

TRENCH REQUIREMENTS

January 2020

1. Water lines shall be a minimum of twelve (12) inches from any rock, power lines, telephone lines, TV. cable lines, or any other obstructions. Waterlines shall be 2 feet from Natural Gas lines.
2. Rocks, trees, brush or garbage shall NOT be used for fill.
3. All rocks and debris shall be hauled away.
4. The job site shall be returned, as close as possible, to its original condition.
5. Any use of a road right-of -way or road crossing must be approved by the appropriate County, City and/or State Highway Department. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAID ROAD CROSSINGS AND ALL REPAIRS TO THE ROAD SURFACE. ...
6. Any water line crossing a canal shall be done to the specifications of the appropriate irrigation district. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAID CANAL CROSSINGS AND ALL REPAIRS TO THE CANAL.
7. Any water line crossing railroad, gas, sewer, power, telephone or TV. cable lines shall be done to the specifications of the appropriate company. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAID RAILROAD AND UTILITY CROSSINGS AND ALL REPAIRS TO THE RAILROAD OR UTILITIES. ...
8. All excavators hired by the customer or Avion shall provide Avion with a certificate of insurance, and follow the OSHA Safety Standards.
9. Minimum width and depth requirements for trenches: NOTE: YOU WILL NEED TO ADD SIX (6) INCHES TO THE TRENCH DEPTH AND PAD THE PIPE WITH A MINIMUM OF SIX (6) INCHES OF CLEAN, COMPACTED FILL MATERIAL ON THE BOTTOM, AND TWELVE (12) INCHES ON TOP OF THE MAINLINE.

Pipe Size	Width	Depth
Less than 6"	30"	36"+OD+Bedding
6"	30"	48"
8"	32"	50"
10"	34"	52"
12"	36"	54"
16"	40"	58"
24"	48"	66"
36"	60"	78"

12" Clearance at ALL Times !!!



TRENCH REQUIREMENTS cont'd.

January 2020

10. All water lines will be at least ten (10) feet from any sewer line or any other potential source of contaminants.
11. The proper locating tape and **14 gauge**, or larger, wire shall be installed as directed. Proper wire nuts, **rated for direct bury, with silicone**, shall be used. (e.g. DryConn DBR/Y-600, or equivalent) Locate wires in Valve tubes shall run outside the 3034 Riser Sleeve and inside the 910 Cast Iron Valve tube.
12. Provision shall be made for the installation of meters and a stub trench shall be dug five (5) feet perpendicular to the main line for the installation of a tail piece and pipe. This will be decided before the construction begins. No meter box shall be set in sidewalks, driveways, curbs, or any hard surfaces.
13. Tapping Sleeves shall be wrapped in 4 mil plastic sheeting, with a concrete thrust block. The size of the thrust block will be determined by the design engineer and approved by the inspector on site.
14. When a sewer line is located above, or less than 18" below a crossing waterline, the sewer line shall be constructed of pipe conforming to water pipe standards. (AWWA C900) The minimum length of this strengthened sewer is 20ft. It is intended that a full 20ft stick of C900 pipe shall be used for the sewer line, to be centered over the water main and connected to the sewer line with City of Bend approved couplings. **Must adhere to OAR 333-061-0050 (9) Construction Standards**, with regard to all Sewer Crossings.
15. Any deviation from the above requirements shall have prior approval from Avion Water Company, Inc.



WATER AND PIPE FITTINGS

January 2020

PIPE:

Avion will determine size, type, pressure rating, or class prior to construction. All pipe used shall be C900 **(DR 18)** or Ductile Iron (DI, Thickness **Class 52**) and gasketed pipe. NO GLUE pipe will be accepted in sizes larger than 2". All gasketed pipe shall be joined using an approved water soluble, vegetable based non-toxic lubricant. **All pipe shall have 2 Reference Marks on the spigot end of the pipe. (1 as the Insert Mark, and the 2nd being the Inspection Mark.)**

PIPE FITTINGS:

All fittings 3" and larger shall be ductile or cast iron with mechanical joints. All fittings shall be constructed to AWWA standards and be a Domestic product. **All direct bury fittings shall be MJ fittings. Fittings in a vault shall be Flange**, unless approved by Avion Water Co.

THRUST/STRADDLE BLOCKS:

Will ONLY be used when specifically noted by Avion Water Co., All Thrust/Straddle block specifications shall be determined by the design engineer and approved by the inspector.

RESTRAINT JOINTS:

All fittings shall be restrained with EBBA Mega, or equivalent, restraint joints. Bell joint restraints shall be installed per Avion Water specifications. Specifications on bell joint restraints will be given by the Avion Water engineering department or the inspector at the time of pre-construction or construction.

If using class pipe, restraint joints with TRANSITION gaskets MUST be used. MJ gaskets must be pipe type specific gaskets. No universal gaskets will be accepted.

VALVES:

All valves shall be iron and shall be of the resilient seated type, with non-rising stems, and a 2" square operating nut. Butterfly valves shall be used in all applications 14" and larger **(GV for 12" and lower)** with the exception of live line taps. All valves shall be AWWA approved, and a Domestic product.

