

WATER SPECIFICATIONS:

7-09 WATER MAINS

SECTION 7-09.2: MATERIALS

PARAGRAPH 1 IS REPLACED WITH THE FOLLOWING:

MATERIALS SHALL MEET THE FOLLOWING SECTIONS:

PIPE	9-30.1
DUCTILE IRON PIPE (RESTRAINED JOINT)	9-30.1(1)
FITTINGS	9-30.2
DUCTILE IRON PIPE	9-30.2(1)
RESTRAINED JOINTS	9-30.2(6)
BOLTED SLEEVE-TYPE COUPLINGS FOR PLAIN END PIPE	9-30.2(7)
VALVES	9-30.3
GATE VALVES (3 INCHES TO 10 INCHES)	9-30.3(1)
BUTTERFLY VALVES (12 INCHES AND GREATER)	9-30.3(3)
VALVE BOXES	9-30.3(4)
VALVE MARKER POSTS	9-30.3(5)
VALVE STEM EXTENSION	9-30.3(6)
COMBINATION AIR RELEASE VALVES	9-30.3(7)
TAPPING SLEEVE AND VALVE ASSEMBLY	9-30.3(8)
HYDRANTS	9-30.5
(ALL BOLTS AND NUTS TO BE STAINLESS STEEL W/THANTI-SEIZE COMPOUND)	
SERVICE CONNECTIONS (2 INCHES AND SMALLER)	9-30.6

ALL DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES SHALL HAVE RESTRAINED JOINTS BY THE USE OF MEGA-LUGS, ROMAC GRIP RINGS, FIELD-LOCK GASKETS, OR APPROVED EQUAL.

BOLTS AND NUTS FOR FLANGED PIPE AND FITTINGS SHALL CONFORM IN SIZE AND LENGTH WITH ANSI/AWWA C115/A21.15. ALL BOLTS AND NUTS SHALL BE MADE FROM COR-TEN STEEL IN ACCORDANCE WITH ANSI/AWWA C111/A21.11.

ALL FITTINGS TO HAVE THRUST BLOCKS AS INDICATED IN CITY STANDARD PLANS.

NOTE: THE CITY RESERVES THE RIGHT FOR ANY OR ALL SALVAGE RIGHTS TO ANY EXISTING MATERIALS REMOVED INCLUDING BUT NOT LIMITED TO FIRE HYDRANTS, CROSSES, TEES, GATE VALVES OR PIPE.

IT SHALL BE DETERMINED BY THE CITY AS TO WHAT MATERIALS WILL BE SALVAGED.

ANY MATERIAL REQUESTED FOR SALVAGE WILL BE DELIVERED BY THE CONTRACTOR TO THE CITY'S OPERATION CENTER AS DIRECTED BY THE CITY.

ALL COSTS ASSOCIATED WITH DELIVERY OR REMOVAL AND DISPOSAL SHALL BE BORNE BY THE CONTRACTOR.

7-09.3 CONSTRUCTION REQUIREMENTS

SECTION 7-09.5: GRADE AND ALIGNMENT

THIS SECTION IS SUPPLEMENTED WITH THE FOLLOWING:

A MINIMUM HORIZONTAL SEPARATION OF 10 FEET BETWEEN SANITARY SEWERS AND ANY EXISTING POTABLE WATER LINES, AND A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE CROWN OF THE SEWER, SHALL BE MAINTAINED. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. SEWER LINE SHOULD BE LOWER THAN WATER LINE AND INSTALLED IN SEPARATE TRENCHES.

SECTION 7-09.5(9): BEDDING THE PIPE

SENTECE 1 IS REPLACED WITH THE FOLLOWING:

BEDDING MATERIAL SHALL BE SELECT GRANULAR MATERIAL FREE FROM WOOD WASTE, ORGANIC MATERIAL, AND OTHER EXTRANEUS OR OBJECTIONABLE MATERIALS AND SHALL BE CSTM.

