

GENERAL:		EARTHWORK:		WATER SYSTEM:		WATER SERVICE LINES:			
<p>1. ALL CONSTRUCTION, MATERIAL, INSTALLATION, AND TESTING SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TOGETHER WITH THE COUNTY'S MINIMUM DESIGN STANDARDS AND SPECIFICATIONS AS APPLICABLE. IF F.D.O.T. MATERIAL IS SPECIFIED, IT SHALL IMPLY THAT THEIR CONSTRUCTION PROCEDURES SHALL BE FOLLOWED.</p> <p>2. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER PROPERTY AND SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED DURING CONSTRUCTION AND SHALL REPAIR SAID DAMAGES AT HIS EXPENSE.</p> <p>3. THE ENGINEER WILL HOLD A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF ANY CONSTRUCTION AND INCLUDE A REPRESENTATIVE FROM THE RESPECTIVE ENGINEERING AND UTILITY DEPARTMENTS, THE CONTRACTOR, OWNER, AND OTHER APPLICABLE AGENCIES.</p> <p>4. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL "OTHER" UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE OTHER UTILITIES, THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY OWNERS TO RESOLVE UTILITY CONFLICTS AND UTILITY ADJUSTMENTS, AS REQUIRED.</p> <p>5. ALL DEVIATIONS FROM PLANS ARE TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION AND FOR ALL INSPECTIONS AND TESTING.</p> <p>6. THE ENGINEER MUST BE GIVEN A MINIMUM 48 HOURS NOTICE PRIOR TO START OF CONSTRUCTION AND FOR ALL INSPECTIONS AND TESTING.</p> <p>7. CONTRACTOR IS RESPONSIBLE TO PREPARE COMPLETE AS-BUILT PLANS WITH INFORMATION RELATIVE TO LOCATIONS AND ELEVATIONS OF EXISTING SERVICES, FITTINGS, LENGTHS OF PIPE, TOP OF WATER MAIN ELEVATIONS, AND ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE AND SUBMITTED TO THE DESIGN ENGINEERING FIRM PRIOR TO FINAL ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE A REGISTERED LAND SURVEYOR AND SHOWN ON A SEALED AS-BUILT PLAN ALONG WITH AN AUTOCADD DISK.</p> <p>8. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES AND IMPROVEMENTS FROM DAMAGES, DISRUPTION, OR SERVICE, OR DESTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.</p> <p>9. WALL REINFORCEMENT AND THICKNESS FOR PRECAST STRUCTURES SHALL BE IN ACCORDANCE WITH ASTM C478. MINIMUM WALL THICKNESS SHALL BE 8" AND MIN 6" BASE EXTENSION OUTSIDE OF MANHOLE WALL.</p> <p>10. MORTAR USED TO SEAL THE PIPE INTO THE WALLS OF THE PRECAST STRUCTURES WILL BE NON-SHRINK GROUT AND WILL NOT CAUSE LEAKAGE IN OR OUT OF THE STRUCTURES. THE MAXIMUM OPENING THROUGH WALLS FOR PIPES SHALL BE THE MAXIMUM REQUIRED OUTSIDE DIAMETER PLUS 6".</p> <p>11. ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE AND SHALL REST ON A FIRM CAREFULLY GRADED SUBGRADE WHICH SHALL PROVIDE UNIFORM BEARING UNDER BASE.