VALVE BOXES OR TUBES:

Valve tubes shall be, East Jordan 910 18" Top, Valve Tube and cast iron lid with "AVION WATER" cast into the lid. The riser pipe shall be a 6" 3034 PVC pipe. All valve boxes NOT set in asphalt shall be set in a 4" thick concrete pad, 18" width minimum.

Locate wires in Valve tubes shall run outside the 3034 Riser Sleeve and inside the 910 Cast Iron Valve tube.



WATER AND PIPE FITTINGS cont'd

January 2020

METERS:

All meters 1", or smaller, shall be provided by Avion Water Co. All meters larger than 1" shall be approved by Avion Water Co. and shall read in cubic feet.

All lines from the main line to the meter stop shall be no less than 1" in size.

All meters to be paid for by the customer or contractor.

FIRE HYDRANTS:

All Fire Hydrants shall be RED.

Fire Hydrants that are scratched or dull may need to be re-painted.



Policy for Services in Subdivisions

January 2020

1. All services and Backflow Prevention Assemblies (BPA) shall be installed in a professional manner. Using the following guidelines provided by Avion Water Co. Inc. Must adhere to OAR 333-061-0070, or Illustration drawings.
2. No service, meter, or backflow assembly that falls under our tariffs shall be in concrete or asphalt, unless approved by Avion Water. (Driveways, Sidewalks, or Streets)
3. All service lines, 1" to 1 ½" shall have a Corporation Stop.
All service lines 2" and larger shall have a gate valve, with a valve tube, at the tap.
4. All 1" to 2" mainline taps shall use a Double strap Service Saddle.
All corporation stops shall be either: **Mueller** or **A.Y. McDonald**
5. All 1", 1 ½" and 2" service lines will be copper, unless approved by Avion Water Co.
6. All meters and BPA's shall be between the curb and sidewalk, or in a P.U.E., or as approved by Avion Water Co. Inc. All BPA installations must adhere to OAR 333-061-0070.
7. All 1 ½" and 2", meters and BPA's, shall be **in their own box**.
8. All meters, 1 ½" and larger, shall have a meter screen.
9. All ¾" and 1", meters and BPA's, shall be **in the same box**.
10. All boxes for ¾" and 1" meter and BPA's shall be either:
For non-traffic areas:
OldCastle 17"x30"x18" Straight Wall Polymer Box (#17302030)
w/ 17"x30" Black/Gray Plastic Lid w/CI Flip Reader (#17304172)
For light traffic areas:
OldCastle 17"x30"x18" Straight Wall Polymer Box (#17302030)
w/ 17"x30" Polymer Concrete Lid w/CI Flip Reader
Any other box shall have prior approval before installation.
11. All boxes for 1½" and 2" meter and BPA's shall be either:
For non-traffic areas:
NDS 17"x30"x18" Flared Wall Plastic Bpx (#126BCDMCIFB)
w/ 17"x30" Black Plastic Lid w/CI Flip Reader
For light traffic areas:
Hubbell 17"x30"x18" Flared Wall Polymer Concrete Box (#PT1730BA18)
w/ 17"x30" Polymer Concrete Lid w/CI Flip Reader (#PG1730WAR250)
Any other box shall have prior approval before installation.



Policy for Services in Subdivisions cont'd

January 2020

12. Material under meter boxes shall be compacted with a plate compactor or Jumping Jack, to prevent settling.
13. All fittings shall be sized for 1" meters.
14. All fittings shall be set at 12" below finish grade, and 14" to the top of the box.
15. All brass to be rated at 150 psi, or greater, and meet the new "lead free" rules. Must adhere to OAR 333-061-0087.
16. All 1" meter stops shall be full port, either: **Mueller** – 1" part # B24258
or **A.Y. McDonald** – 1" part # 74602BQ
17. All Services that have been cut down after the initial pressure test, **shall** have the **compression gaskets replaced** prior to the 2nd pressure test.
18. All services shall be **Flow Tested**, 50gpm minimum.
19. All spacers shall be level and properly threaded into the meter nuts.
20. All services shall be inspected by Avion Water Co. Inc. before the subdivision is accepted.

Chlorination and Pressure Testing

1. Chlorination shall adhere to AWWA standards C651 through C654, as well as OAR 333-061-0050 (10) Disinfection Standards. Avion Water shall adopt the Hot stick method for most chlorination's. (Physical separation between existing and new system) **3ft/sec min. Flushing Requirement.**
2. All Service Lines shall be chlorinated and pressure tested with the main system. The services shall be set at least 1 foot above grade, during the initial test. There will be a 2nd pressure test after the services have been cut to the required grade specifications. **The meter stop compression gaskets MUST be replaced prior to the 2nd pressure test.**
3. Avion Water Co. reserves the right to choose the Contractor responsible for the Chlorination, Hot Tapping and Pressure testing procedures. **Avion Water Co. may require a different Contractor from the Pipe and Parts Supplier, to perform the Chlorination, Hot Tapping and Pressure Testing.**
4. After the Hot Stick tie in has been completed, a **2nd pressure test** may be required.