7-09.3(19) CONNECTIONS

SECTION 7-09.3(19) A: CONNECTIONS TO EXISTING MAINS

PARAGRAPHS 1, 4, 5, AND 6 ARE REPLACED WITH THE FOLLOWING:

WATER NOTES:

1. SPECIFICATION FOR ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" AS PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.

2. THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS DEPARTMENT (608.835.2662) 24 HOURS PRIOR TO THE START OF CONSTRUCTION. INSPECTION AND APPROVAL OF THE CONSTRUCTION WILL BE BY THE CITY PUBLIC WORKS OFFICE. A SATISFACTORY PRESSURE AND BACTERIOLOGICAL TEST FOR THE WATER CONSTRUCTION IS REQUIRED FOR APPROVAL.

3. WHEN CONSTRUCTION IS TO TAKE PLACE WITHIN A CITY RIGHT-OF-WAY A CITY APPROVED TRAFFIC CONTROL PLAN WILL BE REQUIRED PRIOR TO THE START OF CONSTRUCTION.

4. WHERE EXISTING SERVICE MUST BE INTERRUPTED, THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AND THE INSPECTOR 48 HOURS IN ADVANCE OF THE DATE AND LOCATION OF THE INTERRUPTION. NOTIFICATION MUST BE DONE 48 HOURS IN ADVANCE OF THE INTERRUPTION. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION TO PROVIDE MINIMUM INTERRUPTION OF SERVICES AS DETERMINED BY THE INSPECTOR. ALL SERVICE INTERRUPTIONS SHALL BE PERFORMED BY THE CITY.

5. NO EXCAVATED MATERIAL TO BE PLACED ON ROAD SURFACES UNLESS APPROVED BY A CITY REPRESENTATIVE.

6. ALL PIPE FURNISHED SHALL BE NEW AND CONFORM TO THE REQUIREMENTS OF AWWA C151-71.

7. ALL PIPE SHALL BE CLASS 52, DUCTILE IRON, UNLESS OTHERWISE NOTED ON THE PLANS.

8. ALL PIPE SHALL BE FURNISHED IN 18 TO 20 FOOT LENGTHS AND SHALL BE CEMENT MORTAR LINED.

9. ALL RUBBER GASKET JOINTS FOR DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF AWWA C111-80.

10. ALL FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C110-82 OR C153-85.

11. FITTINGS SHALL BE OF THE SIZE, TYPE, TYPE OF IRON, AND TYPE OF JOINT AS CALLED FOR ON THE PLANS. ALL DUCTILE IRON FITTINGS SHALL BE CEMENT LINED.

12. COMPACT FITTINGS WILL ONLY BE ALLOWED ON INSTALLATIONS THRU 12" DIAMETER. ALL COMPACT FITTINGS SHALL BE DUCTILE IRON, CEMENT LINED, AND HAVE A PRESSURE RATING OF 350 PSI.

13. ALL RUBBER GASKET JOINTS FOR DUCTILE IRON AND GREY IRON FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C111-80.

14. BED PIPE WITH SCREENING 6" BELOW AND 12" ABOVE.

15. TRENCH BACKFILL MATERIALS SHALL BE ACCORDING TO THE BACKFILL SECTION SHOWN ON THE PLANS AND/OR UTILITY PERMIT. NO DITCHES WILL BE LEFT OPEN AND TEMPORARY COLD MIX INSTALLED IF IN HIGH TRAFFIC AREAS. ALL PIPE WILL BE CAPPED OR PLUGGED WHEN LEFT UNATTENDED.

16. COMPACTION OF THE TRENCH BACKFILL SHALL BE ACCORDING TO SECTION 7-10 OF THE SPECIFICATIONS. EACH BACKFILL LAYER SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY THE COMPACTION CONTROL TEST.