</p> <p>12. ALL JOINTS SHALL BE FURNISHED WATERTIGHT. NO PIPE SHALL BE COVERED UNTIL INSPECTED AND APPROVED BY THE ENGINEER AND OTHER APPLICABLE AUTHORITIES.</p> <p>13. ALL PIPE SHALL BE LAID IN A DRY TRENCH. ALL MUCK OR OTHER UNSTABLE MATERIAL ENCOUNTERED IN TRENCH BOTTOM SHALL BE REMOVED AND BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99, METHOD "C".</p> <p>14. SHOP DRAWINGS FOR ALL STRUCTURES AND MATERIALS TO BE USED ON THE PROJECT SHALL BE SUBMITTED TO THE DESIGN ENGINEER AND THE RESPECTIVE ENGINEER AND UTILITY DEPARTMENTS FOR APPROVAL PRIOR TO CONSTRUCTION OR INSTALLATION.</p> <p>15. CONTRACTOR TO CONTACT SUNSHINE STATE ONE-CALL OFFICE (1-800-432-4770) AND ALL LOCAL UTILITY COMPANIES FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION.</p> <p>16. EXISTING SECTION CORNERS AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE MAINTAINED BY THE CONTRACTOR AND BE RESET AFTER CONSTRUCTION UNDER CERTIFICATION BY A REGISTERED SURVEYOR.</p> <p>17. CONTRACTOR IS TO PREVENT INTRODUCTION OF DEBRIS OR DIRT INTO EXISTING STORM DRAIN AND / OR SANITARY SYSTEM AS A RESULT OF CONSTRUCTION ACTIVITIES. ALL LINES AND STRUCTURES SHALL BE CLEANED PRIOR TO FINAL INSPECTION AND ACCEPTANCE.</p> <p>18. LOCATION OF DRAINAGE AND SANITARY SEWER STRUCTURES GOVERN, ADJUST PIPE LENGTHS AS REQUIRED.</p> <p>19. THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" F.D.O.T. & B.C.T.E.D. STANDARDS SHALL BE USED CURRENT FOR THE SIGNAGE AND PAVEMENT MARKING REQUIREMENTS OF THE PROJECT.</p> <p>20. ALL UNDERGROUND UTILITY MAINS AND STRUCTURES FOR WATER, SEWER, GAS, IRRIGATION, DRAINAGE, TELEPHONE, POWER, CABLE TV, AND OTHERS MUST BE INSTALLED, INSPECTED, TESTED, AND APPROVED PRIOR TO ANY SUBGRADE CONSTRUCTION.</p> <p>21. ALL PERMANENT GRASS AREAS ARE TO RECEIVE A 4" MUCK BLANKET OR TOPSOIL TREATMENT.</p> <p>22. ALL CURB AND GUTTER SHALL HAVE A LIMEROCK FOUNDATION OR "PAD" OF AT LEAST FOUR INCHES (4") THICKNESS, COMPACTED TO 98% OF MAXIMUM DENSITY PER AASHTO (T-180).</p> <p>23. A MINIMUM 10' SEPARATION BETWEEN ALL UTILITIES SHALL BE MAINTAINED.</p> <p>24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE SAFETY PRECAUTIONS DURING EXCAVATION AND TRENCHING OPERATIONS AS REQUIRED BY THE "TRENCH SAFETY ACT" AND THE O.S.H.A. PART "P".</p> <p>25. ALL INSTALLATIONS, MATERIALS, AND WORKMANSHIP IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE B.C.E.D. "MINIMUM STANDARDS".</p>		<p>1. 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IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE THE SITE IN ACCORDANCE WITH THE OWNER'S GEOTECHNICAL REPORT FOR SUBSURFACE EXPLORATION AND RECOMMENDATIONS.