

VALVE MANHOLE CASTINGS
VALVE MANHOLE FRAMES AND COVERS SHALL BE 22 INCH NEMA R-1771, OR APPROVED EQUAL, ASTM-448 WITH INTERCHANGEABLE PIECES AND MACHINED HORIZONTAL BEARING SURFACES.

IF CASTINGS ARE DELIVERED TO THE JOB UNPAINTED, THEY SHALL BE GIVEN ONE COAT OF ASPHALT VARNISH OR COAL-TAR PITCH PAINT BY THE CONTRACTOR.

MANHOLE/HYDRANT GRADES
CONTRACTOR SHALL ADJUST MANHOLE RIM GRADES AS SHOWN ON DRAWINGS TO ACTUAL SURROUNDING GRADE OR AS DIRECTED BY THE ENGINEER. NO ACTUAL PAYMENT IS ALLOWED FOR THESE ADJUSTMENTS.

FIRE HYDRANTS AND APPURTENANCES - GENERAL
THIS ITEM COVERS FIRE HYDRANTS, WATCH VALVES AND VALVE BOXES, HYDRANT TEES, ANCHORING FITTINGS AND ANCHORING PIPE WHICH MAY BE REQUIRED IN CONNECTION WITH THE INSTALLATION OF THE WATER MAINS. HYDRANTS IN NEW SUBDIVISIONS SHALL BE 4-FOOT UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE DIRECTOR OF PUBLIC SERVICE. FIRE HYDRANTS AND APPURTENANCES WHEN INSTALLED WITH CLASS 52 DUCTILE PIPE SHALL BE WRAPPED AS PREVIOUSLY SPECIFIED.

FIRE HYDRANTS
FIRE HYDRANTS SHALL BE OF THE COMPRESSION TYPE, OPENING AGAINST AND CLOSING WITH THE WATER PRESSURE IN THE MAIN, HAVING A 5-1/4 INCH VALVE OPENING, TWO 2-1/2 INCH HOSE NOZZLES (2-63/64 INCHES O.D., 8 THREADS PER INCH), HYDRANTS SHALL CONFORM TO ANMA C502, LATEST REVISION, THE MANUFACTURER SHALL FURNISH AN AFFRUIT INDICATING THAT ALL TESTS AND PROVISIONS OF ANMA C502 HAVE BEEN MET.

THE FOLLOWING MAKES AND MODELS OF HYDRANTS WILL BE PERMITTED:

AMERICAN-DARLING	B-84-B
KENNEDY	K-81A
MUELLER	A-423, SUPER CENTURION 200

THE HYDRANT BARREL SHALL HAVE AN INSIDE DIAMETER OF NOT LESS THAN 6 INCHES AND SHALL BE IN TWO PARTS FASTENED TOGETHER WITH A FRANGIBLE SECTION LOCATED JUST ABOVE GROUND LINE. THE HYDRANT STEM SHALL HAVE A BREAKABLE COUPLING IN THE SAME PLANE AS THE FRANGIBLE SECTION. STEM SHALL TERMINATE AND 1.50 INCHES POINT TO FLAT. SEALS SHALL BE RUBBER O-RINGS. HYDRANTS SHALL BE SUITABLE FOR SETTING IN TRENCHES OF THE DEPTHS SHOWN OR AS REQUIRED. THE HYDRANTS SHALL BE DESIGNED SO THAT WHEN PROPERLY OPERATED WATER DRAIN WILL BE PREVENTED. HYDRANTS SHALL BE FURNISHED WITH A POSITIVE-OPERATING DRAWER VALVE AND SHALL BE FURNISHED WITH A 6 INCH MECHANICAL JOINT BASE. HYDRANTS SHALL OPEN BY TURNING TO THE LEFT (COUNTER-CLOCKWISE).