17. COMPACTION CONTROL TESTS TO DETERMINE OPTIMUM MOISTURE CONTENT AND MAXIMUM DENSITY SHALL BE BY THE FOLLOWING METHODS:

A. FOR NON-GRANULAR MATERIALS - METHOD OF TEST FOR COMPACTION CONTROL OF GRANULAR MATERIALS (WSDOT TEST METHOD NO. 609)

B. FOR GRANULAR MATERIALS - METHOD OF TEST FOR COMPACTION OF GRANULAR MATERIALS (WSDOT TEST METHOD 606)

C. FIELD MOISTURE AND DENSITY OF BACKFILL MATERIAL SHALL BE DETERMINED BY THE NUCLEAR MOISTURE/DENSITY GAUGE

18. THE SERVICES ARE TO BE INSTALLED BY THE CONTRACTOR, AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT, 24 HOURS AFTER COMPLETION OF THE SERVICE LINES. THE WATER METERS WILL BE SET BY THE CITY. PRIOR TO INSTILLATION OF THE WATER LINES, IT IS REQUIRED THAT THE DEVELOPER SUPPLY THE CITY WITH A REPRODUCIBLE COPY OF THE PLAT MAP INDICATING THE ADDRESS OF EACH LOT IMMEDIATELY UPON COMPLETION OF THE PROJECT. NO WATER METERS WILL BE SET UNTIL THESE CONDITIONS ARE MET.

19. RESILIENT-SEATED VALVES WILL BE USED FOR VALVE INSTALLATIONS OF 8 INCH AND SMALLER.

20. RESILIENT-SEATED VALVES SHALL BE USED ON ALL FIRE HYDRANT AND FIRE PROTECTION SERVICE INSTALLATIONS.

CONNECTIONS TO THE EXISTING WATER MAIN SHALL NOT BE MADE WITHOUT FIRST MAKING THE NECESSARY ARRANGEMENTS WITH THE CITY WATER DEPARTMENT IN ADVANCE. WORK SHALL NOT BE STARTED UNTIL THE EXISTING MAIN HAS BEEN POTHOLED TO DETERMINE THE MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO PROPERLY COMPLETE THE WORK. ALL THE MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO PROPERLY COMPLETE THE WORK SHALL BE ASSEMBLED ON THE SITE BEFORE WORK IS STARTED. TORQUE TIGHTEN ALL NON-TEST BOLTS.

ONCE WORK IS STARTED ON A CONNECTION, IT SHALL PROCEED CONTINUOUSLY WITHOUT INTERRUPTION, AND AS RAPIDLY AS POSSIBLE UNTIL COMPLETED. NO SHUTOFF OF MAINS WILL BE PERMITTED OVERNIGHT, OVER WEEKENDS, ON MONDAYS OR FRIDAYS, OR ON HOLIDAYS. THE WATER MANAGER MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY SHUTOFF AND MUST GIVE APPROVAL PRIOR TO THE SHUTOFF TAKING PLACE.

IF THE CONNECTION TO THE EXISTING SYSTEM INVOLVES TURNING OFF THE WATER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE RESIDENTS AFFECTED BY THE SHUTOFF A MINIMUM OF 48 HOURS PRIOR TO THE SHUTOFF. THE WATER MANAGER WILL ADVISE WHICH PROPERTY OWNERS ARE TO BE NOTIFIED.

CONNECTIONS MUST BE PERFORMED BETWEEN 8:00 A.M. AND 4:00 P.M. TUESDAY THROUGH THURSDAYS UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE WITH THE WATER MANAGER. ANY OVERTIME COST BY CITY STAFF WILL BE INCURRED BY THE CONTRACTOR.

ALL WATERLINES AND SERVICES SHALL BE ABANDONED AT THE MAIN AND PROVIDE A ONE FOOT SEPARATION FROM THE WATERMAIN. FLUSHING MAY BE REQUIRED TO BE PERFORMED AT NIGHT (PER CITY DIRECTION) DURING NON-PEAK FLUXES.

SECTION 7-09.3(21): CONCRETE THRUST BLOCKING

THIS SECTION IS SUPPLEMENTED WITH THE FOLLOWING:

ALL FORMS FOR CONCRETE AND DEFORMED REBAR THRUST BLOCKING MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO POURING THE CONCRETE.

