### QUANTITY + COST ESTIMATE

ITEM CLEARING AND GRUBBING	QUANTITY 5	UNIT	UNIT PRICE 4000.00	COST 20000.00	BONDABL
EXCAVATION	16000	C.Y.	2.50	40000.00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
LACAVATION	10000	0.1.	2.50	40000.00	
CURB INLET DI-3B	2	EACH	2000.00	4000.00	4000.00
CURB INLET DI-3C	2	EACH	2000.00	4000.00	4000.00
MANHOLE MH-1	2	EACH	1500.00	3000.00	3000.00
15 -IN. CONCRETE PIPE, CLASS III	40	LIN. FT.	18.00	720.00	720.00
18 —IN. CONCRETE PIPE, CLASS III	80	LIN. FT.	20.00	1440.00	1440.00
24 -IN. CONCRETE PIPE, CLASS III	233	LIN. FT.	23.00	5359.00	5359.00
36 —IN. CONCRETE PIPE, CLASS III	339	LIN. FT.	27.00	9153.00	9153.00
48 —IN. CONCRETE PIPE, CLASS III	165	LIN. FT.	32.00	5280.00	5280.00
36 —IN. CONCRETE ENDWALL EW— 1	1	EACH	750.00	750.00	750.00
48 -IN. TRIPLE CONCRETE ENDWALL EW-7	2	EACH	2000.00	2000.00	2000.00
18 -IN. END SECTION ES-1	4	EACH	700.00	700.00	700.00
18 -IN. END SECTION ES-1 24 -IN. END SECTION ES-1	1	EACH EACH	300.00 325.00	300.00 325.00	300.00 325.00
36 -IN. END SECTION ES-1	2	EACH	350.00	700.00	700.00
CURB & GUTTER CG-6	1200	LIN. FT.	12.00	14400.00	14400.0
HEAVY DUTY PAVING	2266	S.Y.	15.00	33990.00	33990.0
HEAVI DOTT PAVING	2200	5.1.	15.00	33990.00	55990.0
8" WATER LINE	575	UN. FT.	18.00	10350.00	10350.0
O WAIER LINE	3/3	Liv. 11.	10.00	10000.00	10000.0
FIRE HYDRANT ASSEMBLIES	2	EACH	1250.00	2500.00	2500.00
	EACH	EACH	EACH	EACH	EACH
6 -IN. GATE VALVES, W/VAULT, FRAME & COVER	1	EACH	500.00	500.00	500.00
8" SANITARY SEWER	442	LIN. FT.	18.00	10350.00	10350.00
STANDARD MANHOLE W/FRAME & COVER SAMPLING MANHOLE/PORT	3	EACH	1500.00	4500.00	4500.00
AS-BUILT PLANS	. 1	LUMP SUM	2500.00	2500.00	2500.00
STORMWATER MANAGEMENT	1	LUMP SUM	13585.00	13585.00	13585.0
		-			127,058.0
10% CONTINGENCY					12,705.0
ESTIMATED TOTAL					<b>\$</b> 139,763.

### I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.

#### **GENERAL NOTES**

All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County and/or the Virginia Department of Transportation and Western Va. Water Authority.

The contractor or developer is required to notify the Rognoke County Engineering Division 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
- 1. 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, 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

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 quard 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 WVWA with correct

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

Field corrections shall be approved by the Roanoke County Engineering Division and the WVWA prior to such construction.

100 year floodway and floodplain information shall be shown where

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

### INDEX

- C1 COVER SHEET
- C2 EXISTING CONDITIONS AND DEMOLITION PLAN
- C3 LAYOUT AND UTILITY PLAN

As-Built plans before final acceptance.

