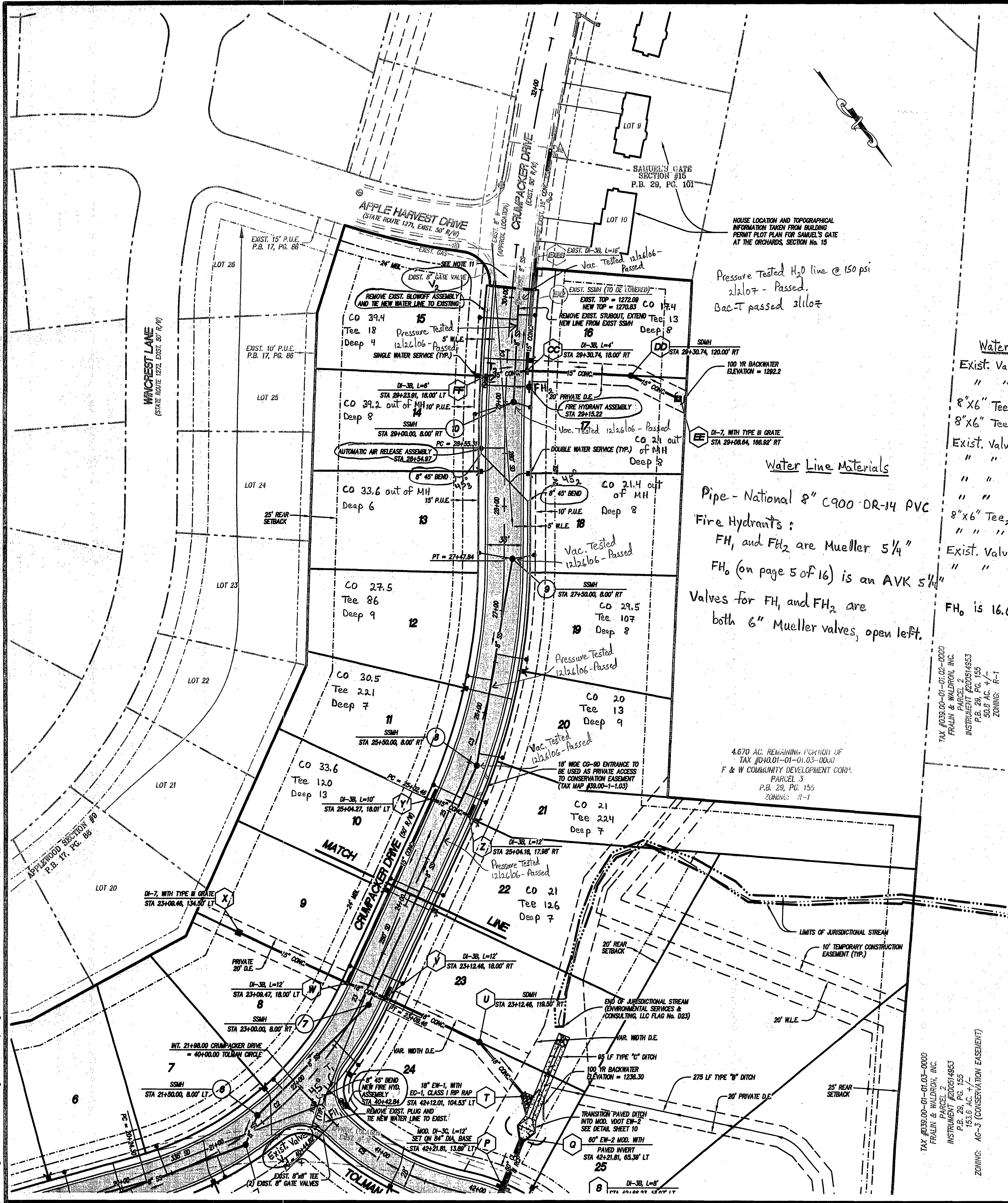




## NOTES:

1. ALL WATER AND SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY'S WATER AND SANITARY SEWER STANDARDS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
3. SANITARY SEWER MATERIAL SHALL BE PVC, SDR 35, EXCEPT AS NOTED, OR APPROVED EQUAL.
4. WATER LINE MAIN MATERIAL SHALL BE C900, DR14, EXCEPT AS NOTED, OR APPROVED EQUAL.
5. ALL WATER METERS SHALL BE 5/8" x 3/4" SIZE.
6. INDIVIDUAL PRESSURE REDUCING VALVES (SEE DETAIL W-02, ON SHEET 14) ARE REQUIRED ON THE CUSTOMER'S SIDE OF THE METER FOR LOTS 1 THROUGH 4 AND 38 THROUGH 39.
7. THE WORKING PRESSURE FOR WATER MAINS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IS LESS THAN 100 PSI.
8. WET TAPS TO THE EXISTING WATER MAIN ARE TO BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY AFTER EXCAVATION IS PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE THE TAPPING SLEEVE AND TAPPING VALVE.
9. SANITARY SEWER CONNECTIONS TO THE EXISTING MANHOLES SHALL BE EXCAVATED BY THE CONTRACTOR AND CENTER MARKED FOR CORING (IF REQUIRED). CORING, IF REQUIRED, TO BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR IS RESPONSIBLE FOR ANY REPAIRS FOR DAMAGE TO EXISTING STRUCTURES AS A RESULT OF CONSTRUCTION IN ACCORDANCE WITH W001, WESTERN VIRGINIA WATER AUTHORITY, AND/OR ROANOKE COUNTY STANDARDS AND SPECIFICATIONS.
11. PERPENDICULAR SAW CUT AND TACK COAT TO BE PROVIDED WHERE NEW PAVEMENT CONNECTS TO EXISTING PAVEMENT. LOCATION OF SAW CUT TO BE DETERMINED IN FIELD AND SHALL BE LOCATED AT THE TERMINATION OF THE FULL DEPTH ASPHALT SECTION FOR THE EXISTING PAVEMENT.