SECTION 7-09.3(23): HYDROSTATIC PRESSURE TEST

PARAGRAPHS 1, 4, AND 5 ARE REPLACED WITH THE FOLLOWING:

ALL WATER MAINS AND APPURTENANCES SHALL BE TESTED IN SECTIONS OF CONVENIENT LENGTH UNDER A HYDROSTATIC PRESSURE EQUAL TO 1.5 TIMES THAT UNDER WHICH THEY WILL OPERATE OR 200 PSI WHICHEVER IS GREATER. ALL PUMPS, GAUGES, PLUGS, SADDLES, CORPORATION STOPS, MISCELLANEOUS HOSE AND PIPING, AND MEASURING EQUIPMENT NECESSARY FOR PERFORMING THE TEST SHALL BE FURNISHED AND OPERATED BY THE CONTRACTOR. THE ENGINEERING DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO TESTING AND MUST BE PRESENT WHEN TESTS ARE PERFORMED.

THE MAINS SHALL BE FILLED WITH WATER AND ALLOWED TO STAND UNDER PRESSURE A SUFFICIENT LENGTH OF TIME TO ALLOW THE ESCAPE OF AIR AND ALLOW THE LINING OF THE PIPE TO ABSORB WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE WATER NECESSARY TO FILL THE PIPELINES FOR TESTING PURPOSES.

THE TEST SHALL BE ACCOMPLISHED BY PUMPING THE MAIN UP TO THE REQUIRED PRESSURE, STOPPING THE PUMP FOR 2 HOURS, AND THEN PUMPING THE MAIN UP TO THE TEST PRESSURE AGAIN. DURING THE TEST, THE SECTION BEING TESTED SHALL BE OBSERVED TO DETECT ANY VISIBLE LEAKAGE. A CLEAN CONTAINER SHALL BE USED FOR HOLDING WATER FOR PUMPING UP PRESSURE ON THE MAIN BEING TESTED.

DISINFECTION OF WATER MAINS

SECTION 7-09.3(24): FLUSHING

PARAGRAPHS 1 IS REPLACED WITH THE FOLLOWING:

SECTIONS OF PIPE TO BE DISINFECTED SHALL FIRST BE FLUSHED TO REMOVE ANY SOLIDS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LODGED IN THE PIPE. TAP SHALL BE PROVIDED LARGE ENOUGH TO DEVELOP A VELOCITY OF AT LEAST 6 FPS IN THE MAIN. HYDRANTS ARE NOT TO BE USED FOR PIPE FLUSHING; ONLY APPROVED BLOW OFF ASSEMBLIES ARE TO BE USED. CONNECTING TO CITY MAINS OR FLUSHING MAY BE REQUIRED AT NIGHT DEPENDING ON SYSTEM CONDITIONS AS

DETERMINED BY THE ENGINEER. SIT FOR 24 HRS.

CONTRACTOR TO PROVIDE SAMPLING STATION POINT PER CITY STANDARDS.

SECTION 7-09.3(24D): DRY CALCIUM HYPOCHLORITE

7-12 VALVES FOR WATER MAINS

CONSTRUCTION REQUIREMENTS

SECTION 7-12.3(1): INSTALLATION OF VALVE MARKER POST

THIS SECTION IS REPLACED WITH THE FOLLOWING:

6. SHUT DOWNS OF THE WATER SYSTEM FOR CONNECTIONS WILL BE DONE BETWEEN TUESDAY AND THURSDAY FROM 8 AM AND 4 PM. MAX TIME THE WATER MAY BE OFF IS 4 HOURS WITHOUT PRIOR APPROVAL.

7. SUBMITTALS AND SHOP DRAWINGS MUST BE APPROVED BEFORE THE SHUT DOWN IS SCHEDULED. CONTRACTOR IS REQUIRED TO NOTIFY THE CUSTOMERS AFFECTED 2 WORKING DAYS IN ADVANCE IN WRITING WITH CITY APPROVED LETTER.

