ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
				,,,,,	
XCAVATION ROADWAYS ONLY	27,000	C.Y.	\$2.50		\$67,500.00
URB INLET DI-7, W/ GRATE A, TYPE III	2	EACH	\$1500.00	-	\$3,000.00
CURB INLET DI-1 SERIES	2	EACH	\$1200.00	<u>-</u>	\$2,400.00
CURB INLET DI-3 SERIES	19	EACH	\$2000.00		\$38,000.00
AANUOLE AUL O CEDIEC		PAOL	41500.00		<b>\$</b> 7,000,00
MANHOLE MH-2 SERIES	2	EACH	\$1500.00		\$3,000.00
15 -IN. CONCRETE PIPE, CLASS III	1800	LIN. FT.	\$35.00		\$63,000.00
18 -IN. CONCRETE PIPE, CLASS III	1040	LIN. FT.	\$42.00		\$43,680.00
24 -IN. CONCRETE PIPE, CLASS III	405	LIN. FT.	\$55.00	,	\$22,275.00
18 -IN. END SECTION ES-1	1 1	EACH	\$500.00		\$500.00
24 -IN. END SECTION ES-1	3	EACH	\$1000.00		\$3000.00
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PAVEMENT	12500	S.Y.	\$18.00		\$225,080.00
CURB & GUTTER CG-6	8070	LIN, FT.	\$12.00		\$96,840.00
TRAFFIC CONTROL	1	LUMP SUM	\$2,500.00		\$2,500.00
PIDEWALK	6500	1.5	<b>\$</b> 17.00		\$110,500.00
SIDEWALK	0000	L.F.	₩17.0U		\$110,000.00
` · · · · · · · · · · · · · · · · · · ·					
B" WATER LINE	3650	LIN. FT.	\$22.00		\$80,300.00
S" WATER LINE AIR RELEASE VALVE	610	LIN. FT. EACH	\$17.00 \$1000.00		\$10,370.00 \$3,000.00
FIRE HYDRANT ASSEMBLIES	4	EACH	\$1250.00		\$5,000.00 \$5,000.00
BLOW OFFS W/VAULT, FRAME & COVER	6	EACH	\$250.00		\$1,500.00
8 -IN. GATE VALVES, W/VAULT, FRAME & COVER	13	EACH	\$500,00		\$6,500.00
-IN. GATE VALVES, W/VAULT, FRAME & COVER		EACH			
SINGLE WATER METER SETTERS	11	EACH	\$250.00		\$2,750.00
DOUBLE WATER METER SETTERS	20	EACH_	\$350.00		\$7,000.00
	A-m=	<u> </u>	<b>A</b> 00.00		<b>#</b> 57 500 00
8" SANITARY SEWER 4" RESIDENTIAL LATERALS	2875 51	LIN. FT.	\$20.00 \$500.00		\$57,500.00 \$25,500.00
STANDARD MANHOLE W/FRAME & COVER	16	EACH	\$1,500.00		\$24,000.00
OTHER WAR AND THE STATE OF THE					
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			-		
EROSION AND SEDIMENT CONTROL MEASURES	PREVIOUSI	Y BONDED FOR	93,200,00		
ENCOUNT THE CEDIMENT CONTINUE WILLIAM					
\	4	<del>                                      </del>			<u> </u>
<u> </u>		<del> </del>			
ξ,					
AS-BUILT PLANS	1 .	LUMP SUM	\$5,000.00		<b>\$5,000.00</b>
STORMWATER MANAGEMENT	2	LUMP SUM -	\$5,000.00		\$10,000.00
	+		#21040100		Ţ. 5,550.00
			`		
			] .		
			<del></del>	SUB-TOTAL	\$919,695.00
			10% CONTINGEN		\$92,305.00
ESTIMATED TOTAL				<b>\$1</b> C	12,000.00

### LANDSCAPE NOTES

SIGNED:

ALL LANDSCAPE PLANTINGS SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION.

