall be no closer than 2 feet from back end of bell or spigot insertion line. Multiple taps shall be staggered at least 18 inches apart lengthwise.

Do not tap curved PVC/PVCO water pipe.

When drilling, care shall be taken to completely cut through the water pipe wall. Thoroughly clean all tapped threads, making sure to remove any remnants of water pipe materials.

Threaded end of corporation stop shall be wrapped with Teflon tape and corporation stop threaded into tapped hole and tightened so as to be watertight. For leaking corporation stops, repeat process as necessary until a successful installation is made.

Backfilling of the trench shall be done in a manner so as to avoid damage to the corporation stop.

For water main pipe that is wrapped in polyethylene, method of making direct tap shall consist of applying two or three wraps of polyethylene adhesive tape completely around the water main pipe to cover the area where the tapping machine and chain will be mounted to minimize possible damage to the polyethylene during the direct tapping procedure. After the tapping machine is mounted, install corporation stop directly through the tape and polyethylene. After direct tap is completed, entire circumferential area of the polyethylene should be closely inspected for damage, making any repairs as needed.

Contractor is prohibited from tapping either the backside or top of the water main pipe.

S912-3.02 Water Service Saddle

On ductile or cast iron water main pipe, saddle shall be used in conjunction with a tap when the tap size exceeds the following:

Water Pipe Size	Maximum Tap Size allowed without Service Saddle
4 to 6 inch	all taps require saddle
8 to 10 inch	3/4 inch
12 inch	1 inch
16 inch or larger	1-1/2 inch

All taps on PVC/PVCO water main shall require service saddles. Saddle tap and corporation stop sizes for PE services on PVC/PVCO water mains shall conform to the following:

PE Water Service Size	Saddle Tap Size	Corporation Stop Size
1 inch	1 inch	1 inch
1-1/2 inch	1-1/2 inch	1-1/2 inch
2 inch	2 inch	2 inch

S912-3.03 Abandon Existing Water Service at Tap

Existing corporation stop shall be completely closed before the water service line is disconnected at the existing corporation stop. After removal of the service line from the corporation stop, a bronze cap or plug shall be installed on the outlet side of the corporation stop. If the water service line cannot be removed without damaging the existing corporation stop and/or creating a leak, the water service line shall be sawed off at the existing corporation stop. Nut on the bottom of the existing corporation stop, if present, shall be completely tightened. If the existing corporation stop leaks when fully closed or after being tightened, the existing corporation stop shall be completely plugged as approved by the Project Manager. The curb box shall be removed and properly disposed of with no additional payment.

Existing curb boxes found on previously abandoned water services shall be removed and payment made under Section S914 Curb Stop and Box.

S912-4 METHOD OF MEASUREMENT

The quantity to be measured for payment shall be the number of water service taps and installations made or number of water services abandoned at tap.

S912-5 BASIS OF PAYMENT

S912-5.01 General all Items

The unit price bid for all items shall include the cost of: preparation and submittal of service record information and cards; pavement saw cutting; and furnishing all labor, material and equipment necessary to complete the work.

S912-5.02 Water Service Tap at Water Main

The unit price bid shall also include the cost of: making the tap at the main; furnishing and installing the corporation stop; saddle; connection of the water service to the corporation stop; polyethylene adhesive tape; and repairing damaged polyethylene pipe wrap.

S912-5.03 Abandon Existing Water Service at Tap

The unit price bid shall also include the cost of: closing the corporation stop; disconnecting the water service tubing from the corporation stop; plugging the corporation stop; and removal and disposal of the curb box.

No payment will be made for disconnecting water services on abandoned water mains, or for closing corporation stops and disconnecting water services that are to be extended to new or existing water mains, unless a separate excavation is required.

S912-5.04 Water Service Tap at Water Main with Abandonment of Existing Water Service Tap

The unit price bid shall also include the cost of: making new tap at the water main; furnishing and installing new corporation stop; saddle; connection of new water service pipe to new corporation stop; closing and plugging existing corporation stop; and disconnecting existing water service tubing from existing corporation stop.

S912-5.05 Excavation, Backfill and Surface Restoration

Excavation, furnishing and placing of bedding and select granular backfill, surface restoration will be paid for under separate bid items or included in the price bid for each item as indicated in the item description.

Excavation that is included in the pay item does not include rock excavation. Rock excavation will be paid for under separate bid item.

Payment will be made under:

ITEM NO.	ITEM	PAY UNIT
S912.01XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection	Each
S912.02XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection (Including Excavation and Backfill)	Each
S912.03XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection (Including Excavation, Backfill and Surface Restoration)	Each
S912.04	Abandon Existing Water Service at Tap	Each
S912.05	Abandon Existing Water Service at Tap (Including Excavation and Backfill)	Each
S912.06	Abandon Existing Water Service at Tap (Including, Excavation, Backfill and Surface Restoration)	Each
S912.07XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection (Including Abandonment of Existing Tap)	Each
S912.08XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection (Including Abandonment of Existing Tap) (Including Excavation and Backfill)	Each
S912.09XXXX	New X" Water Service Tap at Water Main, Corporation Stop and Connection (Including Abandonment of Existing Tap) (Including Excavation, Backfill and Surface Restoration)	Each

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