ALL BACKFILL SHALL BE 3" MINUS (CSTC).

FOUNDATION MATERIAL & GEO GRID SHALL BE INSTALLED AS DIRECTED BY THE CITY & TO THE DEPTH AS DIRECTED.

ALL PAVEMENT PATCHES SHALL BE 2" PLUS EXISTING IN DEPTH OR AS DIRECTED BY THE CITY.

ALL PAVEMENT SHALL BE FULL DEPTH SAWCUT & REPLACED PER THE LIMITS AS MARKED BY THE CITY AFTER CONSTRUCTION.

A CONCRETE COLLAR SHALL BE POURED AROUND VALVE BOXES THAT ARE TO GRADE. A TWO HEADED ARROW STAMP WILL BE USED TO STAMP THE CONCRETE COLLAR TO SHOW DIRECTION OF FLOW FOR THE WATER MAIN.

ALL OPERATORS FOR BUTTERFLY VALVES SHALL BE ON CENTERLINE OF STREET SIDE OF THE MAIN.

THE CONTRACTOR SHALL NOT OPERATE ANY CITY VALVE. THE CITY MUST BE CONTACTED TO TURN ALL CITY VALVES FOR ALL PHASES OF CONSTRUCTION.

7-14 HYDRANTS

CONSTRUCTION REQUIREMENTS

SECTION 7-14.3(6): HYDRANT EXTENSIONS

THIS SECTION IS SUPPLEMENTED WITH THE FOLLOWING:

HYDRANT EXTENSIONS WILL NOT BE ALLOWED FOR NEWLY CONSTRUCTED HYDRANTS. THE LARGE PORT ON THE HYDRANT SHALL FACE THE ROAD.

7-15 SERVICE CONNECTIONS

SECTION 7-15.3: CONSTRUCTION REQUIREMENTS

PARAGRAPH 1 IS REPLACED WITH THE FOLLOWING:

WATER METER SERVICE SHALL NOT CONFLICT WITH ELECTRIC/GAS SERVICES. REQUIRED 5"

HORIZONTAL AND 18" VERTICAL SEPARATION. (10' HORIZONTAL AND 18" VERTICAL FROM SANITARY SEWER)

PERMISSIBLE HYDRANT METER LOCATION NOTE (CONSTRUCTION WATER)

CONTRACTOR SHALL APPLY FOR HYDRANT METER PERMIT BY COMPLETING THE APPROPRIATE FORM AND

SUBMITTING TO WASHOUGAL CITY HALL AT 1701 C STREET, WASHOUGAL, WA 98671.

NO METERS INSTALLED WITHOUT FEE'S BEING PAID IN FULL.

CITY TO DETERMINE LOCATION FOR ALL HYDRANT METERS.

WATER NOTES ADDITIONAL

1. CONNECTION TO THE WATER SYSTEM SHALL BE INSPECTED BY PUBLIC WORKS DEPARTMENT. 48 HOURS (2 WORKING DAYS) NOTICE FOR INSPECTION.

2. ALL WATER SYSTEM FLUSHING, INCLUDING FIRE LINES, SHALL BE SCHEDULED THROUGH THE

WATER DEPARTMENT WHO WILL BE PRESENT TO RECORD WATER USED AND TO OPERATE CITY

VALVES.

3. UTILITY PERMITS MUST BE APPLIED AND PAID FOR PRIOR TO ANY CONNECTIONS BEING MADE TO

THE WATER SYSTEM.

4. ALL BACKFLOW DEVICES MUST BE TESTED AND CERTIFIED BY A STATED CERTIFIED TESTER PRIOR

TO THE WATER SERVICES BEING ACTIVATED FOR USE.

5. ONLY CITY WATER DEPARTMENT PERSONNEL SHALL OPERATE CITY VALVES.

STANDARD WATER DETAILS - SHEET 1

CITY OF WASHOUGAL

Drawing No.

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