THE CONTRACTOR SHALL VERIFY THAT THE HYDRANT FURNISHED AND THAT THE HYDRANT PUMP NOZZLE WITH STORZ FITTING, OPERATING NUT, OUTLET NOZZLE CAP NUTS AND HOSE THREADS CONFORM TO THOSE IN THE SYSTEM BEFORE NEW HYDRANTS ARE SHIPPED.

EACH HYDRANT EXTERIOR, IN ADDITION TO FINISHING AS REQUIRED BY ANMA C502, SHALL BE GIVEN ONE FIELD COAT OF ASPHALT VARNISH AFTER ERECTION AND BEFORE BACKFILLING FROM GROUND LEVEL DOWN. THAT PART OF THE HYDRANT EXTERIOR ABOVE GROUND LEVEL SHALL BE FIELD PAINTED WITH TWO COATS OF PAINT AS REQUIRED BY THE OWNER AFTER BACKFILLING IS COMPLETE.

BONNET, 3 CAPS AND CHAINS - BLACK EMAMEL, GULDEN 4551, ICI DEVOC #43089990, OR CITY APPROVED EQUAL.
BARREL - MEDIUM YELLOW EMAMEL, GULDEN 4560, ICI DEVOC #43088600, OR CITY APPROVED EQUAL.

PROTECTION AND PAINTING
ALL IRON PARTS OF VALVES AND ACCESSORIES SHALL BE PAINTED BEFORE LEAVING THE SHOP WITH TWO COATS OF ACCEPTABLE HIGH GRADE BITUMINOUS PAINT.
THE VALVES SHALL BE PROTECTED AT ALL TIMES FROM RUST OR DAMAGES, BOTH BEFORE AND AFTER INSTALLATION, UNTIL THE COMPLETION OF THE CONTRACT.

ANCHORS AND SUPPORTS
REINFORCED CONCRETE ANCHORS AND SUPPORTS (THRUST BLOCK) SHALL BE PROVIDED AT ALL FITTINGS, VALVES OR CHANGES IN DIRECTION OF THE PIPE. THEY SHALL BE CONSTRUCTED OF CLASS I CONCRETE, AS SHOWN ON DETAIL SHEET, AND SHALL BE PLACED AGAINST FIRM UNDISTURBED SOIL. ALL PLUG OR CAPS SHALL BE SECURELY STRAPPED OR BLOCKED.

INSTALLATION
ALL PIPE AND APPURTENANCES SHALL BE INSTALLED TRUE TO LINE, GRADE, AND LOCATION WITH ADJUSTMENTS STRONG. PROPER SUPPORT AND BLOCKING PROVIDED WITH ADJUSTABLE STEEL CLAMP SHALL BE USED TO AND BE PIPES THAT ARE SUPPORTED BY THE FULL LENGTH OF THE BARREL. THE PIPE SHALL HAVE APPROXIMATELY 4" OF COVER, WHERE CONFLICTS OCCUR WITH OTHER UTILITIES A MINIMUM OF 6" COVER SHALL BE MAINTAINED. WHERE SPECIAL CONDITIONS WARRANT, THE DEPTH OF COVER SHALL BE OBTAINED. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED IMMEDIATELY AFTER PIPES IS AND THEREIN NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONES, ROCK OR PIECES OF WOOD. TRENCHES OUTSIDE THE LIMITS OF 5 FEET FROM THE EDGE OF PAVEMENT SHALL BE BACKFILLED WITH THOROUGHLY TAMPED GRANULAR MATERIAL A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE TRENCH MAY BE FILLED WITH EXCAVATED MATERIAL, INSOFAR AS IT IS OF SUITABLE CHARACTER.

WATERLINE LENGTHS
ALL LENGTHS SHOWN ON PLAN VIEWS ARE MEASURED FROM CENTERLINE OF VALVE OR FITTINGS IF APPLICABLE.

WHENEVER IT IS NECESSARY TO CUT THE PIPE AT FITTINGS, VALVES, SPECIALS, OR ELSWHERE, THE REMAINING PORTIONS MAY BE USED WHERE POSSIBLE TO MINIMIZE THE NUMBER OF SCRAP PIECES WHEN THE PROJECT IS COMPLETE; HOWEVER, SCRAP PIECES LESS THAN 5'-FEET IN LENGTH SHALL NOT BE USED.