</p> <p>3. THE ENTIRE WIDTH OF THE RIGHT-OF-WAY SHALL BE COMPLETELY DEMUCKED BEFORE CONSTRUCTION OF THE ROADWAY BEGINS. NO MATERIAL OF CLASSES A-5, A-7, OR A-8 SHALL BE ALLOWED. ALL MATERIAL SUPPORTING THE ROADWAY AND SHOULDERS SHALL BE STABILIZED TO HAVE A MINIMUM LBR OF 40. SUBGRADE SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99 METHOD "C".</p> <p>4. WHEREVER EXCAVATIONS FOR UTILITIES ARE MADE BELOW THE GRADES INDICATED ON THE PLANS, GRANULAR MATERIAL FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL SHALL BE USED TO RESTORE THE AREA TO THE PROPER GRADE, AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99 METHOD "C".</p> <p>5. AREAS TO BE COMPACTED SHALL BE MOISTENED AND COMPACTED BY EITHER ROLLING, TAMING, OR ANY OTHER METHOD APPROVED BY THE ENGINEER. IN ORDER TO OBTAIN THE DESIRED DENSITY, THE ENGINEER SHALL REJECT ALL COMPACTED AREAS PRIOR TO FURTHER CONSTRUCTION OPERATIONS.</p> <p>6. PRIOR TO BACKFILLING AROUND STRUCTURES, THE AREAS SHALL BE CLEAN OF ALL TRASH AND DEBRIS OF ANY DESCRIPTION, UNLESS DIRECTED BY THE ENGINEER TO BE LEFT IN PLACE. SUCH AS SIGNS AND BRACING. BACKFILL SHALL BE HAND TAMPED IN 12" COMPACTED LIFTS.</p> <p>7. THE EXISTING ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF THE PROVISION OF THE PROPOSED WATER MAINS AND SANITARY SEWERS. NO WAY SHOULD INDICATE ELEVATION AT ANY POINT OTHER THAN THAT SHOWN.</p>		<p>1. ALL WORKMANSHIP AND MATERIAL SHALL CONFORM TO BCWS STANDARDS, THE COLOR CODING AND APPLICABLE DETAIL REQUIREMENTS FOR WATER MAINS AND REHABILITATION SERVICES STANDARDS. NO PHYSICAL CONNECTION OF NEW WATER MAINS TO ACTIVE WATER MAINS SHALL BE MADE. UNLESS SUCH TIME THAT THE NEW MAINS ARE CONFIRMED TO BE BACTERIOLOGICALLY CLEAN AND FREE OF CONTAMINATION. THE CONTRACTOR SHALL OBTAIN TEMPORARY CONNECTIONS OF NEW MAINS TO ACTIVE MAINS FOR ITS EXHAUSTIVE TESTING AND FLUSHING. SUCH CONNECTIONS SHALL BE MADE BY A METHOD DEMOED ACCEPTABLE TO THE UTILITY PROVIDING SERVICE.</p> <p>2. ALL WATER MAINS SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 150 PSI AND MAINTAINED UNDER PRESSURE AND SPOUT JOINTS.</p> <p>3. THE WATER SYSTEM SHALL BE HYDROSTATICALLY PRESSURE TESTED AND DISINFECTED PER AWWA / ANSI C600-05, C621-05 AND TESTED FOR A MINIMUM PERIOD OF 2 HOURS AT A MINIMUM STARTING PRESSURE OF 150 PSI IN ACCORDANCE WITH AWWA STANDARD C600-05 WITH AN ALLOWABLE LEAKAGE AS DETERMINED BY THE FOLLOWING FORMULA:</p> <p>$Q = LD \times \text{SQUARE ROOT OF } P / 148,000$ WHERE: Q = QUANTITY OF