ALL SEWER PIPING SHALL BE TESTED IN ACCORDANCE WITH INDIANA CODE AND IDEM REGULATIONS.

AIR PRESSURE ACCEPTANCE TEST

1) CONTRACTOR SHALL PERFORM AN AIR PRESSURE TEST ON ALL GRAVITY SEWER PIPE IN ACCORDANCE WITH ASTM F-1417 SPECIFICATIONS.
2) THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS, LABOR, AND CONDUCT THE TEST UNDER OBSERVATION OF CITY PERSONAL.
3) TEST METHOD:

A. LOW PRESSURE AIR TEST METHOD SHALL BE THE TIME PRESSURE DROP METHOD. THE PRESSURE USED IN THE TEST SHALL BE THE STATED PRESSURE GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUND WATER ABOVE THE PIPE. THE TIME REQUIRED FOR THE PRESSURE IN THE TEST SECTION TO DROP 1.0 psig SHALL BE MEASURED USING A STOP WATCH. IF THE TIME EXCEEDS THE TIME DETERMINED FROM ASTM F-1417 THE SECTION FAILS.

FORCE MAIN LEAKAGE TESTS

1) CONTRACTOR SHALL FURNISH ALL EQUIPMENT, LABOR, AND MATERAILS NECESSARY FOR THE HYDROSTATIC PRESSURE AND LEAKAGE TEST ON ALL MAINS UNDER THE SUPERVISION OF CITY PERSONAL
2) TESTS PRESSURE SHALL BE 100 PSI OR 150% OF NORMAL PIPE OPERATING PRESSURE, WHICH EVER IS GREATER.
3) LEAKAGE TEST PRESSURE SHALL NOT BE LESS THAN THE MAXIMUM OPERATING PRESSURE OF THE PIPE. THE DURATION OF THE LEAKAGE TEST SHALL NOT BE LESS THAN TWO HOURS. ALLOWABLE LEAKAGE SHALL NOT EXCEED 9 gal/in OF PIPE DIAMETER PER MILE OF PIPE IN 24hr.

DEFLECTION TEST OF PVC SEWER PIPE

1) VERTICAL RING DEFLECTION - BEFORE FINAL ACCEPTANCE OF SEWER LINES, ALL SECTIONS OF SEWER PIPE 8-INCHES AND LARGER SPECIFIED DIAMETER SHALL BE MEASURED FOR VERTICAL RING DEFLECTION BY THE CONTRACTOR AND WITNESSED BY THE CITY . MAXIMUM DEFLECTION UNDER FULL LOAD SHALL NOT EXCEED 5% OF THE ASTM DESIGNATED AVERAGE INSIDE DIAMETER AS DETERMINED BY THE LABORATORY FOR THE SPECIFIED PIPING.
2) FAILURES - SHOULD A PIPE EXCEED THE ALLOWABLE DEFLECTION, THE CONTRACTOR SHALL REPLACE THOSE PIPES AND RETEST THE SECTION TESTING SHALL BE GO-NO-GO PULL THROUGH GAGES OF A TYPE APPROVED BY THE CITY. A METAL OR
3) EQUIPMENT- PLASTIC GAUGING RING OF DIAMETER EQUAL TO 95% OF THE SPECIFIED AVERAGE INSIDE PIPE DIAMETER SHALL BE WITH EACH GAGE.
4) THE CONTRACTOR SHALL FURNISH TESTING EQUIPMENT AND PERSONNEL AND PERFORM THE REQUIRED TESTS. TESTS MUST BE WITNESSED BY CITY PERSONNEL.
5) USE OF MECHANICAL PULLING DEVICES IS NOT PERMITTED.
6) DEFLECTION TESTING SHALL NOT BE PERFORMED UNTIL THE COMPLETED AND ACCEPTED TRENCH BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS.

City of Carmel Utilities STANDARD DETAILS		TITLE: TESTING SPECIFICATIONS
DATE: December 2011 DRAWING: CW13	SCALE: Not To Scale	DRAWN BY: Jones & Henry Engineers, Ltd. FORT WAYNE, INDIANA