PIPE LAYING
PIPE SECTIONS SHALL BE STRUNG ALONG THE ROUTE OF THE MAINS SO AS TO INTERFERE LEAST WITH PEDESTRIAN AND VEHICULAR TRAFFIC, AND TO PROTECT THE PIPE AS FULLY AS POSSIBLE. CARE SHALL BE TAKEN AT ALL TIMES IN HANDLING THE PIPE SO AS NOT TO INJURE IT IN ANY WAY AND AT NO TIME SHALL OTHER PIPES OR MATERIAL BE PLACED IN THE PIPES.

RUBBER TIED EQUIPMENT SHALL BE USED ON ALL PAVED SURFACES DURING PIPE LAYING AND ALL RELATED OPERATIONS. HEAVY EQUIPMENT SHALL NOT BE DRIVEN OVER STREETS, BUT SHALL BE MOVED BY TRAILER.

THE MAINS SHALL BE LAID IN THE LOCATIONS AND AT THE GRADES SHOWN ON THE PLANS, EXCEPT AS SPECIFICALLY PERMITTED OR ORDERED OTHERWISE BY THE CITY OR THEIR ENGINEER IN ORDER TO AVOID EXISTING OR PROPOSED UTILITY LINES OR ANY OTHER OBSTRUCTIONS ENCOUNTERED IN THE COURSE OF THE WORK; TO SECURE A MORE READILY ACCESSIBLE POSITION FOR TRENCHING; OR TO FACILITATE THE LOCATION OF VARIOUS APPURTENANCES OF THE MAINS.

EXISTING UTILITIES OR OTHER OBSTRUCTIONS ALONG THE ROUTE OF THE MAINS SHALL BE LOCATED AND THE ELEVATION DETERMINED AT LEAST 200 FEET IN ADVANCE OF PIPE LAYING.

ALL UTILITIES, WHEN ENCOUNTERED, SHALL BE ADEQUATELY SUPPORTED, SHORED UP OR OTHERWISE PROTECTED WHENEVER EXPOSED IN THE EXCAVATION TO THE SATISFACTION OF THE CITY OR THEIR ENGINEER. TIMBER SUPPORTS SHALL BE A MINIMUM OF 6-INCHES SQUARE, SUPPORT OF UTILITIES PERPENDICULAR TO THE EXCAVATION SHALL BE IN ACCORDANCE WITH DETAIL.

PLANS SHALL INDICATE THE LOCATION OF EXISTING UTILITIES, IN ACCORDANCE WITH THE BEST INFORMATION PRESENTLY AVAILABLE, BUT NEITHER THE CITY OR THEIR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE ACCURACY OF THEIR LOCATION OR THAT ALL UTILITIES ARE SHOWN.

WHEN ABRUPT CHANGES IN THE GRADE OF THE MAIN ARE NECESSARY TO AVOID EXISTING UTILITIES OR OTHER OBSTRUCTIONS, SUITABLE FITTINGS, USUALLY 1/8 BENDS, SHALL BE USED, UNLESS OTHERWISE SPECIFIED, SO AS TO SECURE AN EASY FLOW OF LIQUID AND TO PROVIDE SUFFICIENT COVER BELOW SAME. PIPE SHALL BE SO LOCATED WITH RESPECT TO OTHER UTILITIES AS TO ALLOW FOR TAPS TO BE INSERTED, A MINIMUM CLEARANCE OF ONE FOOT IN ALL DIRECTIONS SHALL BE MAINTAINED.

ALL PIPES SHALL BE THOROUGHLY CLEANED INSIDE AND OUTSIDE BEFORE BEING LOWERED INTO THE TRENCH. THEY SHALL BE KEPT CLEAN DURING AND AFTER LAYING, AND THE END OF THE PIPE SHALL BE PLUGGED TO EXCLUDE WATER, ANIMALS OR OTHER MATTER WHEN PIPE LAYING IS STOPPED FOR ANY REASON.