MAKEUP WATER IN GALLONS / HOUR L = LENGTH OF PIPE SECTION BEING TESTED IN FEET D = NOMINAL DIAMETER OF THE PIPE IN INCHES P = AVERAGE TEST PRESSURE IN PSI HYDROSTATIC TEST PRESSURE SHALL NOT VARY MORE THAN 5 PSI THROUGHOUT THE TEST. THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE BASED ON A MAXIMUM ALLOWABLE LEAKAGE OF 100 GALLONS PER 1000 FEET OF PIPE PER HOUR. THRUST BLOCKS AS SHOWN ON THE DETAIL SHEETS SHALL BE PROVIDED AT ALL BENDS (UNLESS NOTED OTHERWISE) ON ALL RESTRAINT JOINTS. THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE UTILITY SHALL BE FOLLOWED. THRUST BLOCKS WILL BE ALLOWED EXCEPT FOR FIRE HYDRANTS.</p> <p>6. BACTERIOLOGICAL TESTING SHALL BE IN ACCORDANCE WITH AWWA / ANSI C601-05 LATEST REVISION.</p> <p>8. ALL PVC PIPE SHALL BE SUITABLE FOR USE AS A PRESSURE PIPE. THE PIPE SHALL BE TESTED TO THE MINIMUM REQUIREMENTS OF AWWA C900-97 POLYVINYL CHLORIDE (PVC) PRESSURE PIPE, CLASS 150 PIPE SHALL CONFORM TO REQUIREMENT OF SDR 18.</p> <p>10. ALL PVC PIPE SHALL BE SUITABLE FOR USE AS A PRESSURE PIPE. THE PIPE SHALL BE TESTED TO THE MINIMUM REQUIREMENTS OF AWWA C900-97 POLYVINYL CHLORIDE (PVC) PRESSURE PIPE, CLASS 150 PIPE SHALL CONFORM TO REQUIREMENT OF SDR 18.</p> <p>11. PVC PIPE SHALL BE DELIVERED TO THE JOB SITE FROM THE FACTORY AND NOT STORED AT THE JOB SITE IN PALLETIZED UNITS OR BUNDLES TO PREVENT UNNECESSARY DEFLECTION PRIOR TO INSTALLATION. EACH PALLETIZED UNIT SHALL BE SIZED TO LIMIT THE STACKING OF PIPE NOT MORE THAN SIXTY (60) INCHES HIGH OR THIRTY (30) INCHES LONG.</p> <p>12. CARE SHALL BE TAKEN DURING THE TRANSPORTING OF THE PIPE TO INSURE THAT THE BINDING AND THE DOWN METHODS DO NOT DAMAGE OR DEFLECT THE PIPE. THE MANHOLES, PIPE, OR OTHER DEFLECTED, OR OTHERWISE DAMAGED DURING SHIPPING WILL BE REJECTED.</p> <p>13. PVC MAINS SHALL BE LAID WITH A MINIMUM OF 36" CLEAR COVER.</p> <p>14. FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON PRESSURE, CLASS 350 THROUGH 12". ALL FITTINGS SHALL BE CEMENT MORTAR LINED AND BE THE SAME AS PIPE IN ACCORDANCE WITH AWWA/ANSI C110/A21.10-98.</p> <p>15. PVC AND D.I.P. PIPE SHALL BE DEFLECTED NO MORE THAN ONE HALF (1/2) THE MANUFACTURER'S RECOMMENDATION.</p> <p>16. JOINTS FOR BELL AND SPOUT PVC/DIP PIPE AND FITTINGS SHALL BE MECHANICAL OR RUBBER GASKET (ETHER ON SPOUT OR JOINT) IN BELL/COMPRESSION TYPE AS SPECIFIED IN ACCORDANCE WITH AWWA/ANSI STANDARD C110/A21.10-98. SPECIAL FITTINGS AND JOINTS SHALL BE CONSIDERED FOR SPECIFIC INSTALLATION.