



**NOTES:**

1. PIPE MATERIAL AND FITTINGS SHALL BE SMOOTH WALL PVC SDR 28 CONFORMING TO CSA B182.2.
2. CONNECTIONS TO:
  - a) PVC PIPE  
THE CONTRACTOR SHALL BE REQUIRED TO USE ONLY PLANT MANUFACTURED TEES WHEN INSTALLING PRIVATE DRAIN CONNECTIONS. THE ANGULAR RISE OF THE CONNECTIONS SHALL BE BETWEEN 5 DEGREES AND 85 DEGREES. IF THE ANGLE OF THE RISER SECTIONS EXCEEDS 45 DEGREES, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL PVC COUPLING WITH STOP IMMEDIATELY BEYOND THE TEE FITTING. A SHORT SECTION OF PVC PIPE IS TO BE USED TO CONNECT THE COUPLING TO THE TEE FITTING. THE COUPLING SHALL REST DIRECTLY UPON THE BELL PORTION OF THE TEE FITTING.
  - b) CONCRETE PIPE  
PLANT MANUFACTURED TEES MAY CONSIST OF A CAST-IN-PLACE PLASTIC INSERT WITH AN INTEGRAL GASKET, A CONCRETE BELL OR AN ASBESTOS/CEMENT STOP COUPLING THAT IS PROPERLY GROUTED IN PLACE OR A DOUBLE BARRELLED CORE WITH A GLUED IN GASKET. FIELD FABRICATED TEES ON CONCRETE PIPE 375mm IN DIAMETER AND LARGER MAY CONSIST OF AN ASBESTOS/CEMENT STOP COUPLING OR A SANDED PVC FITTING THAT IS GROUTED IN PLACE WITH A NON-SHRINK GROUT AND GIVEN A MINIMUM CURING PERIOD OF 12 HOURS BEFORE LOADING OR BACKFILLING IS PERMITTED. STOP COUPLINGS MUST HAVE A MINIMUM 6mm MONOLITHIC STOPPER WITH AN INTEGRAL RUBBER GASKET THAT IS GLUED IN PLACE.  
  
"INSERTA TEES" FITTINGS OR SIMILAR PRODUCTS AS WELL AS STRAP-ON SADDLES WHICH REQUIRE COMPRESSION GASKETS WILL BE ALLOWED IF THE CONTRACTOR DEMONSTRATES TO THE SATISFACTION OF THE ENGINEER THAT A WATERTIGHT CONNECTION CAN BE ACHIEVED. ALL SUCH METHODS REQUIRE THAT THE PROPER SIZED CORE HOLE IS MACHINE DRILLED INTO THE PIPE.  
  
FIELD TAPPING OF CONCRETE PIPE SMALLER THAN 375mm IN DIAMETER IS NOT ALLOWED. SUCH A CONNECTION REQUIRES THE REMOVAL OF A SECTION OF PIPE AND THE INSTALLATION OF A PLANT MANUFACTURED CONCRETE TEE USING MECHANICAL COUPLINGS THAT CONFORM TO CSA STANDARD B602 TO ENSURE A SOUND AND WATERTIGHT JOINT.  
THE USE OF WINGED PVC FITTINGS OR BELL ENDS OF STANDARD PVC PIPE WILL NOT BE ALLOWED.
  - c) BRICK SEWERS  
THE CONTRACTOR SHALL BE ALLOWED TO FIELD TAP BRICK SEWERS. A NON-SHRINKING, FAST-SETTING GROUT MUST BE USED AND ALLOWED TO CURE FOR A MINIMUM OF 12 HOURS PRIOR TO BACKFILLING. A CONCRETE, ASBESTOS/CEMENT OR VITRIFIED CLAY FITTING IS REQUIRED. PLASTIC FITTINGS ARE NOT ACCEPTABLE WHEN TAPPING BRICK SEWERS. IN ALL CASES, THE CONTRACTOR SHALL ENSURE A SOUND AND WATERTIGHT JOINT.
  - d) ASBESTOS/CEMENT PIPE  
ALL TAPS INTO ASBESTOS/CEMENT PIPE SHALL REQUIRE THE USE OF A SADDLE WITH STAINLESS STEEL STRAPS (CROWLE FITTING) OR A MANUFACTURED TEE. THIS TEE SHALL BE CUT INTO THE EXISTING LINE AND SECURED WITH MECHANICAL COUPLINGS CONFORMING TO CSA STANDARD B602 TO ENSURE A SOUND AND WATERTIGHT JOINT. IF THE SADDLE IS USED, THE OPENING MUST BE MACHINE CUT TO EXACT DIMENSIONS. IN ALL CASES, A SOUND AND WATERTIGHT CONNECTION MUST BE ASSURED.
  - e) VITRIFIED CLAY PIPE  
WHEN VITRIFIED CLAY PIPE IS ENCOUNTERED, A SECTION OF THIS PIPE MUST BE REMOVED AND REPLACED WITH EITHER A VITRIFIED CLAY MANUFACTURED FITTING OR A PVC FITTING. MECHANICAL COUPLINGS CONFORMING TO CSA STANDARD B602 SHALL BE USED TO ENSURE A SOUND AND WATERTIGHT JOINT.
3. FOR SINGLE PRIVATE DRAIN CONNECTION REPLACEMENTS
  - a) BACKFILL WILL BE IN ACCORDANCE WITH CITY OF WINDSOR STANDARD SPECIFICATIONS S-24
  - b) SURFACE RESTORATION WILL BE IN ACCORDANCE WITH CITY OF WINDSOR STANDARD SPECIFICATIONS S-29

<b>CITY OF WINDSOR</b> ENGINEERING DEPARTMENT	
<b>PRIVATE DRAIN CONNECTION DETAILS</b>	
DR'N BY: S.S.	DATE: APRIL, 2004
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CH'KD BY: P.W.	PASSED BY: T.M.
CITY ENGINEER	
<b>AS-313</b>	