

1. A MINIMUM HORIZONTAL SEPARATION OF SIX FEET IS REQUIRED BETWEEN SEWER MAINS AND SERVICES AND WATER, FIRELINE, AND RECLAIMED MAINS AND SERVICES. PROTECTION SHALL BE IN ACCORDANCE WITH MAG SECT 610.5.5 WITH THE EXCEPTION DUCTILE IRON PIPE IS NOT ALLOWED FOR SEWER CONSTRUCTION.
2. ALL SEWER TAPS SHALL BE WYE, WYE SADDLE, OR TEE.
3. CONNECTIONS TO EXISTING SEWER MAINS SHALL BE ACCOMPLISHED BY MACHINE TAPPING, UTILIZING A SADDLE, OR BY CONSTRUCTION OF A MANHOLE.
4. SEWER TAPS SHALL HAVE 4-1/2 FEET MINIMUM COVER AT PROPERTY LINE. TO RAISE THE TAP FROM THE MAINS DEEPER THAN 6 FEET AND LESS THAN 12 FEET, THE WYE AND 1/8 BEND SHALL BE SET AT A 45 DEGREE ANGLE FROM HORIZONTAL AND A SHORT PIECE OF STRAIGHT PIPE SHALL BE PLACED ON THE 1/8 BEND. ANOTHER 1/8 BEND IS PLACED AT THE OTHER END OF THE SHORT PIPE TO BRING THE TAP TO APPROPRIATE GRADE AT THE PROPERTY LINE. FOR MAINS 12 FEET OR DEEPER, REFER TO C-410.
5. ALL SEWER SERVICE CONNECTIONS SHALL BE EXTENDED A SUFFICIENT DISTANCE BEYOND STREET RIGHT-OF-WAY LINES TO CLEAR ALL FACILITIES TO BE INSTALLED IN PUBLIC UTILITY EASEMENTS WHICH PARALLEL THE STREET RIGHT-OF-WAY. REFER TO MAG STD DTL 440, TYPE A, FOR ADDITIONAL REQUIREMENTS.
6. ALL SEWER PIPE SHALL BE CONSTRUCTED WITH BEDDING CONFORMING TO C-402. ALL SEWER LINES 10 FEET IN DEPTH AND GREATER SHALL BE VCP PIPE, OR AS SPECIFIED ON THESE PLANS. LOCATOR WIRE AND IDENTIFICATION TAPE SHALL BE INSTALLED IN ACCORDANCE WITH C-408.
7. PIPE BACKFILL SHALL BE 1/2 SACK CLSM IN ACCORDANCE WITH MAG SECTION 728, UNLESS OTHERWISE DETAILED AND APPROVED ON THESE PLANS. PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD DTL 200, T-TOP.
8. ALL MANHOLES SHALL BE 5-FOOT DIAMETER WITH 30-INCH DIAMETER COVERS. MANHOLES SERVING PUBLIC SEWER MAINS 15-INCH DIAMETER AND LARGER SHALL BE INSTALLED WITH CORROSION PROTECTIVE MATERIALS PER LIST OF APPROVED PRODUCTS. "ONE-OFF" PUBLIC MANHOLES (FIRST MANHOLE UP-STREAM OF 15-INCH DIAMETER AND LARGER SEWER MAINS) SHALL ALSO USE CORROSION-PROTECTIVE MATERIALS. FOR SEWER MAINS LESS THAN 15-INCH, MANHOLES MAY BE INSTALLED USING STANDARD CONCRETE MATERIALS PER DETAIL 420 WITH CAST-IN-PLACE BASES.
9. CONCRETE MANHOLES CONSTRUCTED IN ARTERIAL STREETS SHALL BE COATED WITH A CORROSION-PROTECTIVE COATING APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. COATING IS ONLY REQUIRED ON THE CONCRETE AND GROUTED SURFACES. REFER TO LIST OF

APPROVED PRODUCTS FOR ALLOWABLE CORROSION-PROTECTIVE COATING SYSTEMS. COATED SURFACES SHALL BE HOLIDAY / SPARK TESTED TO VERIFY A CONTINUOUS, VOID-FREE LINING SYSTEM HAS BEEN INSTALLED.

