FORCE MAIN SPECIFICATIONS

1. PLACE THRUST BLOCKS AT ALL FORCE MAIN BENDS.

2. TESTING: THE CONTRACTOR SHALL FURNISH ALL FACILITIES AND PERSONNEL FOR CONDUCTING THE FOLLOWING TEST. THE FORCE MAIN SHALL BE FILLED WITH WATER AND TESTED BY THE CONTRACTOR TO A MINIMUM PRESSURE OF 50 PSI AT THE HIGHEST POINT ALONG THE FORCE MAIN FOR TWO HOURS AND THE PRESSURE SHALL NOT VARY MORE THAN 5 PSI. THE NEW LINES SHALL NOT BE ACCEPTED IF THE LEAKAGE DURING THE TWO-HOUR TEST IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

\[
L = \frac{4000N}{D^2P}
\]

WHERE:
- \( L \) = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR
- \( N \) = THE NUMBER OF JOINTS IN THE LENGTH OF PIPELINE TESTED
- \( D \) = THE NOMINAL DIAMETER OF THE PIPE IN INCHES
- \( P \) = THE AVERAGE TEST PRESSURE MEASURED IN LBS/SQ IN

LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE TO MAINTAIN THE PRESSURE OF 50 PSI. THE CONTRACTOR SHALL AT ONCE LOCATE ANY LEAKS AND ACHIEVE THE ACCEPTABLE LIMIT AT NO EXTRA CHARGE TO THE OWNER.

3. INSTALL A CONTINUOUS SCAFFOLDING SOLID CONDUCTOR COPPER TRACER WIRE OVER PIPE. THE WIRE SHALL BEGIN INSIDE ONE MANHOLE AND RUN TO THE NEXT MANHOLE. INSIDE THE MANHOLE, A COIL OF WIRE LONG ENOUGH TO REACH THE COVER SHALL BE ATTACHED TO THE INSIDE OF THE STRUCTURE. SEE DETAILS 300.01 AND 300.03.