REMOVAL OF EXCAVATED MATERIAL AND STORAGE OF MATERIALS

ALL EXCESS EXCAVATED MATERIAL WHICH HAS BEEN STOCKPILED AT THE WORK SITE, AND WHICH WILL NOT BE USED FOR BACKFILL OR OTHER FILL PURPOSES, MUST BE REMOVED FROM THE PROJECT AREA WITHIN FORTY-EIGHT (48) HOURS. IN ALL CASES, STOCK PILES OF ALL EXCAVATED MATERIAL AND ALL CONSTRUCTION MATERIALS SHALL BE OF LIMITED SIZE AND SHALL BE NEATLY MAINTAINED IN SUCH A MANNER THAT THEY WILL NOT BLOCK EXISTING DRAINAGE OR BE HAZARDOUS TO PEDESTRIAN OR VEHICULAR TRAFFIC IN ANY WAY. THE LIMITATION RELATIVE TO THE STOCKPILING OF ALL EXCAVATED MATERIAL, AS REQUIRED ABOVE, OR FAILS TO SATISFACTORILY MODIFY HIS OPERATIONS RELATIVE TO THE STOCKPILING OF EXCAVATED OR CONSTRUCTION MATERIALS UPON ORDER OF THE CITY OR THEIR ENGINEER, ALL WORK EXCEPT CLEAN-UP OPERATIONS WILL BE STOPPED, AND REMAIN STOPPED UNTIL THE ORDER OF THE CITY OR THEIR ENGINEER HAS BEEN COMPLIED WITH.

THE REMOVAL AND DISPOSAL OF SURPLUS EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BUT THE LOCATION OF THE DISPOSAL AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OR THEIR ENGINEER. HOWEVER, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY IN THE DISPOSAL OF WASTE MATERIALS EVEN THOUGH THE LOCATION OF THE SITE FOR SUCH MATERIAL MAY HAVE BEEN APPROVED BY THE CITY OR THEIR ENGINEER.

PROGRESS

THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE BACKFILLING OPERATIONS AND GENERAL CLEAN-UP WITHIN A REASONABLE DISTANCE OF TRENCHING AND PIPE LAYING OPERATIONS AND OTHER EXCAVATIONS. THE SPECIFIC LIMITATIONS OF THIS PARAGRAPH SHALL BE AT THE DISCRETION OF THE CITY OR THEIR ENGINEER, BUT THE GENERAL INTENT IS TO REQUIRE THE CONTRACTOR TO MINIMIZE THE INCONVENIENCE TO NEARBY RESIDENTS OR IN OTHER LOCATIONS WHERE THE MAINS ARE CONSTRUCTED IN STREETS AND ALLEYS OR IN OTHER LOCATIONS WHERE THE CONSTRUCTION PRODUCES AN INCONVENIENCE TO NEARBY RESIDENCES OR BUSINESSES. THE CITY OR THEIR ENGINEER SHALL BE PERMITTED TO REQUIRE THE CONTRACTOR TO CEASE TRENCHING AND PIPE LAYING OPERATIONS AT SUCH TIME AS HE FEELS THAT BACKFILLING AND CLEAN-UP HAVE NOT PROGRESSED SATISFACTORILY.

TRENCHES

TRENCHES FALLING IN THAT AREA BELOW A LINE DRAWN AT 1:2 (1 HORIZONTAL AND 2 VERTICAL) FROM THE EDGE OF PAVEMENT OR BACK OF CURB AND ABOVE THE HORIZONTAL PLANE OF THE PIPE ELEMENT MATERIAL SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL. TRENCHES FALLING UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE BACKFILLED WITH GRANULAR MATERIAL MEETING REQUIREMENTS OF DOT ITEM 304 TO THE SUBGRADE. THE CITY OF OREGON RESERVES THE RIGHT TO ORDER COMPACTION TESTS, IF IT DEEMS THEM NECESSARY. PIPE OUTSIDE THE LIMITS NOTED ABOVE SHALL BE BACKFILLED WITH SUITABLE EXCAVATED MATERIAL.

