

QUANTITY + COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING	8.2	ACRES	\$2,500.00		\$20,500.00
EXCAVATION	16,000	C.Y.	\$2.50		\$40,000.00
EMBANKMENT					
CURB INLET DI-1 SERIES	1	EACH	\$1,200.00		\$1,200.00
CURB INLET DI-3 SERIES	16	EACH	\$2,000.00		\$32,000.00
CURB INLET DI-7 SERIES	1	EACH	\$1,500.00		\$1,500.00
MANHOLE MH-2 SERIES	3	EACH	\$1,200.00		\$3,600.00
15 -IN. CONCRETE PIPE, CLASS III	885	LF	\$30.00		\$26,550.00
18 -IN. CONCRETE PIPE, CLASS III	590	LF	\$36.00		\$21,240.00
24 -IN. CONCRETE PIPE, CLASS III	255	LF	\$48.00		\$12,240.00
36 -IN. CONCRETE PIPE, CLASS III	125	LF	\$96.00		\$12,000.00
EC-3 DITCH LINING	220	LF	\$5.00		\$1,100.00
PAVED DITCH & WORK	100	LF	\$15.00		\$1,500.00
VDOT STD END SECTION ES-1	2	EACH	\$500.00		\$1,000.00
VDOT STD ENDWALL EW-1	2	EACH	\$1,500.00		\$3,000.00
CURB & GUTTER CG-2					
CURB & GUTTER CG-6	3,550	LF	\$12.00		\$42,600.00
VALLEY GUTTER					
GRAVEL BASE					
GRAVEL SHOULDER					
SURFACE TREATMENT					
-IN. BIT. CONC.: TYPE B-					
-IN. BIT. CONC.: TYPE S-					
-IN. BASE MATERIAL					
PAVEMENT	5,360	SY	\$12.00		\$64,320.00
8" WATER LINE	1,780	LF	\$22.00		\$39,160.00
AIR RELEASE VALVE	1	EACH	\$1,000.00		\$1,000.00
FIRE HYDRANT ASSEMBLIES	2	EACH	\$1,500.00		\$3,000.00
BLOW OFFS W/VAULT, FRAME & COVER	1	EACH	\$1,000.00		\$1,000.00
8-IN. GATE VALVES, W/VAULT, FRAME & COVER	4	EACH	\$500.00		\$2,000.00
SINGLE WATER METERS	1	EACH	\$250.00		\$250.00
DOUBLE WATER METERS	12	EACH	\$350.00		\$4,200.00
8" SANITARY SEWER	1,795	LF	\$20.00		\$35,900.00
STANDARD MANHOLE W/FRAME & COVER	11	EACH	\$1,500.00		\$16,500.00
4" SINGLE RESIDENTIAL LATERALS	25	EACH	\$500.00		\$12,500.00
6" DOUBLE RESIDENTIAL LATERALS					
STORMWATER MANAGEMENT	BONDED WITH BELLEVIEW HOLLOW SUBDIVISION PLANS				
AS-BUILT PLANS	1	LUMP SUM	\$2,500.00		\$2,500.00
SUBTOTAL					\$402,360.00
10% CONTINGENCY					\$40,140.00
ESTIMATED TOTAL					\$442,500.00
I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.					
SIGNED:			DATE:		

COUNTY OF ROANOKE GENERAL NOTES

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

The contractor or developer is required to notify in writing at least three (3) days prior to any construction, including, but not limited to the following:
For Roanoke County:
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
For Town of Vinton:
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 on plans.

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

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 contractor's 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 and Town of Vinton Public Works: 1-540-983-0646.

The developer or contractor shall supply the County and the Town of Vinton with correct As-Built plans before final acceptance.

All work shall be subject to inspection by Roanoke County, the Town of Vinton and V.D.O.T. inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division and/or the Town of Vinton 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, culvert, sanitary sewer and storm sewer.

No construction and/or field changes without approval of the consulting engineer and/or Roanoke County and/or the Town of Vinton Public Works and/or the Virginia Department of Transportation.

Any new alignments, changes in grades, alternative pipe sizes or manholes and ESC measures will require a new set of plans stamped by the consulting engineer. Plan sheets can be 8.5"x11" if the information is legible.