10. CORROSION PROTECTIVE MANHOLES SHALL INCLUDE COMPOSITE FRAMES AND COVERS, COMPOSITE ADJUSTMENT RINGS, COMPOSITE OR POLYMER CONCRETE CONE AND RISER SECTIONS AND CAST-IN-PLACE BASES WITH APPROVED PROTECTIVE COATING. REFER LIST OF APPROVED PRODUCTS, SUPPLEMENTS TO MAG SECTIONS 345 AND 625, AND DETAILS C-400 AND C-401. CORROSION-PROTECTIVE MANHOLES AND MATERIALS USED SHALL BE AS SPECIFIED ON THE PLANS AND/OR SPECIAL PROVISIONS.
11. MANHOLES SERVING PUBLIC SEWER LINES 12-INCH AND SMALLER AND NOT WITHIN ARTERIAL STREETS SHALL BE COATED WITH A LATEX INSECTICIDE PAINT APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO THE CITY'S LIST OF APPROVED PRODUCTS FOR ALLOWABLE INSECTICIDE COATING PRODUCTS. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH US ENVIRONMENTAL PROTECTION AGENCY RECOMMENDATIONS STARTING FROM THE TOP OF THE MANHOLE TO A DEPTH OF 8 FEET BELOW.
12. MANHOLE FRAME AND COVERS SHALL BE ADJUSTED PER C-401. DEBRIS SHIELDS SHALL BE USED TO PREVENT DEBRIS FROM ENTERING SANITARY SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN SYSTEM FOR A MINIMUM OF ONE REACH IF DEBRIS ENTERS SYSTEM. ANY MISSING OR DEFECTIVE FRAMES OR COVERS SHALL BE REPORTED TO THE CITY IN WRITING DURING THE INITIAL LOCATION PROCESS TO ALLOW FOR TIMELY REPLACEMENT.
13. ALL NEW 8" AND LARGER SEWER LINES (INCLUDING STUB-OUTS) SHALL BE CLOSED CIRCUIT TV (CCTV) INSPECTED BY CITY CCTV VENDER PRIOR TO FINAL ACCEPTANCE. CITY PAYS FOR THE INITIAL INSPECTION IN ACCORDANCE WITH MAG SECTION 611. OWNER/CONTRACTOR MAY CONTRACT DIRECTLY WITH CITY'S CCTV VENDER OR USE THEIR PREFERRED NASSCO CERTIFIED CONTRACTOR FOR ADDITIONAL CCTV INSPECTION(S). SEWER LINES SHALL BE VACTORED AND WATER ADDED TO THE SYSTEM PRIOR TO CCTV INSPECTION, WITNESSED BY CITY INSPECTOR. ANY DEFECTS IN THE PIPE, CONSTRUCTION METHODS, OR INADEQUATE CLEANING SHALL BE CORRECTED AT NO ADDITIONAL COST TO THE CITY. PIPE DEFLECTIONS GREATER THAN ONE-INCH SHALL NOT BE ALLOWED. CITY CCTV VENDER SHALL INSPECT LINES AGAIN PRIOR TO END OF ONE-YEAR WARRANTY, PAID BY THE CITY.
14. A PLUG SHALL BE INSTALLED AT THE POINT(S) OF CONNECTION TO EXISTING LINES (OUTFALLS) AT THE START OF CONSTRUCTION PER C-403. EACH RESPECTIVE PHASE SHALL BE PLUGGED AND REMAIN PLUGGED UNTIL ACCEPTED BY THE CITY. NO FLOWS SHALL BE RELEASED INTO THE CITY SANITARY SEWER UNTIL ALL TESTS HAVE BEEN PASSED AND APPROVED BY THE CITY. FAILURE TO INSTALL PLUG MAY RESULT IN CLEANING EXISTING SEWER ONE-MILE IN EACH DIRECTION.