</p> <p>17. ALL WATER MAINS SHALL HAVE CONTINUOUS DETECTOR TAPE. 18 INCHES BELOW GRADE ALONG ALL WATER MAINS. DETECTOR TAPE SHALL HAVE BLUE DYE-UP A 14 GAUGE WIRE MULTI STRAND WIRE. THE DETECTOR TAPE SHALL BE NON-CONDUCTIVE WATER MAIN TO FACILITATE FUTURE LOCATION. AN EXTRA 4" OF WIRE SHALL BE PROVIDED AT BLOWOFFS, FIRE HYDRANTS, ETC.</p> <p>18. POLYETHYLENE ENCASEMENT/WRAP SHALL BE INSTALLED ON ALL IRON PIPES INCLUDING VALVES, FITTINGS, SLEEVES, HYDRANTS, ETC.</p> <p>19. DUCTILE IRON PIPE SHALL BE CLASS 350 AND SHALL BE CEMENT LINED AND SEALCOATED IN ACCORDANCE WITH AWWA/ANSI C110/A21.10-98. WATER MAINS SHALL BE LAID WITH A MINIMUM 30" CLEAR COVER. DUCTILE IRON FITTINGS SHALL BE CLASS 350 THROUGH 12" AND CLASS 250 IN SIZES 16" AND LARGER. ALL FITTINGS SHALL BE CEMENT LINED AND SEALCOATED THE SAME AS PIPE IN ACCORDANCE WITH AWWA / ANSI STANDARDS C110/A21.4-95 AND C110/A21.53-00. NEOPRENE GASKETS SHALL BE USED.</p> <p>20. ALL WATER MAINS SHALL BE BEDDED AND BACKFILLED PER STANDARD TRENCH DETAILS.</p> <p>21. CONTRACTOR IS RESPONSIBLE FOR THE EXISTING ON-SITE WATER SYSTEM UNTIL FINAL INSPECTION, CERTIFICATION AND APPROVAL BY THE UTILITY.</p> <p>22. CONTRACTOR IS RESPONSIBLE WHETHER, OR NOT NOTED ON PLANS FOR CAUSING OR LOWERING OF EXISTING GATE VALVE BOXES, METER BOXES, ETC. THAT MAY NEED ADJUSTMENT TO MEET PROPOSED FINISH GRADES.</p> <p>23. ALL EXISTING WATER MAINS AND COMPONENTS DESIGNATED FOR REMOVAL ARE THE PROPERTY OF THE UTILITY. MATERIALS SHALL BE REMOVED FROM THE GROUND AS CAREFULLY AS POSSIBLE AND SALVAGED FOR UTILITY SHOULD. UTILITY REFUSE SAID WATER COMPONENTS, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR OFF-SITE DISPOSAL.</p> <p>24. CONTRACTOR TO REFER TO ARCHITECTURAL (PLUMBING) PLANS TO CONFIRM LOCATIONS AND ELEVATIONS OF ALL WATER FIRE AND SEWER BUILDING CONNECTIONS.</p> <p>25. DEVELOPER IS RESPONSIBLE TO DEDICATE UTILITY EASEMENTS TO THE UTILITY FOR ALL PUBLIC WATER MAINS THAT ARE TO BE ULTIMATELY OWNED AND MAINTAINED BY THE UTILITY. EASEMENTS TO BE GRANTED UPON CONCLUSION OF THE WORK FROM AS-BUILT PIPE LOCATIONS, UNLESS OTHERWISE REQUIRED BY THE UTILITY.</p> <p>26. CONTRACTOR IS RESPONSIBLE TO DELIVER AS-BUILT WATER PLANS, MYLAR, AND COMPUTER DISK TO THE ENGINEER OF RECORD PRIOR TO FINAL CERTIFICATION TO THE UTILITY. AS-BUILTS SHALL BE SIGNED AND SEALED BY A REGISTERED FLORIDA SURVEYOR.</p> <p>27. MAINTAIN A 10-FOOT HORIZONTAL CLEARANCE BETWEEN ALL UTILITIES AND BUILDING STRUCTURES, UNLESS OTHERWISE SHOWN ON THE PLANS.</p> <p>28. LANDSCAPING SHALL NOT BE INSTALLED WITHIN 6' OF ALL WATER MAINS AND SERVICES OR WITHIN A 5' RADIIUS OF ALL FIRE HYDRANTS, UNLESS APPROVED BY THE ENGINEER.</p> <p>29. WATER MAINS SHALL BE DEFLECTED OVER DRAINAGE AT ALL CONFLICTS.