INDEX

- C-1 COVER SHEET
- C-2 OVERALL PLAN
- C-3 DIMENSIONAL PLAN
- C-4 GRADING PLAN
- C-5 ESC PLAN
- C-6 PROFILES
- C-7 PROFILES
- C-8 ESC DETAILS
- C-9 ESC NOTES
- C-10 CONSTRUCTION NOTES
- C-11 WWA DETAILS
- C-12 WWA DETAILS

REVISIONS

REVISED 12-7-06 PER ROANOKE COUNTY COMMENTS
REVISED 12-12-06 PER VDOT COMMENTS

SEWER NOTES

ALL SANITARY SEWER FACILITIES SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE WESTERN VIRGINIA WATER AUTHORITY 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 IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

ALL TRENCHES IN EXISTING OR FUTURE RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER NOTES

ALL WATER FACILITIES SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE WESTERN VIRGINIA WATER AUTHORITY 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 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 RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER MAIN SHALL BE MINIMUM CLASS 350 DUCTILE IRON IN ACCORDANCE WITH AWWA C151 OR DR-14 PVC IN ACCORDANCE WITH AWWA C-900.

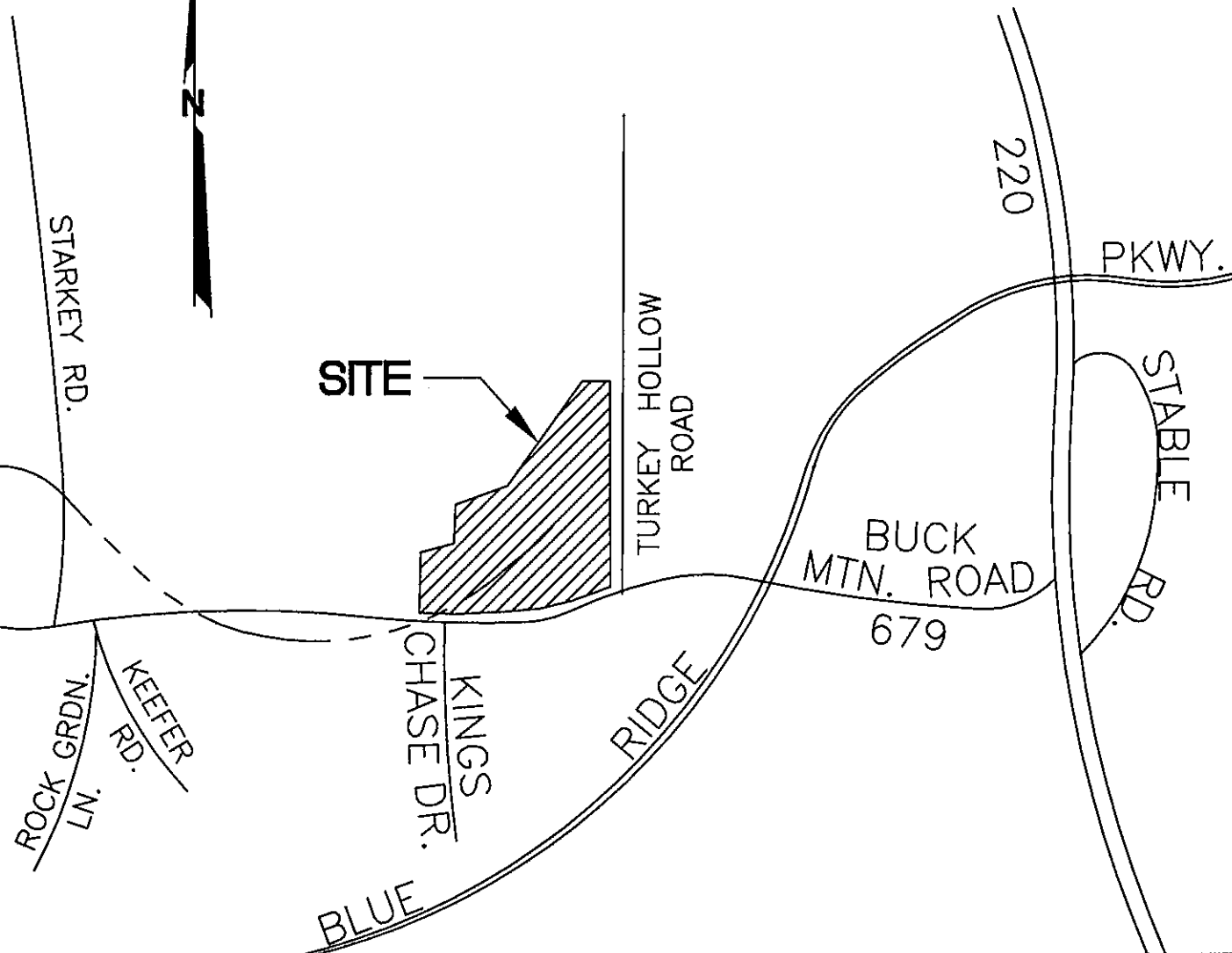
DUCTILE IRON PIPE IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS SHALL BE REQUIRED FOR ALL PIPE WITH A WORKING PRESSURE EQUAL TO OR GREATER THAN 100 psi.

