

**GENERAL NOTES**

ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF GRESHAM PUBLIC WORK STANDARDS AND ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.

THE CITY OF GRESHAM WILL PROVIDE INSPECTION ON ALL PHASES OF WORK. NOTIFY INSPECTION DEPARTMENT FIVE (5) DAYS PRIOR TO COMMENCING WORK AND PROVIDE 48 HOURS NOTIFICATION TO OBSERVE AND INSPECT ALL NECESSARY WORK. CONTRACTOR WILL UNCOVER AT HIS/HER EXPENSE ALL WORK COVERED UP FOR WHICH THE CITY INSPECTOR WAS NOT NOTIFIED TO CONDUCT OBSERVATIONS. THE INSPECTOR SHALL HAVE ACCESS TO THE CONSTRUCTION SITE AT ALL TIMES.

ALL UTILITIES SHOWN HAVE BEEN LOCATED FROM THE BEST AVAILABLE INFORMATION. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES AND WHEN ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY CHANGES IN PUBLIC FACILITIES MUST BE REVIEWED AND APPROVED BY THE CITY OF GRESHAM.

CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT PRIOR TO WORK IN ANY EXISTING RIGHTS-OF-WAY OR PUBLIC EASEMENTS.

AREAS OF CONSTRUCTION SHALL BE STRIPPED BY REMOVING TOPSOIL, HUMUS, ROOTS AND SOILS NOT SUITABLE FOR COMPACTION. STRIPPED MATERIALS SHALL NOT BE USED FOR STRUCTURAL FILL. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL: HOWEVER, TOPSOIL MAY BE PLACED AND SPREAD WHERE APPROPRIATE FOR LAWN AREAS.

CONTRACTOR AND/OR SUBCONTRACTOR(S) SHALL HAVE A MINIMUM OF ONE (1) SET OF APPROVED CONSTRUCTION PLANS AND ACCESS TO THE CITY OF GRESHAM PUBLIC WORKS STANDARDS ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.

TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).

EXCAVATORS SHALL COMPLY WITH ALL PROVISIONS OF ORS 757.542 TO 757.562 AND 757.993 INCLUDING NOTIFICATION OF ALL OWNERS OF UNDERGROUND FACILITIES AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS BEFORE COMMENCING ANY EXCAVATION. "ONE CALL" LOCATE NUMBER IS (503) 246-6699.

THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES IN THE PLANS. WHEN ERRORS, OMISSIONS OR DISCREPANCIES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED. WORK PERFORMED BY THE CONTRACTOR AS A RESULT OF AN ERROR, OMISSION OR DISCREPANCY IN THE PLANS SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE WHEN SUCH ERROR, OMISSION, OR DISCREPANCY HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ENGINEER.

PROTECT ALL EXISTING MONUMENTS, BENCHMARKS, PROPERTY CORNERS, AND GOVERNMENT CORNERS.

IF AN ARCHAEOLOGICAL SITE OR OBJECT IS FOUND DURING CONSTRUCTION, CONSTRUCTION SHALL BE SUSPENDED, AND THE CITY OF GRESHAM NOTIFIED IMMEDIATELY.

THE REMOVAL OF TREES SHOULD BE CONDUCTED IN ACCORDANCE WITH THE MIGRATORY BIRD TREATY ACT (MBTA) AND OUTSIDE OF THE PEAK BIRD NESTING SEASON (FEBRUARY 15 THROUGH SEPTEMBER 15).

## **WASTEWATER**

PIPE BEDDING, PIPE ZONE AND ROCK BACKFILL MATERIALS SHALL BE CLASS "B". ROCK BACKFILL SHALL BE COMPACTED PER CITY OF GRESHAM STANDARD DETAIL 214.

SANITARY SEWER PIPE AND APPURTENANCES SHALL BE AIR TESTED FOR LEAKAGE. IN ADDITION, HDPE AND PVC PIPE SHALL BE TESTED FOR DEFLECTION. DEFLECTION TEST SHALL BE DONE WITH A 95% MANDREL.