## Water Line Distances

Exist. Valve V<sub>1</sub> → 8' 45" 18.0'  
 " " " → 8" x 6" Tee, 31.0'  
 8" x 6" Tee → FH<sub>1</sub> Valve 15.75'  
 8" x 6" Tee → FH<sub>1</sub> 19.3'  
 Exist. Valve V<sub>1</sub> → 8" 45" 633.5'  
 " " " → 8" 45" 693.5'  
 " " " → ARV 707.0'  
 " " " → 8" x 6" Tee<sub>2</sub> 765.75'  
 8" x 6" Tee<sub>2</sub> → FH<sub>2</sub> Valve 2.5'  
 " " " → FH<sub>2</sub> 45.2'  
 Exist. Valve V<sub>1</sub> → End of new line 840.7'  
 " " " → Exist. Valve V<sub>2</sub> 876.7'

## Water Line Materials

Pipe - National 8" C900 DR-14 PVC  
 Fire Hydrants:  
 FH<sub>1</sub> and FH<sub>2</sub> are Mueller 5 1/4"  
 FH<sub>0</sub> (on page 5 of 16) is an AVK 5 1/4"  
 Valves for FH<sub>1</sub> and FH<sub>2</sub> are  
 both 6" Mueller valves, open left.

| FIRE HYDRANT FLOW AND PRESSURE INFORMATION |                 |          |                   |
|--------------------------------------------|-----------------|----------|-------------------|
| HYDRANT LOCATION                           | STATIC PRESSURE | FLOW     | RESIDUAL PRESSURE |
| STA 14+54.80<br>CRUMPLER DRIVE             | 81 PSI          | 2180 GPM | 58 PSI            |
| STA 40+42.84<br>TOLMAN CIRCLE              | 61 PSI          | 2200 GPM | 37 PSI            |
| STA 29+15.22<br>CRUMPLER DRIVE             | 47 PSI          | 2050 GPM | 20 PSI            |

FIRE FLOW INFORMATION IS BASED ON A WATERCAD COMPUTER SIMULATION ASSUMING THAT THE WATER TANKS SERVING THIS DEVELOPMENT ARE AT ELEVATION 1380. IN ADDITION, AN ESTIMATION OF THE EXISTING DOMESTIC DEMAND ON THE SYSTEM WAS INCLUDED IN THE SIMULATION. THIS INFORMATION HAS NOT BEEN FIELD VERIFIED.