EXCEPT WHERE OTHERWISE SPECIFICALLY REQUIRED OR PERMITTED BY THE CITY OR THEIR ENGINEER, THE MAINS SHALL BE LAID IN OPEN TRENCH EXCAVATED TO A DEPTH SUFFICIENT TO PROVIDE NOT LESS THAN 4'-FEET OF VERTICAL COVER, UNLESS OTHERWISE NOTED. HOWEVER, PIPES SHALL BE INSTALLED AT A GREATER DEPTH WHEN SHOWN ON THE PLANS; WHEN NECESSARY TO PASS UNDER OTHER UTILITIES OR OBSTRUCTIONS; OR WHERE NECESSARY TO PREVENT HIGH POINTS IN THE MAIN, IN ADDITION TO THE MINIMUM VERTICAL COVER, WHERE ANY PIPES PARALLEL, ROADSIDE DITCHES OR STREAMS, A LATERAL COVER SHALL BE PROVIDED AT LEAST EQUAL TO THE SPECIFIED VERTICAL COVER.

SUFFICIENT SPACE SHALL BE PROVIDED IN THE TRENCH FOR PROPERLY MAKING THE JOINTS WITHOUT RAISING THE LENGTH OF PIPE ABOVE THE SOLID BOTTOM ON THE TRENCH. CARE SHALL BE TAKEN TO DETECT AND REMOVE ANY STONE, BOULDER OR OTHER DEBRIS THAT MIGHT BE ENCOUNTERED IN THE BOTTOM OF THE TRENCH WHICH WOULD DAMAGE THE PIPE OR BE DETRIMENTAL TO THE PROPER BEDDING OF THE PIPE.

WHERE THE PIPE LENS ENTER THE PAVED LIMITS OF A STREET, ALLEY, DRIVEWAY OR PARKING AREA, THE PAVEMENT SHALL BE NEARLY CUT AND THE MAIN INSTALLED IN OPEN TRENCH, IF PERMITTED BY THE CITY, OTHERWISE IT SHALL BE BORED. PAVEMENT CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS SUBSEQUENTLY SPECIFIED.

WHERE CATCH BASINS ARE IN THE LINE OF CONSTRUCTION, THE CONTRACTOR SHALL TUNNEL UNDER THE BASINS TO INSTALL THE PIPE, UNLESS OTHERWISE INSTRUCTED.

ON PRIVATE LAWNS, OUTSIDE OF RIGHT-OF-WAY, THE SOD OVER THE TRENCH SHALL FIRST BE REMOVED AND PLACED IN A PROTECTED AREA ADJACENT TO THE TRENCH.

BACKFILLING

ALL TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED IMMEDIATELY AFTER PIPE IS LAID THEREIN, NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONES, ROCK OR PIECES OF MASONRY, FROZEN EARTH, DEBRIS OR EARTH WITH AN EXCEPTIONALLY HIGH VOID CONTENT. TRENCHES OUTSIDE THE LIMITS OF 5 FEET FROM THE EDGE OF PAVEMENT, PAVED OR STONE BERM OR BACK OF CURB SHALL BE BACKFILLED WITH THOROUGHLY TAMPED GRANULAR MATERIAL, A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE TRENCH MAY BE FILLED WITH EXCAVATED MATERIAL, INSOFAR AS IT IS OF SUITABLE CHARACTER. TRENCHES WITHIN 5 FEET OF BACK OF THE CURB, EDGE OF PAVEMENT OR EDGE OF PAVED OR STONE BERM SHALL BE BACKFILLED WITH THOROUGHLY TAMPED GRANULAR MATERIAL TO THE PAVEMENT SUBGRADE. GRANULAR BACKFILL SHALL CONFORM TO THE GRADATION REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR ITEM 703.11, TYPE 1, (304 ONLY) OF THE 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, (MAX. DRY DENSITY EXCEEDING 102 LBS. PER CUBIC FEET) AND COMPACTION TO 100% OF THE STANDARD PROCTOR TEST). GRANULAR MATERIAL MAY BE COMPACTED WITH WATER IF STRATIFICATION DRAINAGE IS PROVIDED FOR THE EXCESS WATER. WHEN COMPACTING WITH WATER, THE GRANULAR MATERIAL MAY BE PLACED IN LAYERS NOT TO EXCEED 8 INCHES THICK. SPIN AND EACH LAYER THOROUGHLY SATURATED WITH WATER BEFLOODING OR LAYING. CARE TO BE TAKEN TO PREVENT THE PLACEMENT OF SOIL OVER THE GRANULAR MATERIAL, THE EXCESS WATER SHOULD BE DRAINED.