ALL LANDSCAPE PLANTINGS SHALL CONFORM TO STANDARDIZED PLANT NAME AND SHALL BE WELL-FORMED, TRUE TO TYPE AND HAVE WELL-DEVELOPED ROOT SYSTEMS. ALL PLANTINGS SHALL BE SOUND, HEALTHY, AND FREE FROM DEFECTS.

DATE:

ALL PLANTING SHALL BE DONE DURING THE PROPER SEASON AND NO PLANTING SHALL BE DONE IN FROZEN SOIL OR DURING UNFAVORABLE WEATHER CONDITIONS.

ALL TREES ARE TO BE LOCATED WITH RESPECT TO EXISTING OR PROPOSED UTILITIES. MULCH ALL PLANTINGS WITH A MINIMUM OF THREE INCHES OF SHREDDED OR CHIPPED

ADJUSTMENTS MAY BE NECESSARY DUE TO PLANT AVAILABILITY. DUE TO ON-SITE CONDITIONS, IN-FIELD ADJUSTMENTS MAY BE NECESSARY. ALL PLANTING OF TREES, SHRUBS, ETC. SHALL BE DONE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 605.

#### GENERAL NOTES

PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:

BOCA - BASIC CODES

ROANOKE CITY VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION,

ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS

VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK

OSHA — OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

WVWA - WESTERN VIRGINIA WATER AUTHORITY

MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION. OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK.

PAY REQUIRED FEES.

NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THE PLANS.

COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.

COORDINATE BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.

A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND CITY'S AGENT MUST ATTEND.

VERIFY THE LOCATION AND ELEVATION OF EACH EXISTING UNDERGROUND UTILITY IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. CONTACT ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONFLICT, UPON DISCOVERY OF A UTILITY WHICH IS NOT SHOWN, AND UPON DISCOVERY OF A LOCATION OR ELEVATION WHICH DIFFERS FROM THAT SHOWN. TO LOCATE UTILITIES, CALL "MISS UTILITY" 1-800-552-7001. UTILITY LOCATIONS SHOWN ARE THE RESULT OF A COMBINATION OF FIELD LOCATION AND EXISTING INFORMATION. LOCATIONS ARE APPROXIMATE.

REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO OWNER.

NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.

SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE CITY. A SEPARATE PERMIT IS REQUIRED.

ANY SITE DEVELOPMENT OUTSIDE OF THE SCOPE OF THIS PLAN WILL REQUIRE SITE PLAN REVIEW.

#### WESTERN VIRGINIA WATER AUTHORITY NOTES

A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE WESTERN VIRGINIA WATER AUTHORITY TO BE HELD AT LEAST ONE (1) DAY PRIOR TO ANY CONSTRUCTION OF THE APPROVED WATER AND SANITARY SEWER FACILITIES.

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES.

ALL SANITARY SEWER AND WATER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VAULTS, MANHOLES, ETC. AFTER PAVING AND ADJUSTING 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 VIRGINIA DEPARTMENT OF TRANSPORTATION'S STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL REFER TO THE WESTERN VIRGINIA WATER AUTHORITY STANDARD WATER AND SEWER REGULATIONS FOR CONSTRUCTION DETAILS AND INSTALLATION METHODS AS REQUIRED TO COMPLETE THE PROPOSED UTILITY FACILITIES AS INDICATED BY THESE DRAWINGS,

FIELD CORRECTIONS SHALL BE APPROVED BY THE WVWA ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE THE WESTERN VIRGINIA WATER AUTHORITY WITH CORRECT AS-BUILT PLANS PRIOR TO SUBSTANTIAL COMPLETION OF ANY NEW PUBLIC EXTENSIONS.

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

WATER LATERALS FROM THE METER TO THE BUILDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

THE CONSTRUCTION OF THE PROPOSED PUBLIC WATER MAIN AND ALL RESIDENTIAL SERVICES SHALL BE IN COMPLIANCE WITH THE CURRENT WESTERN VIRGINIA WATER AUTHORITY REGULATIONS. REFER TO THESE REGULATIONS FOR COMPLETE DETAILS AND INSTALLATION METHODS.

