

ENGINEERING  
CONCEPTS INC.

DESIGNED  
CEV/JDE

DRAWN  
CEV

CHECKED  
JDE/LWW

APPROVED  
LWW

SCALE  
AS NOTED

DATE  
APRIL '96

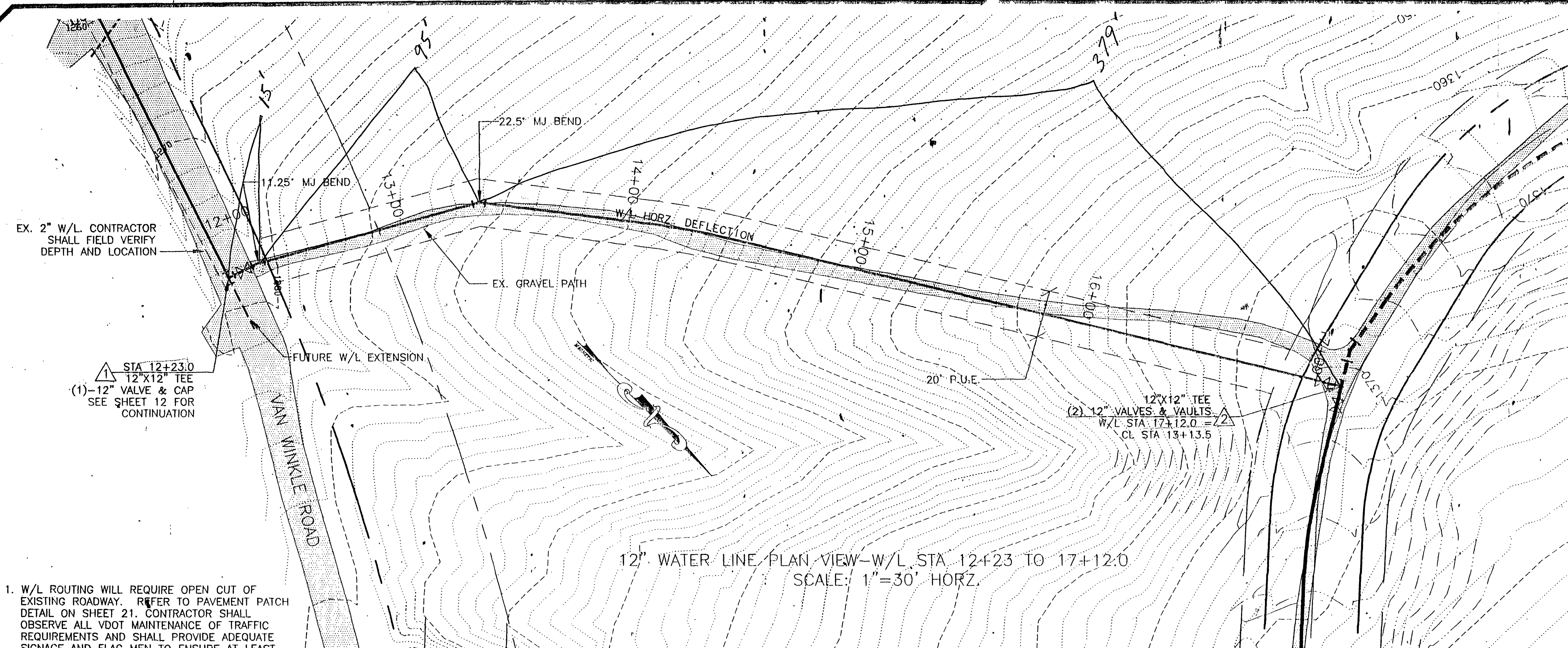
PROJECT  
96017

REVISIONS

NO.	DATE	BY
2	12/6/96	JDE CEV

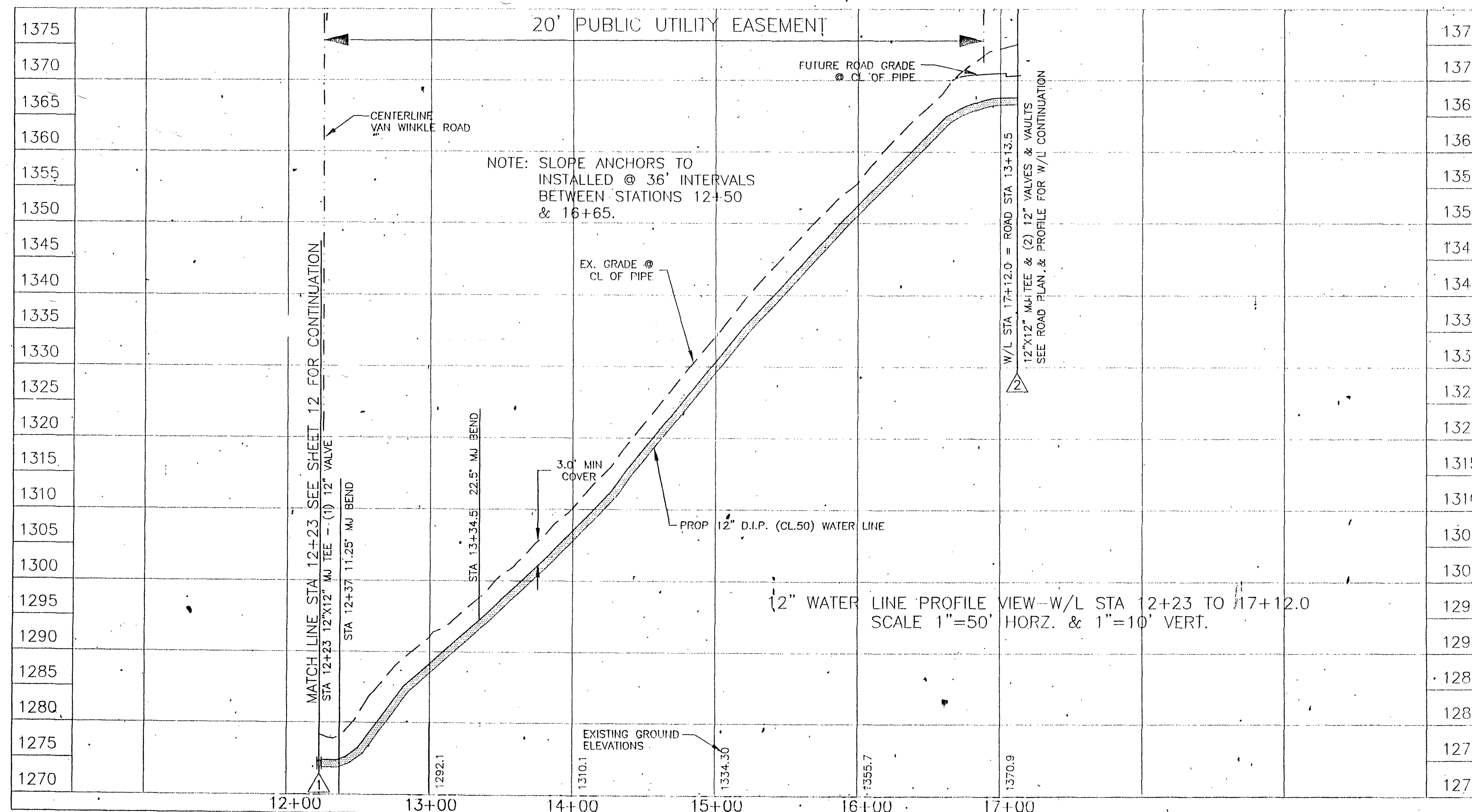
SHEET NO.  
13

OF  
22



1. W/L ROUTING WILL REQUIRE OPEN CUT OF EXISTING ROADWAY. REFER TO PAVEMENT PATCH DETAIL ON SHEET 21. CONTRACTOR SHALL OBSERVE ALL VDOT MAINTENANCE OF TRAFFIC REQUIREMENTS AND SHALL PROVIDE ADEQUATE SIGNAGE AND FLAG MEN TO ENSURE AT LEAST ONE OPEN LANE OF TRAFFIC AT ALL TIMES.

2. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL POINTS FOR RESIDENCES ALONG NARROWS LANE AND VAN WINKLE ROAD.



