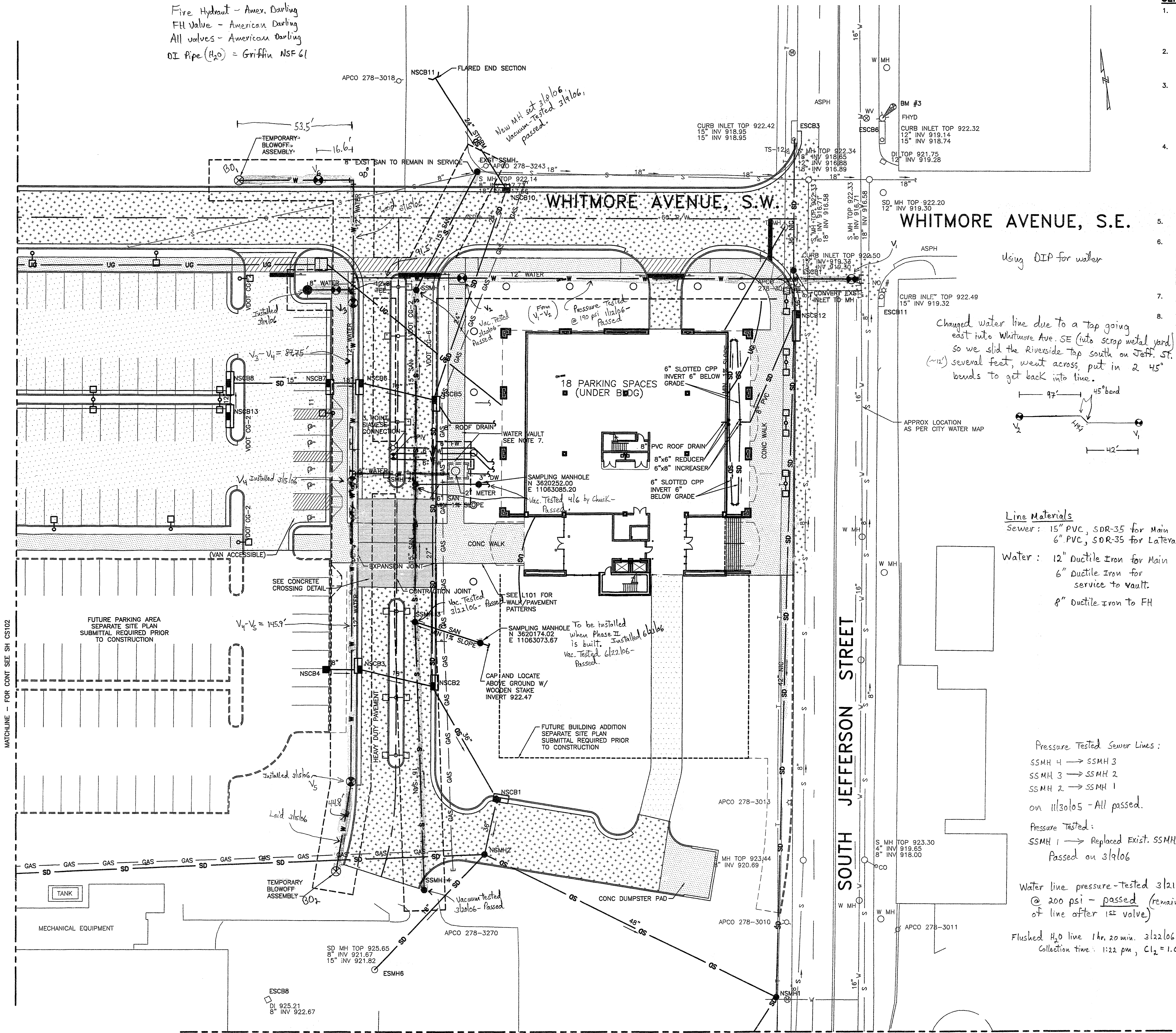


Fire Hydrant - Amer. Darling
FH Valve - American Darling
All valves - American Darling
OI Pipe (H_2O) = Griffin NSF 61



GENERAL UTILITIES NOTES:

1. CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC WHEN PRACTICAL WHEN WORKING WITHIN EXISTING STRIPS. THE CONTRACTOR SHALL PLACE SIGNS, DANGER LIGHTS, BARRICADES, AND FURNISH FLAGMEN TO MAINTAIN TRAFFIC ACCORDANCE WITH THE WORK AREA TRAFFIC CONTROL HANDBOOK.
2. ALL PAVEMENT, CURBS, AND GUTTERS DISTURBED FOR INSTALLATION OF UTILITIES ALONG EXISTING ROADS SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING PAVEMENT MARKINGS, IMMEDIATELY FOLLOWING THE INSTALLATION.
3. THE CITY OF ROANOKE'S UTILITY LINE SERVICES WILL MAKE THE CONNECTION TO THE SEWER MAIN FOLLOWING EXCAVATION AND SHORING PER OSHA REGULATIONS BY THE CONTRACTOR. A SEWER TAP FEE WILL BE CHARGED. TO SCHEDULE THE TAP OF THE SEWER MAIN AT MANHOLE, CONTACT UTILITY LINES SERVICES AT 540-853-2792. SEWER TAP FEES WILL BE INCURRED ANTICIPATED DATE THE MANHOLE TAP IS NEEDED. SEWER FEES SHOULD BE PAID AT LEAST ONE WEEK PRIOR TO THE DATE SEWER HOOKUP IS NEEDED.
4. THE WATER CONNECTION AND WATER TAPS WILL BE DONE BY THE WESTERN VIRGINIA WATER AUTHORITY. TAPPING SLEEVES AND VALVES SHALL BE PROVIDED BY THE CONTRACTOR. A CONNECTION FEE WILL BE CHARGED WHICH WILL INCLUDE THE PUBLIC SERVICE LINE FROM THE TAP TO METER. WATER TAPS AND WATER METER AT THE PROPERTY LINE. PLEASE CONTACT THE CITY OF ROANOKE'S BILLINGS AND COLLECTIONS OFFICE, AT 540-853-8818 TO COORDINATE PAYMENT OF THE ABOVE REFERENCED WATER AND SEWER FEES. WATER FEES SHOULD BE PAID APPROXIMATELY EIGHT WEEKS PRIOR TO THE DATE OF WHICH WATER IS NEEDED.
5. CONTRACTOR SHALL ADHERE TO WESTERN VIRGINIA WATER AUTHORITY REGULATIONS AND CONSTRUCTION GUIDELINES AND REGULATIONS.
6. TRENCH EXCAVATION IN THE CITY RIGHT-OF-WAY ALONG SOUTH JEFFERSON STREET AND RESERVE AVENUE SHALL BE MILLED AND PATCHED FOR A MINIMUM OF 10' IN BOTH DIRECTIONS FROM THE EDGE OF THE INITIAL PAVEMENT REPAIR. MILLING DEPTH SHALL BE A MINIMUM ONE AND ONE-HALF INCHES (1 1/2") REPAVING SHALL EXACTLY MATCH MILLING DEPTH. POSITIVE DRAINAGE AND EXISTING FLOW LINES MUST BE MAINTAINED.
7. WATER VAULT WILL BE SUPPLIED AND INSTALLED BY THE WESTERN VIRGINIA WATER AUTHORITY.
8. THE LIMIT OF FINAL RESTORATION MAY BE ADJUSTED BY THE PERMIT ADMINISTRATOR.

8.
Changed water line due to a tap going
east into Whitmore Ave. SE (into scrap metal yard)
so we slid the Riverside tap south on Jeff. St.
(~12') several feet, went across, put in 2 45°
bends to get back into line.

Line Materials

Sewer: 15" PVC, SDR-35 for Main
6" PVC, SDR-35 for Laterals

Water: 12" Ductile Iron for Main
6" Ductile Iron for
service to vault.
8" Ductile Iron to FH

Pressure Tested Sewer Lines:

SSMH 4 $\rightarrow$ SSMH 3
SSMH 3 $\rightarrow$ SSMH 2
SSMH 2 $\rightarrow$ SSMH 1

on 11/30/05 - All passed.