ALL SERVICE LATERALS SHALL EXTEND 10 FT. BEYOND THE PROPERTY LINE. THE END SHALL BE MARKED WITH A SINGLE 2X4 WHICH SHALL EXTEND 2 FT. ABOVE FINISH GRADE. THE EXPOSED PORTIONS OF THE 2X4 SHALL BE PAINTED WHITE. DEPTH OF LATERAL SHALL BE PAINTED ON THE 2X4.

SANITARY LATERAL LOCATIONS SHALL BE STAMPED WITH AN "S" ON THE TOP OF CURB FOR FUTURE LOCATION.

PLUG CONNECTION TO EXISTING SEWER UNTIL THE NEW LINE IS TESTED AND CONNECTION IS APPROVED BY THE CITY OF GRESHAM.

## **STORMWATER**

PIPE BEDDING AND BACKFILL SHALL BE CLASS "B".

ALL FLEXIBLE PIPE SHALL BE TESTED FOR DEFLECTION USING A 95% MANDREL PER CITY SPECIFICATIONS.

LOTS ARE TO BE FINAL GRADED TO DIRECT SURFACE DRAINAGE TO STREET OR APPROVED STORM DRAINAGE SYSTEM.

ALL DRAIN TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE PIPED DIRECTLY TO THE STORM SYSTEM.

## **STREETS**

EMBANKMENTS SHALL BE CONSTRUCTED FROM EXCAVATED MATERIAL OR IMPORTED MATERIALS ACCEPTABLE TO THE ENGINEER AND SHALL BE BROUGHT TO GRADE IN LIFTS NOT TO EXCEED 8". EACH LIFT SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557 COMPACTION TEST. ALL LOT GRADING SHALL BE DONE IN ACCORDANCE WITH CH. 70 OF THE UNIFORM BUILDING CODE.

CONTRACTOR SHALL CONTACT THE CITY OF GRESHAM FOR REMOVAL OF ALL BARRICADES ON EXISTING STREETS.

IMMEDIATE COLD PATCH REQUIRED FOR ALL TRENCH CUTS IN EXISTING STREETS. MAINTAIN IN GOOD CONDITION UNTIL PERMANENT PATCHING IS COMPLETE.

ALL AC JOINTS TO BE SEALED WITH JOINT FILLER IN CONFORMANCE WITH PWS 205.02.10D.

NO SIGNS IN THE RIGHT-OF-WAY MAY BE REMOVED BY THE CONTRACTOR WITHOUT CITY AUTHORIZATION.

## **WATER**

EXCEPT FOR COPPER AND PEXa SERVICES, ALL PUBLIC WATERLINE PIPE SHALL BE CLASS 52 DUCTILE IRON. DUCTILE IRON PIPE SHALL BE CEMENT-MORTAR LINED AND SHALL CONFORM TO ANSI/AWWA C151/A21.51 AND SHALL BE U.S. TYTON JOINT PIPE OR APPROVED EQUAL. RUBBER RING GASKETS SHALL CONFORM TO ANSI/AWWA C111/A21.11. ALL CAST IRON FITTINGS AND

FLANGED DUCTILE IRON FITTINGS SHALL BE CLASS 250 AND ALL DUCTILE IRON MECHANICAL JOINT FITTINGS SHALL BE CLASS 350 CONFORMING TO ANSI/AWWA C110/A-21.10 AND ANSI/AWWA C153/A21.53. MORTAR LINING SHALL BE SAME THICKNESS AS FOR PIPE. ALL FLANGE GASKETS SHALL BE RING STYLE OR "DROP-IN", NOT FULL-FACE.

NO PUBLIC WATER VALVES SHALL BE OPENED OR CLOSED (OPERATED) BY ANYONE BUT THE CITY OF GRESHAM WATER STAFF.

ALL PUBLIC WATERLINE PIPE SHALL HAVE A MINIMUM OF 36" OF COVER IN STREET RIGHT OF WAYS TO FINISH GRADE UNLESS OTHERWISE SHOWN. ALL WATERLINE PIPE IN UNIMPROVED AREAS WILL HAVE A MINIMUM OF 48" OF COVER FROM FINISHED GRADE.