WATER NOTES

1. ALL MATERIALS, CONSTRUCTION, ETC. SHALL MEET ALL THE SPECIFICATIONS AND REQUIREMENTS OF THE COMMONWEALTH OF VIRGINIA/STATE BOARD OF HEALTH "WATERWORKS REGULATIONS", LATEST EDITION, AS WELL AS THOSE OF THE LOCAL GOVERNING AUTHORITY AND THE AWWA.
2. ALL WATER LINES SHALL BE MAINTAINED AT TEN (10) FEET HORIZONTAL SEPARATION FROM SEWER LINES AND MANHOLES. THE DISTANCE SHALL BE MEASURED EDGE-TO-EDGE. WHEN LOCAL CONDITIONS PREVENT THE DESIRED HORIZONTAL SEPARATION, THE WATERLINE MAY BE LAID CLOSER TO THE SEWER OR MANHOLE PROVIDED THAT THE BOTTOM OF THE WATERLINE SHALL BE AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER. WHERE THIS VERTICAL SEPARATION CANNOT BE OBTAINED, THE SEWER SHALL BE CONSTRUCTED OF AWWA APPROVED WATER PIPE AND PRESSURE TREATED IN PLACE PRIOR TO BACKFILLING. THE SEWER MANHOLE SHALL BE OF WATERTIGHT CONSTRUCTION TESTED IN PLACE.
3. THE CONTRACTOR SHALL MINIMIZE ANY DISTURBANCE TO EXISTING WATER SERVICE OF ANY OTHER UTILITY DURING CONSTRUCTION AND PROVIDE QUALITY WORKMANSHIP.
4. WATER PIPE SHALL BE DUCTILE IRON WITH PUSH-ON JOINTS. DUCTILE IRON PIPE SHALL CONFORM TO AWWA C-110/ANSI 21.10. THE PIPE AND FITTINGS SHALL BE BITUMINOUS COATED AND CEMENT WED IN ACCORDANCE WITH AWWA C-104/ANSI 21.40. THE PIPE THICKNESS SHALL CONFORM TO AWWA C-150/ANSI 21.50. AND SHALL BE CLASS 50, AS A MINIMUM, UNLESS SPECIFIED OR INDICATED OTHERWISE.
5. MR. JESSE PERDUE (981-2601) OF THE CITY OF ROANOKE WATER DEPARTMENT SHALL BE CONTACTED 72 HOURS PRIOR TO CONNECTION TO EXISTING W/L. COORDINATE TIMING OF CONNECTION AND MAXIMUM DOWN TIME PERMITTED AND SCHEDULE FOR INSPECTOR TO BE ON SITE DURING CONNECTION OPERATION.
6. WATER MAINS SHALL HAVE A MINIMUM COVER OF 3.0 FEET.
7. ALL PIPE JOINTS SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. (AWWA STANDARDS MINIMUM)
8. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL PIPE. STONES AND ROCKS FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE AND TAMPED SELECTED FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, THE TRENCH SHALL BE BACKFILLED WITH SELECTED MATERIAL, THOROUGHLY COMPACTED TO 90%, 95% UNDER PAVEMENT OR CONCRETE SLAB, OF THE MODIFIED PROCTOR (ASTM D-1557) USING CARE NOT TO DAMAGE THE PIPE.
9. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE CITY OF ROANOKE WATER DEPARTMENT. COORDINATE INSPECTIONS FOR TESTING.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VAULTS AFTER PAVING AND ADJUSTMENT TO FINAL GRADE IF NECESSARY.
11. COMMERCIAL WATER METER TO BE INSTALLED BY THE DEVELOPER.
12. THE DETECTOR CHECK VALVES AND VAULT SHALL BE INSTALLED BY THE CITY OF ROANOKE WATER DEPARTMENT AT OWNER'S EXPENSE. ALTERNATE IS CONTRACTOR INSTALLATION PER CITY STANDARDS AND SPECIFICATIONS. COORDINATE ALTERNATE WITH MR. JESSE PERDUE OF THE CITY OF ROANOKE WATER DEPARTMENT (981-2601).
13. DURING WATER LINE INSTALLATION ALONG NARROWS LANE, AT LEAST ONE LANE OF TRAFFIC SHALL REMAIN OPEN AT ALL TIMES. TRAFFIC CONTROL SHALL FOLLOW MINIMUM STANDARDS OF V.D.O.T. FOR CONSTRUCTION AREAS.

THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. UTILITIES MAY EXIST WITHIN THE CONSTRUCTION AREA OF THESE PLANS THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE COMMENCING WORK, AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE SUCH UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THESE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE. CALL MISS UTILITIES AT 1-800-552-7001 (TOLL FREE) 48 HOURS BEFORE DIGGING.