- C4 GRADING AND EROSION CONTROL PLAN
- C5 PROFILES
- C6 EROSION CONTROL DETAILS
- C7 NOTES
- C8 WATER AND SEWER DETAILS
- C9 DETAILS

## 4-15-05 PER COUNTY COMMENTS 5-15-05 PER COUNTY AND VDOT COMMENTS 6-7-05 PER COUNTY AND DEQ ESC COMMENTS 6-8-05 PER COUNTY AND DEQ ESC COMMENTS 7-5-05 PER DEQ COMMENTS 7-29-05 PER COUNTY COMMENTS

### **SEWER NOTES**

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.

All water and sanitary sewer facilities are to be installed according to the WVWA Water and Sanitary Sewer Design and Construction Standards.

# CARVINS CREEK ROAD 1-81 S. 70 WILLIAMSON

### **WATER NOTES**

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 \_\_\_\_\_\_ 05-72

All water and sanitary sewer facilities are to be installed according to the WVWA Water and Sanitary Sewer Design and Construction Standards.

### **LEGEND**

Property Line -					
, ,	<u> </u>				
Right—of—way -	R/W				
Centerline -	<u> </u>				
Minimum Building Line	M.B.L				
Existing Storm Sewer :	18" S.D.———————————————————————————————————				
Existing Sanitary Sewer :	8" SAN. ————————————————————————————————————				
Existing Water Main -					
Existing Contour -	1045				
Proposed Contour -	1045				
Proposed Drainage Divide					
Proposed Limits of Clearing					
Proposed Storm Sewer	24" S.D.				
DEVELOPMENT PLAN	8" M.H.				
Proposed Sanitary Sewer					
Proposed WaterTMoicTION . BY ROANOKE COUNTY	HYDRANT BLOWOFF BLOWOFF				
Department Date					
Development Review	95744				

SURVEY INFORMATION

VICINITY MAP

Horizontal and vertical control surveys were performed in (year) 2005 by BALZER AND ASSOCIATES, INC.

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

Source of topographic mapping is BALZER AND ASSOCIATES, INC. dated <u>JANUARY 2005</u>

Boundary was performed by BALZER AND ASSOCIATES, INC.

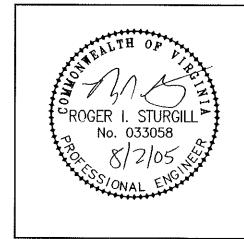
dated <u>JANUARY 2005</u>

The professional seal and signature below certifies the boundary survey and topographic mapping to be accurate and correct.

I AM CERTIFIED BY THE STATE OF VIRGINIA AS A "RESPONSIBLE LAND DISTURBER." I SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN AS SHOWN.

SIGNATURE \_ PRINTED NAME\_ CERTIFICATE DATE-

TELEPHONE NUMBER-ADDRESS ....



PROFESSIONAL ENGINEER SEAL AND SIGNATURE

### COUNTY OF ROANOKE

NEW CENTURY INDUSTRIAL PARK

HOLLINS MAGISTERIAL DISTRICT(S)

THIS SITE DEVELOPMENT PLAN AND OTHER APP-LICABLE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS. UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.

OWNER/DEVELOPER, AM AWARE

OF THE SITE DESIGN REQUIREMENTS IMPOSED BY

4 & 5

OWNER (name, address, telephone)

Water & Sever

Planning & Zoning

TAX MAP NO(S)

NEW CENTURY DEVELOPMENT CO. LLC 5041-A BENOIS RD ROANOKE, VA 24014

CONTACT: JOHN SHOULDERS PHONE: 725-8230 FAX: 725-8231

DEVELOPER (name, address, telephone)

RRB 8/05/05

NEW CENTURY DEVELOPMENT CO. LLC 5041-A BENOIS RD

CONTACT: JOHN SHOULDERS PHONE: 725-8230 FAX: 725-8231

ENGINEER. ARCHITECT OR SURVEYOR (name, address, telephone)

BALZER AND ASSOCIATES, INC. 1208 CORPORATE CIRCLE

BLOCK NO(S)

CONTACT: SEAN HORNE PHONE: 772-9580 FAX: 772-8050

PARCEL NO(S)

SHEET 1 OF 9