</p> <p>30. ALL WATER SERVICES SHALL TERMINATE A MINIMUM OR 5' FROM BUILDING.</p> <p>31. UNDERGROUND WATER MAINS AND FIRE HYDRANTS SHALL BE INSTALLED AND OPERATIONAL PRIOR TO BUILDING CONSTRUCTION AS REQUIRED BY THE LOCAL FIRE DEPARTMENT AND THE SOUTH FLORIDA BUILDING CODE, LATEST REVISION.</p> <p>32. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 82-555.320, F.A.C.</p>		<p>1. WATER SERVICES SHALL BE POLYETHYLENE TUBING (PE 3408) COMPLYING WITH APPLICABLE REQUIREMENTS FOR PE, AWWA C802-01 HIGH MOLECULAR WEIGHT PLASTIC MATERIAL ASTM C966 (250 PSI RATING, CTS-200) SDR 9. SERVICE PIPE SHALL BE INSTALLED AS A SINGLE RUN WITHOUT UNIONS.</p> <p>2. JOINTS FOR TUBING SHALL BE OF THE COMPRESSION TYPE UTILIZING A TOTALLY CONFINED GRIOT SEAL AND COUPLING NUT. STAINLESS STEEL TUBE STIFFENER INSERTS SHALL ALSO BE USED FOR TUBING SERVICES.</p> <p>3. SERVICE LINES SHALL BE MARKED WITH 2" X 4" POST PAINTED BLUE.</p> <p>4. ALL WATER SERVICES SHALL BE BEDDED AND BACKFILLED PER STANDARD TRENCH DETAIL.</p> <p>5. PIPE DEFLECTION SHALL BE NO MORE THAN ONE HALF OF THE MANUFACTURER'S RECOMMENDATION.</p> <p>6. MINIMUM COVER SHALL BE 24".</p> <p>7. ALL WATER SERVICE LINES UNDER PAVED AREAS SHALL BE SLEEVED IN SCHEDULE 40 PVC AND SHALL BE OF ONE SINGLE LENGTH WITHOUT UNIONS.</p> <p>8. FORD STAINLESS INSERTS ARE REQUIRED FOR PLASTIC PIPE.</p>		<p>1. METER VALVES (ASTM B-62 LATEST) SHALL BE FORD ANGLE STOPS MODEL #W43-342W FOR SINGLE SERVICES AND FORD MODEL #W43-42W FOR DOUBLE SERVICES OR APPROVED EQUAL.</p> <p>2. CURB STOPS SHALL BE OF THE INVERTED KEY TYPE WITH TEE-HEAD. SHUT OFF CURB STOP SHALL BE MADE OF BRASS ALLOY IN ACCORDANCE WITH ASTM SPECIFICATION B62-82A.</p> <p>3. METER VALVES AND CORPORATION STOPS (FORD BALL CORP. NO. FC 202) SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM SPECIFICATION B62-82A WITH EPOXY COATED DUCTILE IRON BODY. STAINLESS STEEL SERVICE SADDLES BY FORD.</p> <p>4. INLET TRENCH FOR METER VALVES AND CURB STOPS SHALL BE AWWA TAPER THREAD IN ALL SIZES IN ACCORDANCE WITH ANSI / AWWA STANDARD C802-01. OUTLET CONNECTIONS SHALL HAVE A COMPRESSION TYPE FITTING SAME AS THE SERVICE LINE.</p> <p>5. CONTRACTOR TO REVIEW WATER DETAILS TO DETERMINE EXTENT OF JURISDICTION OF WATER SERVICE AND METER MATERIALS (METERS, ETC.) SUPPLIED AND INSTALLED BY UTILITY.</p>	
