

QUANTITY + COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING	0.799	ACRES	1400	1118.60	1118.60
EXCAVATION	88	C.Y.	4.50	396	396
EMBANKMENT		C.Y.			
CURB INLET DI-		EACH			
CURB INLET DI-		EACH			
MANHOLE MH-		EACH			
MANHOLE MH-		EACH			
AREA DRAIN/CATCH BASIN (12")	2	EACH	400	800	800
18-IN. CONCRETE PIPE, CLASS III	82	LIN. FT.	34	2788	2788
-IN. CONCRETE PIPE, CLASS IV		LIN. FT.			
6-IN PVC	70	LIN. FT.	14	980	980
8-IN PVC	102	LIN. FT.	16	1632	1632
-IN. C.M. CULVERT		LIN. FT.			
-IN. C.M. CULVERT		LIN. FT.			
BOX CULVERT		LUMP SUM			
PAVED DITCH		LIN. FT.			
RIPRAP - CLASS		S.F.			
SODDED SWALE		S.Y.			
-IN. CONCRETE ENDWALL EW-		EACH			
18-IN. END SECTION ES-2	2	EACH	400	800	800
HEADER CURB & GUTTER CG-6	142	LIN. FT.	16	2272	2272
CURB CG-2	204	LIN. FT.	12	2448	2448
VALLEY GUTTER		EACH			
GRAVEL BASE		S.Y.			
GRAVEL SHOULDER		S.Y.			
SURFACE TREATMENT		S.Y.			
-IN. BIT. CONC.: TYPE B-		S.Y.			
-IN. BIT. CONC.: TYPE S-		S.Y.			
-IN. BASE MATERIAL		C.Y.			
-IN. SUBBASE MATERIAL		C.Y.			
6"21-B/2"SM-9.5AL	1221	S.Y.	18	21978	21978
6"21-B/3"IM-1A/1.5"SM-9.5AL	148	S.Y.	22	3256	3256
TRAFFIC BARRICADE		EACH			
8" WATER LINE		LIN. FT.			
6" WATER LINE	15	LIN. FT.	35	525	525
5/8" WATER LINE	47	LIN. FT.	12	564	564
FIRE HYDRANT ASSEMBLIES	1	EACH	2200	2200	2200
BLOW OFFS W/VAULT, FRAME & COVER		EACH			
-IN. GATE VALVES, W/VAULT, FRAME & COVER		EACH			
-IN. GATE VALVES, W/VAULT, FRAME & COVER		EACH			
6" SANITARY SEWER	140	LIN. FT.	16	2240	2240
STANDARD MANHOLE W/FRAME & COVER		EACH			
SAMPLING MANHOLE/PORT	1	EACH	800	800	800
AS-BUILT PLANS	1	LUMP SUM	800	800	800
STORMWATER MANAGEMENT	1	LUMP SUM		25450	25450
10% CONTINGENCY					7104.76
ESTIMATED TOTAL					78152.36
I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.					
SIGNED:		DATE:			

GENERAL NOTES

All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, the Western Virginia Water Authority, and/or the Virginia Department of Transportation. The contractor or developer is required to notify the Roanoke County Engineering Division and the Western Virginia Water Authority in writing at least three (3) days prior to any construction, including, but not limited to the following:

A. Installation of approved erosion control devices
B. Clearing and grubbing
C. Subgrade excavation
D. Installing storm sewers or culverts
E. Setting curb and gutter forms
F. Placing curb and gutter
G. Placing other concrete
H. Placing gravel base
I. Placing any roadway surface
J. Installing water lines
K. Installing sanitary sewer lines

A pre-construction conference should be scheduled with the Roanoke County Engineering Division and the Western Virginia Water Authority, to be held at least one (1) day prior to any construction.

Measures to control erosion and siltation must be provided prior to plan approval. Plan approval in no way relieves the developer or contractor of the responsibilities contained within the erosion and siltation control policies.

A permit must be obtained from the V.D.O.T. Residency Office, Roanoke County, prior to construction in the highway right-of-way.

Plan approval does not guarantee issuance of any permits by V.D.O.T.

An approved set of plans and all permits must be available at the construction site.

Field construction shall honor proposed drainage divides as shown on plans.

All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

Pavement sections on approved plans are based on a minimum CBR of 10. CBR tests are to be performed by the engineer and submitted to V.D.O.T. and to the Roanoke County Engineering Division prior to placement. CBR values < 10 will require revised pavement sections.

All roadside ditches or grades of more than 5 percent shall be paved with cement concrete to the limits as indicated on the plans and as required at the field inspection.

Location of guard rails shall be determined at a joint field inspection by the County and V.D.O.T.

All springs shall be capped and piped to the nearest storm sewer or natural watercourse. The pipe shall be 6 inch minimum diameter and conform to V.D.O.T. Standard SB-1.

Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.

Construction debris shall be containerized in accordance with the Virginia Litter Control Act. No less than one litter receptacle shall be provided on site.

The contractor shall provide adequate means of cleaning mud from trucks and/or other equipment prior to entering public streets. It is the contractors responsibility to insure that the streets are in a clean, mud and dust free condition at all times.

The developer and/or contractor shall supply all utility companies with copies of approved plans, advising them that all grading and installation shall conform to approved plans.

Contractors shall notify utilities of proposed construction at least two (2), but not more than ten (10) working days in advance. Area public utilities may be notified thru "Miss Utility": 1-800-552-7001.

