MOLECULARLY ORIENTED POLYVINYL CHLORIDE WATER MAIN (PVCO)

- Molecularly oriented polyvinyl chloride (PVCO) Class 305 water main shall have push-on joints, conform to the latest ANSI/AWWA C909-09 and ASTM F1483 and shall be constructed in accordance with the City of Crystal Lake Ordinances and the applicable portions of the Standard Specifications for Water and Sewer Main Construction in Illinois.

- Wherever water is encountered in the trench, it shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Any dewatering of the trenches shall be considered incidental. At no time shall trench water be allowed to enter the water main.

- All types of pipe shall be handled in such a manner as to prevent damage to the pipe. Damage to the pipe, as determined by the city, shall be removed from the job, and the methods of handling shall be corrected to prevent further damage.

- When requested by the City, the pipe shall be inspected by the City for defects while suspended above grade.

- All cutting of existing water main pipe for the insertion of valves, tees or other fittings shall be performed without damage to the pipe and so as to leave a smooth end at right angles to the axis of the pipe.

- A canvas strap shall be used to lower the PVCO water main into the trench to avoid damaging the pipe.

- A utility line marking tape shall be installed along the centerline of the entire pipeline. The tape shall be four to six inches below the base course in roadway areas, and shall be 18 to 24 inches below existing or proposed ground surface in other areas. The six-inch wide tape shall be aluminum foil encased in an impervious mylar plastic coating on both sides, resistant to acid, alkali and corrosion and detectable with radio-type locators to a buried depth of three feet. The words, "Caution - Water Main Buried Below" shall be continuously, reverse printed on the Safety Precaution blue tape with striping. The tape shall be Lineguard, Inc., Type **III** SUPER TUFF, CAUTION STRIPED, Linetec, Inc. or an equal approved by the City Engineer.

- The first two joints beyond any valve, bend, cross, or tee shall be restrained with retainer glands. Also, any joint where the proposed PVCO water main ties into the existing water main shall be restrained with retainer glands. Retainer glands shall be C909 PVC Pipe Restraints Series 19MJOO or Series 2016PV or similar restrained harness as required for the PVCO water main diameter manufactured by EBAA Iron, or an equal approved by the ENGINEER. Also all bends, crosses, and tees shall be additionally restrained with thrust blocks as shown on the details in the plans.

- All taps shall require a saddle suitable for AWWA C909 PVCO water main (no direct taps are allowed). See Detail UW-04a for PVCO C909 water service tapping information. Valve Vaults require saddled taps on both sides of the valve (See Detail UW-01) and shall use Cascade CS12 or Approved Equal.

- All bolted connections shall be torqued to the manufacturer's specification. The contractor shall verify the manufacturer's specification with an approved torque wrench. Do not over torque bolts. Over torqued connections shall be removed and pipe checked for deformity. If the Engineer determines the pipe to be compromised, the pipe shall be removed and replaced at no additional cost to the City.

- Only products specifically identified for use on PVCO should be used on PVCO.

Revised:
1. 06/12/2015
2. KL 01/25/2021 Torque Specification. Pressure Class 305 PVC
3.
4.

Drawing Name

PVCO WATER MAIN GENERAL SPECIFICATIONS

Drawing Number

UW-12

Date: 06/10/2015

Drawn	Checked
JH	VR

City of Crystal Lake Illinois