Pressure Tested:
SSMH 1 $\rightarrow$ Replaced Exist. SSMH
Passed on 3/9/06

Water line pressure-tested 3/21/06
@ 200 psi - passed (remainder
of line after 1st valve)

Flushed H_2O line 1 hr. 20 min. 3122106
Collection time: 1:22 pm, $Cl_2 = 1.0$

Water Line Lengths:

12" DIP = 640.17'
8" DIP = 21.33'
6" DIP = 57.67'

$V_{\text{valve}_1} \rightarrow 1^{\text{st}} 45^\circ$	: 42.0
$1^{\text{st}} 45^\circ \rightarrow 2^{\text{nd}} 45^\circ$	: 19.0
$2^{\text{nd}} 45^\circ \rightarrow V_2$	: 97.0
$V_2 \rightarrow 12 \times 12 \text{ Tee}$	: 91.5
$12 \times 12 \text{ Tee} \rightarrow 90^\circ$	: 48.7
$90^\circ \rightarrow V_6$	: 16.6
$90^\circ \rightarrow B_1$	: 53.5
$12 \times 12 \text{ Tee} \rightarrow 12 \times 8 \text{ Tee}$	: 3.75
$12 \times 8 \text{ Tee} \rightarrow FH \text{ valve}$	: 14.7
$12 \times 8 \text{ Tee} \rightarrow FH$	: 21.3
$12 \times 12 \text{ Tee} \rightarrow V_3$	: 10.0
$V_3 \rightarrow 12 \times 6 \text{ Tee}$	: 83.0
$12 \times 6 \text{ Tee} \rightarrow \text{Vault}$	: 57.7
$V_3 \rightarrow V_4$	: 87.75
$V_4 \rightarrow V_5$	: 145.9
$V_5 \rightarrow B_2$	: 44.8

MATCHLINE - FOR CONT SEE SH CS103

Sewer Length

Exist. MH $\rightarrow$ MH 1 64.75'
MH 1 $\rightarrow$ MH 2 95.58'
MH 2 $\rightarrow$ Sampl. MH 25.5'
MH 2 $\rightarrow$ MH 3 65.25'
MH 3 $\rightarrow$ Stub-out 20.0'
MH 3 $\rightarrow$ MH 4 131.25'

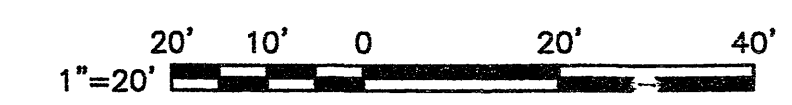
Sewer MH Depths

Exist.	MH	8.67
MH 1	8.58'	
MH 2	7.50'	
MH 3	7.00'	
MH 4	6.58'	

Lateral Depths*

<u>Lateral</u>	<u>Depth</u>
MH 2	4.83'
MH 3	5.00'

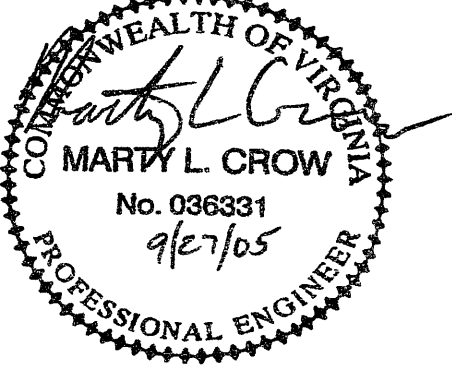
* Both laterals are 6" PVC.



GRAPHIC SCALES

HAYES, SEAY, MATTERN & MATTERN, INC.
1315 FRANKLIN ROAD
ROANOKE, VA 24016
(540) 857-3100 WWW.HSMM.COM

SEALS



CONSULTANT

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CARILION
Health System

**RIVERSIDE
CORPORATE CENTRE
OFFICE BUILDING**

CARILION HEALTH SYSTEM

ROANOKE, VIRGINIA

[illegible]

COMM NO: 40049

ISSUE DATE: SEPTEMBER 16, 2005

DESIGNED BY: ARG DRAWN BY:

DESIGNED BY:	ARC	DRAWN BY:
CHECKED BY:	MLC	SUBMITTED BY:

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CIVIL

SITE LAYOUT AND UTILITY PLAN

WWWA ID# 6GLHKB

CS101