PRESSURE AND LEAKAGE TESTING

THE CONTRACTOR SHALL MAKE PRESSURE AND LEAKAGE TESTS OF ALL PIPE LINES ACCORDANCE WITH ANMA C800 LATEST REVISION UNLESS OTHERWISE DIRECTED BY THE CITY OF OREGON.

PRESSURE TESTS SHALL BE MADE IN ALL PIPE LINES OR VALVED SECTIONS THEREOF, AS DIRECTED. THE CONTRACTOR SHALL FINISH THE PUMP, PIPE CONNECTIONS, TAPS, GAUGES AND ALL OTHER APPARATUS FOR MAKING THE TEST BEFORE TESTING OF THE MAIN. THE CONTRACTOR SHALL FLUSH THE MAIN UNDER THE CITY OF OREGON DIRECTION TO EXPEL ANY WATER, DIRT, CHLORINE, ETC.

THE COST OF FURNISHING ALL MATERIAL, LABOR, EQUIPMENT AND THE TOTAL VOLUME OF WATER FOR TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT CONDUIT ITEM.

DISINFECTION

THE CONTRACTOR SHALL CHLORINATE ALL PIPE LINES AND THIS SHALL BE DONE PRIOR TO PRESSURE TESTING UNLESS OTHERWISE DIRECTED BY THE CITY. DISINFECTION SHALL MEET OR EXCEED ANMA C651.

THE COST TO COMPLETE SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT CONDUIT ITEM.

OHIO E.P.A. REQUIREMENTS

THE OHIO ENVIRONMENTAL PROTECTION AGENCY REQUIRES A CONFORMANCE TO THE 2012 EDITION OF "TEN STATES STANDARDS." THIS STANDARD SHALL BE EQUALLED OR EXCEEDED FOR WATERLINES. SPECIAL ATTENTION SHALL BE GIVEN TO THE FOLLOWING SECTIONS OF PART 8.

8.1.1	MATERIALS CONFORM TO ANMA STANDARDS
8.2.2	MINIMUM 6" DIAMETER FIRE PROTECTION
8.4.4	HYDRANT DRAINAGE
8.7.3	COVER
8.7.6	PRESSURE TESTING ANMA C-800*
8.7.7	DISINFECTION ANMA C-651*
8.8.2	10' HORIZONTAL SEPARATION WATER MAIN/SEWER
8.8.3	18" VERTICAL SEPARATION WATER MAIN/SEWER
8.8.6	NO ENTRY AND/OR CONTACT WITH SEWER MANHOLE

*NOTE: IF SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THIS TEST PROPERLY AND THEIR RESPONSIBILITY FOR ADEQUATE SUPERVISION AND APPROVAL RESTS WITH THE APPROPRIATE GOVERNMENTAL AGENCY. ANY DEVIATION FROM THE ABOVE WILL NOT BE PERMITTED UNLESS SPECIFICALLY INCLUDED IN THE GENERAL NOTES OR OTHERWISE SHOWN ON THESE PLANS.

