

QUANTITY + COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
Neat, Vertical Saw Cut	30	LF	\$ 1.00	\$ 30.00	\$ 30.00
Pavement Removal	10	SY	\$ 10.00	\$ 100.00	\$ 100.00
8-IN Waterline & Bedding	484	LF	\$ 25.00	\$12,100.00	\$12,100.00
8-IN Directional Drill	0	LF	\$ 75.00	\$ 0.00	\$ 0.00
Tap, Sleeve, & Connection	1	EA	\$ 500.00	\$ 500.00	\$ 500.00
8-IN Gate Valve, Frame & Cover	2	EA	\$ 500.00	\$1,000.00	\$1,000.00
8-IN Horizontal or Vertical Bends	5	EA	\$ 500.00	\$2,500.00	\$2,500.00
Blowoff Assembly, Frame & Cover	1	EA	\$ 500.00	\$ 500.00	\$ 500.00
Residential Water Services - Type B	4	EA	\$1,000.00	\$4,000.00	\$4,000.00
Pavement Replacement	10	SY	\$ 30.00	\$ 300.00	\$ 300.00
Permanent Seeding	0.2	AC	\$1,900.00	\$ 380.00	\$ 380.00
Culvert Inlet Protection	0	EA	\$ 700.00	\$ 0.00	\$ 0.00
As-Built Plans	1	LS	\$1,500.00	\$1,500.00	\$1,500.00
SUBTOTAL:					\$22,910.00
10% CONTINGENCY					\$ 2,291.00
ESTIMATED TOTAL:					\$25,201.00

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 and/or the Virginia Department of Transportation.

The contractor or developer is required to notify the Roanoke 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
- N/A B. Clearing and grubbing
- N/A C. Subgrade excavation
- N/A D. Installing storm sewers or culverts
- N/A E. Setting curb and gutter Forms
- N/A F. Placing curb and gutter
- N/A G. Placing other concrete
- H. Placing gravel base
- I. Placing any roadway surface
- J. Installing water lines
- N/A K. Installing sanitary sewer lines

N/A = NOT ANTICIPATED FOR THIS PROJECT

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.D.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.D.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 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.D.T. Standard SB-1.

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 with correct As-Built plans before final acceptance.

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

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

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

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

THE WATERLINE INSPECTION SHALL BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY	
Department	Date
Development Review	8/8/2006
Engineering	8/22/2006
Water & Sewer	8/29/06
Planning & Zoning	

DRAWING INDEX

- C01 COVER SHEET
- C02 PLAN & PROFILE SHEET
- C03 DETAILS

WATER NOTES

All water facilities shall be installed according to the Western Virginia Water Authority Design and Construction Standards/ (Latest Edition).

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 right-of-ways shall be compacted according to V.D.D.T. standards.

Lines shall be staked prior to construction.

Water main shall be minimum Class 350 Ductile Iron in accordance to AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Ductile Iron Pipe in accordance with the Western Virginia Water Authority Design and Construction Standards shall be required for all pipe with a working pressure equal to or greater than 100 p.s.i.

Availability letter number 06-60

HYDRAULIC ANALYSIS

PER CITY OF SALEM WATER DEPARTMENT, THE EXISTING HYDRANT AT THE INTERSECTION OF LILLY DRIVE AND CREEKSIDE DRIVE IS AS FOLLOWS:

ELEVATION OF HYDRANT = 1056
STATIC PRESSURE = 95 PSI
FLOW = 1350 GPM WITH RESIDUAL PRESSURE OF 90 PSI
STATIC ANALYSIS

LOWEST LOT ELEVATION = 1066 (RESULTS IN 91 PSI)
HIGHEST LOT ELEVATION = 1084 (RESULTS IN 83 PSI)

EACH LOT REQUIRES A PRESSURE REDUCING VALVE.

ELEVATION WHERE NO PRESSURE REDUCING VALVE IS REQUIRED IS ELEVATION 1091.