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IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE THE SITE IN ACCORDANCE WITH THE OWNER'S GEOTECHNICAL REPORT FOR SUBSURFACE EXPLORATION AND RECOMMENDATIONS.</p> <p>3. THE ENTIRE WIDTH OF THE RIGHT-OF-WAY SHALL BE COMPLETELY DEMUCKED BEFORE CONSTRUCTION OF THE ROADWAY BEGINS. NO MATERIAL OF CLASSES A-5, A-7, OR A-8 SHALL BE ALLOWED. ALL MATERIAL SUPPORTING THE ROADWAY AND SHOULDERS SHALL BE STABILIZED TO HAVE A MINIMUM LBR OF 40. SUBGRADE SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99 METHOD "C".</p> <p>4. WHEREVER EXCAVATIONS FOR UTILITIES ARE MADE BELOW THE GRADES INDICATED ON THE PLANS, GRANULAR MATERIAL FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL SHALL BE USED TO RESTORE THE AREA TO THE PROPER GRADE, AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99 METHOD "C".</p> <p>5. AREAS TO BE COMPACTED SHALL BE MOISTENED AND COMPACTED BY EITHER ROLLING, TAMING, OR ANY OTHER METHOD APPROVED BY THE ENGINEER. IN ORDER TO OBTAIN THE DESIRED DENSITY, THE ENGINEER SHALL REJECT ALL COMPACTED AREAS PRIOR TO FURTHER CONSTRUCTION OPERATIONS.</p> <p>6. PRIOR TO BACKFILLING AROUND STRUCTURES, THE AREAS SHALL BE CLEAN OF ALL TRASH AND DEBRIS OF ANY DESCRIPTION, UNLESS DIRECTED BY THE ENGINEER TO BE LEFT IN PLACE. SUCH AS SIGNS AND BRACING. BACKFILL SHALL BE HAND TAMPED IN 12" COMPACTED LIFTS.</p> <p>7. THE EXISTING ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF THE PROVISION OF THE PROPOSED WATER MAINS AND SANITARY SEWERS. NO WAY SHOULD INDICATE ELEVATION AT ANY POINT OTHER THAN THAT SHOWN.</p>		<p>1. MECHANICALS OR RUBBER GASKET (ETHER ON SPOUT OR JOINT) AT EACH JOINT WITH AN ELASTOMERIC RING. THE BELL SHALL COMPLY WITH AN INTEGRITY SECTION WITH AN ELASTOMERIC RING WHICH MEETS THE REQUIREMENTS OF ASTM A-477 STANDARD SPECIFICATIONS FOR ELASTOMERIC SEALS (GASKETS FOR JOINING PLASTIC PIPE). THE WALL THICKNESS IN THE BELL SECTION SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3139.</p> <p>2. PVC PIPE SHALL BE DELIVERED TO THE JOB SITE FROM THE FACTORY AND NOT STORED AT THE JOB SITE IN PALLETIZED UNITS OR BUNDLES TO PREVENT UNNECESSARY DEFLECTION PRIOR TO INSTALLATION. EACH PALLETIZED UNIT SHALL BE SIZED TO LIMIT THE STACKING OF PIPE NOT MORE THAN SIXTY (60) INCHES HIGH OR THIRTY (30) INCHES LONG.</p> <p>3. CARE SHALL BE TAKEN DURING THE TRANSPORTING OF THE PIPE TO INSURE THAT THE BINDING AND THE DOWN METHODS DO NOT DAMAGE OR DEFLECT THE PIPE. THE MANHOLES, PIPE, OR OTHER DEFLECTED, OR OTHERWISE DAMAGED DURING SHIPPING WILL BE REJECTED.</p> <p>4. PVC MAINS SHALL BE LAID WITH A MINIMUM OF 36" CLEAR COVER.</p> <p>5. FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON PRESSURE, CLASS 350 THROUGH 12". ALL FITTINGS SHALL BE CEMENT MORTAR LINED AND BE THE SAME AS PIPE IN ACCORDANCE WITH AWWA/ANSI C110/A21.10-98.