IN CASES WHERE ONE AND/OR MORE OF THE ABOVE MENTIONED OHIO E.P.A. STANDARDS FALL SHORT OF THE CITY OF OREGON, WATER DEPARTMENT, THE LATTER SHALL GOVERN.

ONLY THE CITY OF OREGON MAY OPERATE VALVES.

FLUSHING EXISTING WATER MAINS
WHENEVER A CONTRACTOR IS CONNECTING ONTO AN EXISTING WATER MAIN, THE EXISTING WATER MAIN WILL BE FLUSHED THROUGH THE BLOW-OFF ON THE END OF THE MAIN, BEFORE THE NEW PIPE IS CONNECTED TO THE EXISTING WATERLINE.

POLYETHYLENE TUBE

THE WATER LINE SHALL BE FIELD WRAPPED WITH A MINIMUM 8 MIL THICK POLYETHYLENE TUBE MEETING THE REQUIREMENTS OF ANMA C108, WITH THE INSTALLATION IN ACCORDANCE WITH METHOD A AND THE RECOMMENDATIONS PIPES POLYETHYLENE ALL JOINTS AND SEAMS SHALL BE COMPACTED. THE MANUFACTURER SHALL BE 2 INCH MADE OF POLYETHYLENE TUBE WHICH WILL BE COMPACTED TO BOTH SIDES OF THE SURFACES AND THE POLYETHYLENE FILLS FITTINGS THAT REQUIRE CONCRETE. ALL VALVE HYDRANTS AND OTHER APPURTENANCES SHALL ALSO BE PROPERLY WRAPPED TO EITHER THE GROUND LINE OR THE UNDER SIDE OF THE OPERATING NUT OR VALVE. COST OF THE ABOVE SPECIFIED SHALL BE INCLUDED IN THE PRICE BID FOR THE WATER LINE ITEM.

REMOVAL AND DISPOSAL OF EXISTING WATER MAIN AND ALL APPURTENANCES

CONTRACTOR TO REMOVE EXISTING HYDRANTS AND MAIN LINE VALVES AND DELIVER THEM TO THE CITY OF OREGON, WATER DEPARTMENT. EXISTING FIRE HYDRANT LINES THAT CROSS UNDER ROADWAYS MAY BE LEFT IN PLACE BUT MUST BE FILLED WITH GROUT.

TAPPING SADDLE AND CORPORATION STOP

TAPPING SADDLES SHALL BE STAINLESS STEEL. THEY SHALL BE BAND-TYPE OR DOUBLE STRAP TYPE WITH ANMA TAPERED THREAD INLET.

CORPORATION STOPS FOR USE WITH SADDLES SHALL BE BRONZE ALLOY WITH ANMA TAPERED THREAD, AND OUTLET THREAD COMPATIBLE WITH CONNECTING PIPE. WITHOUT SPECIAL ADAPTERS, CORPORATION STOPS FOR DIRECT TAPPING SHALL BE BRONZE ALLOY WITH ANMA TAPERED INLET THREAD, AND WITH OUTLET THREAD COMPATIBLE WITH CONNECTING PIPE, WITHOUT SPECIAL ADAPTERS.

COOPER SERVICE AND FITTINGS

COOPER SERVICE BRANCHES SHALL CONFORM TO ASTM B 88 TYPE K, AND BE ASSEMBLED USING COMPRESSION FITTINGS CONFORMING TO ANMA C-800, MINIMUM WORKING PRESSURE FOR THE BRANCHES SHALL BE 150 POUNDS PER SQUARE INCH. THE MATERIAL SHALL BE EITHER COIL TYPE (TEMPER 080 ANNEALED) OR DRAWN TYPE (TEMPER H).

SERVICE STOP WITH BOX

SERVICE STOPS SHALL BE BRONZE WITH COUPLING THREADS CONFORMING TO ANMA C-800. THE STOP SHALL BE SO DESIGNATED THAT WATER PRESSURE FROM THE INLET SIDE OF THE BODY SHALL PROVIDE ADDITIONAL SEALING ACTION. SERVICE STOPS SHALL OPEN COUNTER-CLOCKWISE.