ALL TEES, BENDS AND ENDS OF WATERLINES SHALL BE BLOCKED WITH POURED IN PLACE CONCRETE THRUST BLOCKS IN ACCORDANCE WITH THE CITY OF GRESHAM SPECIFICATIONS UNLESS ALTERNATE RESTRAINT SYSTEMS HAVE BEEN PREVIOUSLY APPROVED. ALL FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC. ALL PIPE AND FITTINGS SHALL BE FULLY RESTRAINED IN ACCORDANCE WITH PWS 501.02.02 (A) & (B).

ALL FLANGED CONNECTION BOLTS SHALL RECEIVE A COATING OF "SPRAY-ON UNDERCOATING" OR APPROVED EQUAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PROPER SEPARATION BETWEEN SANITARY SEWER LINES AND WATERLINES AS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND STATE DEPARTMENT OF HEALTH. SEE STANDARD DETAIL 510.

DIRECT-BURIED LINE VALVES OF 12" SIZE AND LARGER SHALL BE BUTTERFLY VALVES. ALL SMALLER, DIRECT-BURIED LINE VALVES SHALL BE RESILIENT WEDGE GATE VALVES. ALL VALVES SHALL BE DESIGNED TO AWWA SPECIFICATIONS AND SHALL HAVE A STANDARD 2" SQUARE-OPERATING NUT UNLESS OTHERWISE SHOWN ON PLANS. ALL BUTTERFLY VALVES SHALL BE DESIGNED FOR AT LEAST 150 PSI AND ALL GATE VALVES SHALL BE DESIGNED FOR AT LEAST 250 PSI WORKING PRESSURE AND SHALL OPEN COUNTERCLOCKWISE.

FIRE HYDRANT ASSEMBLY SHALL BE MUELLER SUPER CENTURION 250 CONFORMING TO AWWA STANDARD C502, LATEST REVISIONS. GATE VALVES FOR HYDRANTS ARE TO BE APPROVED RESILIENT WEDGE GATE VALVES ONLY. HYDRANTS ARE TO BE YELLOW AND THE DEPTH OF BURY IS TO BE DETERMINED IN THE FIELD BUT SHALL NOT EXCEED 6 FT IN DEPTH WITHOUT EXPLICIT CITY APPROVAL. SEE STANDARD DETAILS 501A THROUGH 501C.

ALL WATERLINE FACILITIES SHALL BE THOROUGHLY FLUSHED, PRESSURE TESTED AND CHLORINATED. A POTABLE WATER TEST SHALL BE APPROVED BY THE OREGON STATE HEALTH DEPARTMENT AND CITY OF GRESHAM PRIOR TO ANY METER INSTALLATIONS OR CONNECTION TO EXISTING SYSTEM.

ALL FILLING, FLUSHING AND TESTING OF NEW WATERLINE FACILITIES SHALL BE DONE THROUGH A 6" DOUBLE CHECK VALVE ASSEMBLY AND TEMPORARY FILL-POINT / BLOW-OFFS. THE CITY OF GRESHAM MAY PROVIDE 6" DOUBLE CHECK VALVE ASSEMBLY, BUT IF UNAVAILABLE, CONTRACTOR SHALL SUPPLY ASSEMBLY. FLUSHING OF CHLORINATED WATER INTO STORM DRAIN SYSTEM IS NOT ALLOWED UNLESS DECHLORINATED. HIGHLY CHLORINATED WATER SHALL BE DISCHARGED INTO SANITARY SEWER OR OTHER APPROVED LOCATION.

CONTRACTOR MUST COORDINATE BACKFLOW ASSEMBLY TEST WITH THE GRESHAM WATER QUALITY DEPARTMENT (503-628-2626) TO RECEIVE SERVICE TO PROPERTY.

NO CONNECTION TO EXISTING WATERLINE UNTIL NEW LINE IS TESTED AND ACCEPTED BY CITY OF GRESHAM INSPECTOR.