</p> <p>6. PVC AND D.I.P. PIPE SHALL BE DEFLECTED NO MORE THAN ONE HALF (1/2) THE MANUFACTURER'S RECOMMENDATION.</p> <p>7. JOINTS FOR BELL AND SPOUT PVC/DIP PIPE AND FITTINGS SHALL BE MECHANICAL OR RUBBER GASKET (ETHER ON SPOUT OR JOINT) IN BELL/COMPRESSION TYPE AS SPECIFIED IN ACCORDANCE WITH AWWA/ANSI STANDARD C110/A21.10-98. SPECIAL FITTINGS AND JOINTS SHALL BE CONSIDERED FOR SPECIFIC INSTALLATION.</p> <p>8. ALL WATER MAINS SHALL HAVE CONTINUOUS DETECTOR TAPE. 18 INCHES BELOW GRADE ALONG ALL WATER MAINS. DETECTOR TAPE SHALL HAVE BLUE DYE-UP A 14 GAUGE WIRE MULTI STRAND WIRE. THE DETECTOR TAPE SHALL BE NON-CONDUCTIVE WATER MAIN TO FACILITATE FUTURE LOCATION. AN EXTRA 4" OF WIRE SHALL BE PROVIDED AT BLOWOFFS, FIRE HYDRANTS, ETC.</p> <p>9. POLYETHYLENE ENCASEMENT/WRAP SHALL BE INSTALLED ON ALL IRON PIPES INCLUDING VALVES, FITTINGS, SLEEVES, HYDRANTS, ETC.</p> <p>10. DUCTILE IRON PIPE SHALL BE CLASS 350 AND SHALL BE CEMENT LINED AND SEALCOATED IN ACCORDANCE WITH AWWA/ANSI C110/A21.10-98. WATER MAINS SHALL BE LAID WITH A MINIMUM 30" CLEAR COVER. DUCTILE IRON FITTINGS SHALL BE CLASS 350 THROUGH 12" AND CLASS 250 IN SIZES 16" AND LARGER. ALL FITTINGS SHALL BE CEMENT LINED AND SEALCOATED THE SAME AS PIPE IN ACCORDANCE WITH AWWA / ANSI STANDARDS C110/A21.4-95 AND C110/A21.53-00. NEOPRENE GASKETS SHALL BE USED.</p> <p>11. ALL EXISTING WATER MAINS SHALL BE BEDDED AND BACKFILLED PER STANDARD TRENCH DETAILS.</p> <p>12. CONTRACTOR IS RESPONSIBLE FOR THE EXISTING ON-SITE WATER SYSTEM UNTIL FINAL INSPECTION, CERTIFICATION AND APPROVAL BY THE UTILITY.</p> <p>13. CONTRACTOR IS RESPONSIBLE WHETHER, OR NOT NOTED ON PLANS FOR CAUSING OR LOWERING OF EXISTING GATE VALVE BOXES, METER BOXES, ETC. THAT MAY NEED ADJUSTMENT TO MEET PROPOSED FINISH GRADES.</p> <p>14. ALL EXISTING WATER MAINS AND COMPONENTS DESIGNATED FOR REMOVAL ARE THE PROPERTY OF THE UTILITY. MATERIALS SHALL BE REMOVED FROM THE GROUND AS CAREFULLY AS POSSIBLE AND SALVAGED FOR UTILITY SHOULD. UTILITY REFUSE SAID WATER COMPONENTS, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR OFF-SITE DISPOSAL.</p> <p>15. CONTRACTOR TO REFER TO ARCHITECTURAL (PLUMBING) PLANS TO CONFIRM LOCATIONS AND ELEVATIONS OF ALL WATER FIRE AND SEWER BUILDING CONNECTIONS.</p> <p>16. DEVELOPER IS RESPONSIBLE TO DEDICATE UTILITY EASEMENTS TO THE UTILITY FOR ALL PUBLIC WATER MAINS THAT ARE TO BE ULTIMATELY OWNED AND MAINTAINED BY THE UTILITY. EASEMENTS TO BE GRANTED UPON CONCLUSION OF THE WORK FROM AS-BUILT PIPE LOCATIONS, UNLESS OTHERWISE REQUIRED BY THE UTILITY.</p> <p>17. CONTRACTOR IS RESPONSIBLE TO DEL</p>					