450 LF PIPE, 2 45° BENDS AND 2 GATE VALVES HAVE LOSS OF 1 PSI.

LEGEND

----- SURVEYED PROPERTY LINE	---T--- PROP. TELEPHONE LINE	[Pattern] CONCRETE	○ EX. POWER POLE
----- PROPOSED PROPERTY LINE	---G--- PROP. GAS LINE	[Pattern] ASPHALT PAVING	□ EX. TELEPHONE
---DEED PROPERTY LINE	---SAN--- PROP. SANITARY SEWER LINE	[Pattern] PAVEMENT REPLACEMENT	□ EX. TELEPHONE PEDESTAL
---OHE--- EXIST. OVERHEAD POWER	---W--- PROP. STORM SEWER LINE	[Pattern] GRAVEL	⊗ EX. LIGHT POLE
---W--- EXIST. WATER LINE	---C--- PROP. CONTOURS	[Pattern] PAVERS	⊕ BENCHMARK
---C--- EXIST. OVERHEAD CABLE	---2'--- EXIST. 2' CONTOURS	[Pattern] WETLAND AREA	
---C--- EXIST. CENTERLINE OF ROAD	---345--- EXIST. 10' CONTOURS	[Symbol] YARD LIGHT (S.M.H.)	
---W--- EXIST. STORM SEWER	+348.55 PROP. SPOT ELEVATION	[Symbol] TYPICAL YARD HYDRANT	
---SAN--- EXIST. SANITARY SEWER	---X--- SILT FENCE	[Symbol] PROP. FIRE HYDRANT	
---UE--- PROP. UNDERGROUND ELEC. LINE	---RMA--- RESOURCE MANAGEMENT AREA BOUNDARY	[Symbol] PROP. AIR RELEASE VALVE	
---UG--- PROP. UNDERGROUND ELEC. SERVICE	---RPA--- RESOURCE PROTECTION AREA BOUNDARY	[Symbol] PROP. GATE VALVE	
---W--- PROP. WATERLINE	---A--- PROP. AUDIO CABLE	[Symbol] PROP. BLOW OFF VALVE	
---A--- EXIST. TREELINE	---DITCH LINE		

COUNTY OF ROANOKE

NAME OF DEVELOPMENT PUBLIC WATERLINE EXTENSION

MAGISTERIAL DISTRICT(S) CATAWBA MAGISTERIAL DISTRICT

OWNER GCT DEVELOPMENT, LLC

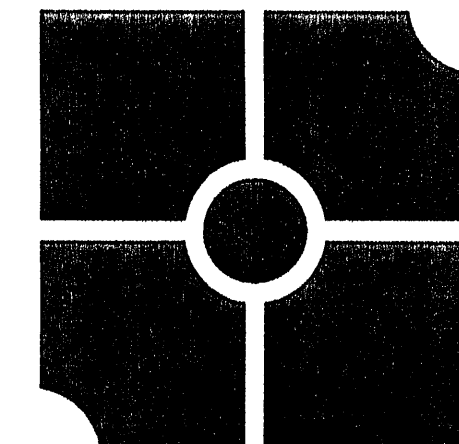
DEVELOPER GCT DEVELOPMENT, LLC, P.O. BOX 1118, SALEM, VIRGINIA 24153

ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) PARKER DESIGN GROUP, INC. 816 BOULEVARD, SALEM, VA 24153 (540) 387-1153

TAX MAP NO(S) 55.04 BLOCK NO(S) 01 PARCEL NO(S) 32.1 thru 32.4

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.

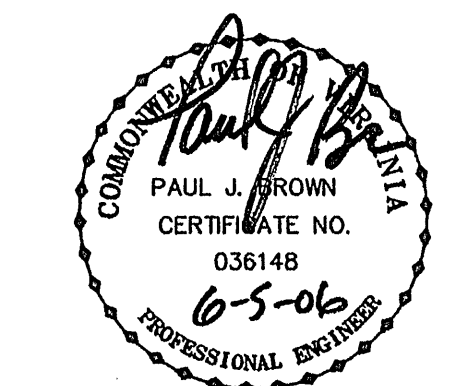
SHEET 1 OF 3



parker
DESIGN GROUP

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Salem, Virginia 24153
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Fax: 540-389-5767
www.parkergd.com

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**Public Waterline Extension for
GCT Development, LLC**
Serving Tax Nos. 55.04-01-32.1 thru 32.4
Catawba Magisterial District
Roanoke County, Virginia

REVISIONS:

PJB-County Review Comments 4/20/06
PJB-Revised Waterline Alignment 8/22/06

DESIGNED BY: PJB

DRAWN BY: PJB

CHECKED BY: SRB

SCALE: 1" = 30'

DATE: 22 March 2006

SHEET TITLE:

COVER SHEET

VVVVA ID# 6PDNGR

C01
01 OF 03
PROJECT NUMBER:
06-0024-02