The developer or contractor shall supply the County and the Western Virginia Water Authority with correct As-Built plans before final acceptance.

All work shall be subject to inspection by Roanoke County, the Western Virginia Water Authority, and/or V.D.O.T. inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division and the Western Virginia Water Authority prior to such construction.

100 year floodway and floodplain information shall be shown where applicable.

Grade stakes shall be set for all curb and gutter, culver, sanitary sewer and storm sewer.

SEWER NOTES

All sewer facilities are to be installed according to the WWA Design and Construction standards.

A minimum cover of three (3) feet is required over proposed lines.

Contractor shall be responsible for locating and uncovering all manholes after paving. Manhole tops shall be adjusted to grade if necessary.

All existing utilities may not be shown or may not be shown in the exact location. The contractor shall comply with State Water Works Regulations, Section 12.05.03, where lines cross.

House connections are to be made with 4" pipe installed at a minimum grade of 1/4 inch to 1 foot in R/W.

Laterals from manholes shall be PVC or Ductile Iron of sufficient length to provide two (2) feet of bearing on natural ground. The transition from ductile iron to asbestos cement or concrete pipe shall be made with an adapter coupling in R/W.

All trenches in existing or future rights-of-way shall be compacted according to V.D.O.T. standards.

Lines shall be staked prior to construction.

WATER NOTES

All water facilities are to be installed according to the WWA Design and Construction standards.

A minimum cover of three (3) feet is required over proposed lines.

Contractor shall be responsible for locating and uncovering valve vaults after paving and adjustment to final grade if necessary.

All existing utilities may not be shown or may not be shown in the exact location. The contractor shall comply with the State Water Works Regulations, Section 12.05.03, where lines cross.

All trenches in existing or future highway right-of-ways shall be compacted according to V.D.O.T. standards.

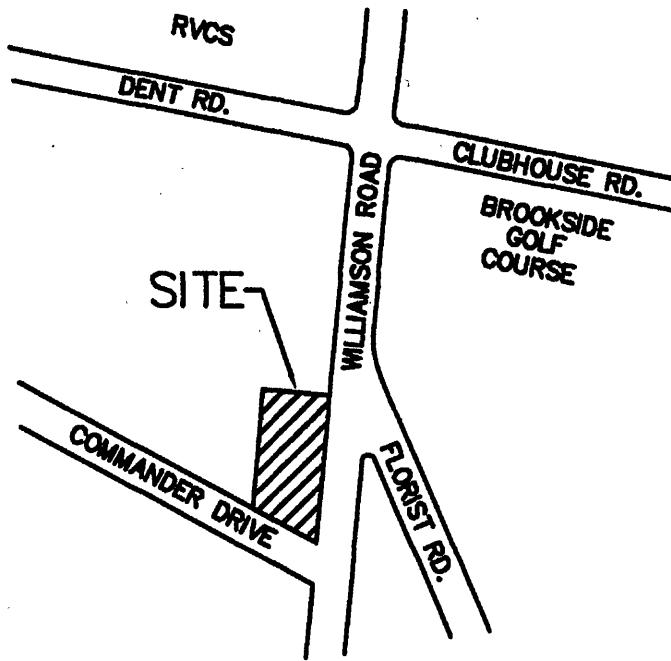
Lines shall be staked prior to construction.

Water main shall be minimum Class 52 Ductile Iron in accordance to AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Availability number Pending

INDEX

- C-0.0 ROANOKE COUNTY COVER SHEET
C-1.2 DIMENSIONAL, UTILITY & LANDSCAPING PLAN
C-1.3 GRADING, DRAINAGE & ESC PLAN
C-2.1 PROFILES & DETAILS
C-5.1 COUNTY ESC DETAIL SHEET
C-5.2 NOTES & SPECIFICATIONS



VICINITY MAP
(NO SCALE)

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year) 1995 by McMURRY SURVEYORS

All elevations must be referenced to the National Geodetic Vertical Datum of 1929.

Source of topographic mapping is McMURRY SURVEYORS dated 1995

Boundary was performed by McMURRY SURVEYORS dated 1995

BENCHMARK: San. Manhole Top Rim Elev. = 1012.80 See Plans for Location.

PROFESSIONAL ENGINEER
SEAL AND SIGNATURE



B & D LOCK, INC.

ROANOKE COUNTY

MAGISTERIAL DISTRICT(S) HOLLINS

OWNER (name, address, telephone): ROBERT R. FRYDRYCH
B & D LOCK, INC.
6014 WILLIAMSON ROAD, NW, ROANOKE, VA 24012
(540) 563-1101

DEVELOPER (name, address, telephone): ROBERT R. FRYDRYCH
B & D LOCK, INC.
6014 WILLIAMSON ROAD, NW, ROANOKE, VA 24012
(540) 563-1101

ENGINEER (name, address, telephone): SPECTRUM DESIGN, PC
10 CHURCH AVE, SE
ROANOKE, VIRGINIA 24011
(540) 342-6001 FAX (540) 342-6055

TAX MAP - BLOCK - PARCEL NO(S) 38.06-06-3.1, 4, 5, 6.1
ZONING C-2

I, _____ OWNER/DEVELOPER, AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APPLICABLE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.

AS BUILT

10/16/2007

SHEET NO.

C-0.0

WWVA ID# 7ASHLV

2, 2007