AVAILABILITY LETTER NUMBER 06-363

LEGEND

Property Line	---
Right-of-way	----
Centerline	-----
Minimum Building Line	-----
Existing Storm Sewer	==
Existing Sanitary Sewer	== 8" ss ==
Existing Water Main	== 8" w ==
Existing Contour	--- 1155 ---
Proposed Contour	--- 1155 ---
Proposed Drainage Divide	----
Proposed Limits of Clearing	----
Proposed Storm Sewer	==
Proposed Sanitary Sewer	== 8" SS ==
Proposed Water Main	== 8" W ==

VICINITY MAP



SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year) 2006 by BALZER & ASSOCIATES

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

Source of topographic mapping is COUNTY OF ROANOKE AERIAL MAPPING dated 1992

Boundary was performed by BALZER & ASSOCIATES dated 2006

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.

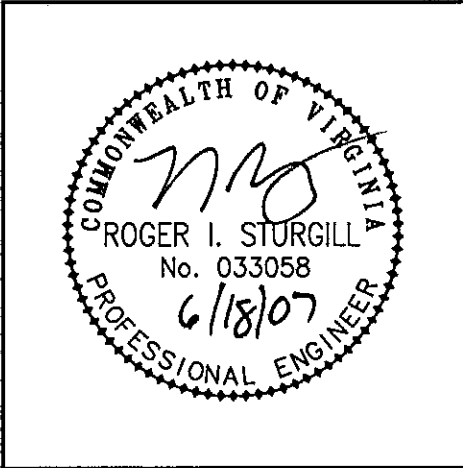
SIGNATURE: _____

PRINTED NAME: _____

CERTIFICATE DATE: _____

TELEPHONE NUMBER: _____

ADDRESS: _____



REGISTERED LAND DISTURBER

PROFESSIONAL ENGINEER SEAL AND SIGNATURE FOR CONSTRUCTION BY ROANOKE COUNTY

Department	Date
Development Review	PL 6/26/07
Engineering	MC 6/26/07
Water & Sewer	RRB 7/5/07
Planning & Zoning	PLW 6/26/07

BERKELEY MANOR

NAME OF DEVELOPMENT

LOCAL GOVERNING AUTHORITY

COUNTY OF ROANOKE

MAGISTERIAL DISTRICT(S)

CAVE SPRING

OWNER (name, address, telephone)

A M COOPER CONSTRUCTION
4430 OLD CAVE SPRING ROAD
ROANOKE, VA 24018

DEVELOPER (name, address, telephone)

A M COOPER CONSTRUCTION
4430 OLD CAVE SPRING ROAD
ROANOKE, VA 24018

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

BALZER AND ASSOCIATES, INC.
1208 CORPORATE CIRCLE
ROANOKE, VA 24018 540-772-9580 FAX 540-772-8050

TAX MAP NO(S)

087.20-01-09.00-0000

JOB NO. R0400130.01

DATE: 10/30/2006

DESIGNED BY: C.P.B.

CHECKED BY: J.V.J.

SHEET 1 OF 12