| SANITARY SEWER MAIN BEARINGS AND DISTANCES |                 |          |
|--------------------------------------------|-----------------|----------|
| LINE                                       | BEARING         | DISTANCE |
| EX1 TO 1A                                  | S 38° 48' 18" W | 38.08'   |
| 1A TO 1                                    | S 38° 48' 18" W | 108.10'  |
| 1 TO 2                                     | S 68° 10' 50" W | 47.05'   |
| 2 TO 3                                     | N 55° 31' 02" W | 228.07'  |
| 3 TO 4                                     | N 65° 43' 24" W | 250.59'  |
| 4 TO 5                                     | N 71° 37' 52" W | 176.54'  |
| 5 TO 6                                     | S 61° 05' 37" W | 29.67'   |
| 6 TO 7                                     | S 84° 23' 55" W | 149.51'  |
| 7 TO 8                                     | S 63° 14' 08" W | 250.85'  |
| 8 TO 9                                     | S 48° 50' 06" W | 201.74'  |
| EX2 TO 10                                  | N 41° 25' 38" E | 95.51'   |
| EX3 TO 11                                  | N 60° 08' 13" W | 184.88'  |
| 11 TO 11A                                  | N 35° 04' 20" W | 136.95'  |
| 11A TO 12                                  | N 35° 04' 20" W | 18.38'   |
| 12 TO 13                                   | S 65° 31' 24" W | 99.42'   |
| 11A TO 14                                  | N 06° 58' 11" E | 163.20'  |
| 14 TO 15                                   | N 10° 59' 21" E | 148.93'  |

|                                                                                                                                                    |                                                                                                                                                    |                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>C1</b><br>Centerline<br>A= 1519.43'<br>D= 543.94'<br>R= 1000.00'<br>T= 134.59'<br>L= 267.28'<br>P.C. 15+15.58<br>P.L. 16+50.46<br>P.T. 17+83.44 | <b>C2</b><br>Centerline<br>A= 4948.44'<br>D= 1728.08'<br>R= 328.00'<br>T= 124.62'<br>L= 245.38'<br>P.C. 29+42.30<br>P.L. 31+46.81<br>P.T. 33+00.48 | <b>C3</b><br>Centerline<br>A= 2438.54'<br>D= 1003.07'<br>R= 670.00'<br>T= 124.62'<br>L= 245.38'<br>P.C. 29+42.30<br>P.L. 31+46.81<br>P.T. 33+00.48 |
| <b>C4</b><br>Centerline<br>A= 2208.35'<br>D= 315.97'<br>R= 1755.92'<br>T= 343.00'<br>L= 677.59'<br>P.C. 29+42.30<br>P.L. 31+46.81<br>P.T. 33+00.48 | <b>C5</b><br>Centerline<br>A= 3232.32'<br>D= 2235.08'<br>R= 280.00'<br>T= 72.97'<br>L= 141.99'<br>P.C. 40+44.82<br>P.L. 41+17.79<br>P.T. 41+86.81  | <b>C6</b><br>Centerline<br>A= 4840.57'<br>D= 3078.15'<br>R= 185.00'<br>T= 63.69'<br>L= 127.19'<br>P.C. 40+44.82<br>P.L. 41+17.79<br>P.T. 41+86.81  |

## ABBREVIATIONS

|        |                          |
|--------|--------------------------|
| D.E.   | DRAINAGE EASEMENT        |
| W.L.E. | WATER LINE EASEMENT      |
| S.S.E. | SANITARY SEWER EASEMENT  |
| P.U.E. | PUBLIC UTILITY EASEMENT  |
| EASMT. | EASEMENT                 |
| M.B.L. | MINIMUM BUILDING LINE    |
| R/W    | RIGHT OF WAY             |
| VAR.   | VARIABLE                 |
| EXIST. | EXISTING                 |
| D.B.   | DEED BOOK                |
| P.B.   | PLAT BOOK                |
| PG.    | PAGE                     |
| No.    | NUMBER                   |
| TYP.   | TYPICAL                  |
| STA    | STATION                  |
| L.T.   | LEFT                     |
| R.P.   | RIGHT                    |
| ROP    | REINFORCED CONCRETE PIPE |
| SD     | STORM DRAIN              |
| SMH    | STORM DRAIN MANHOLE      |
| SS     | SANITARY SEWER           |
| SSMH   | SANITARY SEWER MANHOLE   |
| W      | WATER LINE               |

## LEGEND

| ITEM                       | EXISTING | PROPOSED |
|----------------------------|----------|----------|
| Pavement                   | ---      | ---      |
| Curb and Gutter            | ---      | ---      |
| Storm Drain Line           | ---      | ---      |
| Sanitary Sewer Manhole     | ---      | ---      |
| Sanitary Sewer Line        | ---      | ---      |
| Waterline                  | ---      | ---      |
| Hydrant                    | ---      | ---      |
| Underground Electric Line  | ---      | ---      |
| Overhead Electric Line     | ---      | ---      |
| Underground Telephone Line | ---      | ---      |
| Contours                   | ---      | ---      |
| Tie Line                   | ---      | ---      |

AS - BUILT

03/22/2007

WWW.ID# 602NLL