BOXES SHALL BE CAST IRON SCREW TYPE.

CURB BOXES SHALL BE:

- ARCH-4" DIAMETER BY 7" HEIGHT INSIDE
- SHAFT DIAMETER = 2 1/2"
- FOR CURB STOPS THRU 2" SCREW STYLE
- CAST IRON "WATER" COVER AND RING WITH BRASS PENIKOGON BOLT 47" - 65" RANGE.

UTILITY POLE HOLDING

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE HOLDING AND/OR MOVING OF ANY UTILITY POLES WITH THE OWNERS(S) OF SAID POLES. ALL COSTS INCURRED FOR HOLDING AND/OR MOVING POLES(S) SHALL BE INCLUDED IN THE BID PRICE FOR PIPE INSTALLED. IT WILL BE THE ULTIMATE RESPONSIBILITY OF THE CONTRACTOR AND OWNER OF THE UTILITY POLES TO MAKE THE DECISION OF HOLDING OR MOVING POLES.

RECONNECTION OF SERVICES

ALL EXISTING SERVICES SHALL BE KEPT IN OPERATION UNTIL TRANSITION TO NEW SERVICES. UPON ACCEPTANCE OF INSTALLED WATER MAINS, SERVICES SHALL BE DISCONNECTED FROM EXISTING WATER MAINS AND RECONNECTED TO PROPOSED WATER MAINS AT SIMILAR LOCATIONS.

THIS WORK SHALL INCLUDE A NEW TAPPING SADDLE AND CORPORATION STOP, A LENGTH OF 1 INCH COOPER SERVICE (OR LARGER TO MATCH EXISTING), A NEW SERVICE STOP WITH BOX AND A CONNECTION FITTING TO THE EXISTING SERVICE. SHALL BE JACKED OR DRILLED, NO OPEN CUTTING OF PAVEMENT WILL BE ALLOWED. REMOVAL OF EXISTING SERVICE STOP WITH BOX SHALL BE INCLUDED.

THE PROPERTY OWNERS SHALL BE NOTIFIED BY FLIER DELIVERED 24 HOURS IN ADVANCE OF THEIR WATER DISCONNECTION/RECONNECTION WORK. SHALL BE COMPLETED IN ONE WORKING DAY, WITHOUT NIGHT-TIME DISCONNECTION. PAYMENT FOR THIS WORK SHALL BE MADE FOR PER EACH RECONNECTION UNDER THE CONTRACT.

ITEM 638, RECONNECTION OF WATER SERVICE (SAME SIDE OF ROAD)

ITEM 638, RECONNECTION OF WATER SERVICE (CROSSING UNDER PAVEMENT)

ABANDONMENT OF WATERLINE

- 1) ALL FIRE HYDRANTS AND PIPING SHALL BE REMOVED UP TO AND INCLUDING THE WATCH VALVE AND VALVE BOX.
- 2) REMOVE ALL MAIN LINE VALVES, INCLUDING VALVE BOXES.
- 3) PLUG OR CAP ALL WATERLINES WHERE ANY REMOVAL HAS TAKEN PLACE LEAVING AN OPEN END OF PIPING OR FITTING.
- 4) PLUG OR CAP EXISTING WATERLINES WHERE NOTED ON THE PLANS AND AFTER PROPOSED WATERLINES ARE ACTIVATED.
- 5) THE CITY OF OREGON WATER DEPARTMENT SHALL HAVE FIRST SALVAGE RIGHTS TO VALVES AND HYDRANTS.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED UNDER THE CONTRACT ITEM 638 ABANDONMENT OF EXISTING WATERLINES.

DRAWN	A.L.B.	SCALE	AS SHOWN
CHECKED			
DATE	09/30/15		

WATERLINE NOTES & DETAILS

CITY OF OREGON