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 LATERALS AND REQUIRED FITTINGS LOCATED WITHIN A PUBLIC RIGHT-OF-WAY OR PUBLIC EASEMENT SHALL BE OF THE SAME TYPE OF MATERIAL AS THE MAINLINE SEWER PIPELINE.

THE CONSTRUCTION OF THE PROPOSED PUBLIC SEWER MAIN AND ALL RESIDENTIAL SERVICES SHALL BE IN COMPLIANCE WITH THE CURRENT WESTERN VIRGINIA WATER AUTHORITY REGULATIONS. REFER TO THESE REGULATIONS FOR COMPLETE DETAILS AND INSTALLATION METHODS.

ALL SANITARY SEWER PIPING SHALL BE PVC (POLYVINYL CHLORIDE) MANUFACTURED IN ACCORDANCE WITH ASTM DESIGNATION 3034-77 (SDR 35) UNLESS OTHERWISE NOTED ON THE PLANS/PROFILES.

ALL MANHOLE FRAMES AND COVERS SHALL BE WATERTIGHT AND ALL COVERS SHALL BE BOLT-DOWN MANHOLE COVERS (SEE DETAIL S-05 AND S-06) WHERE APPLICABLE.

### SHEET INDEX

**ABBREVIATIONS** 

ARROW HEAD TOP OF

FIRE HYDRANT

BOTTOM OF CURB

**APPROXIMATE** 

BITUMINOUS

BENCHMARK

CONCRETE

CORNER

DOUBLE

DIAMETER

ELECTRIC

ELEVATION

ENTRANCE

ENDWALL

EXISTING

FOUNDATION

HIGH POINT

INTERSECTION

IRON PIN

INVERT

FINISHED FLOOR

HOMEOWNERS ASSOCIATION

MINIMUM BUILDING LINE

FINISH GRADE

DEFLECTION

DROP INLET

DRAINAGE EASEMENT

EDGE OF PAVEMENT

BOTTOM OF WALL

CURB & GUTTER

CORRUGATED METAL PIPE

CINDER BLOCK

ASPHALT

BUILDING

BLOCK

BLDG

BLK

CMP

COR

DBL

**ELEV** 

**ENTR** 

EW

EXIST

FDN

FG

HOA

HPT

XTM

MBL

CONC

SHEET	TITLE
C-1	COVER SHEET
C-2	OVERALL PLAN
C-3	CONSTRUCTION NOTES
C-4	CONSTRUCTION DETAILS
C-5	ROAD PLAN & PROFILE
C-6	DIMENSIONAL PLAN
C-7	DIMENSIONAL PLAN
C-8	GRADING PLAN
C-9	GRADING PLAN
C-10	OFF-SITE WATERLINE EXTENSION
C-11	SEWER EXTENSION
C-12	PROFILES
C-13	PROFILES
C-14	PROFILES  FSC PLAN  A5-Boilts - 12-6-2001
C-15	200 1 0 114
C-16	ESC NOTES Cb
C-17	ESC DETAILS 0 7
C-18	WVWA DETAILS C 10
C-19,	WVWA DETAILS FR-1A
	r K - U D

MIN

MON

PROP

PUE

**PVMT** 

R.O.W.

REQD

RR

RYS

SAN

SBL

SD

SE

SS

SSE

STA

STD

STO

SYS

TC

TEL

TW

TYP

VDOT

WBL

YD

WVWA

**TRANS** 

SECT

MANHOLE

MINIMUM

MONUMENT

PROPOSED

PAVEMENT

RIGHT OF WAY

STORM DRAIN

SLOPE EASEMENT

SANITARY SEWER

REQUIRED

RAILROAD

SANITARY

SECTION

STATION

STANDARD

STORAGE

TOP OF CURB

TRANSFORMER

TOP OF WALL

RANSPORTATION

WEST BOUND LANE

TYPICAL

VERTICAL

YARD

TELEPHONE

RADIUS

RIGHT

NORTH BOUND LANE

REAR YARD SETBACK

SOUTH BOUND LANE

SIDE YARD SETBACK

TEMPORARY BENCHMARK

VIRGINIA DEPARTMENT OF

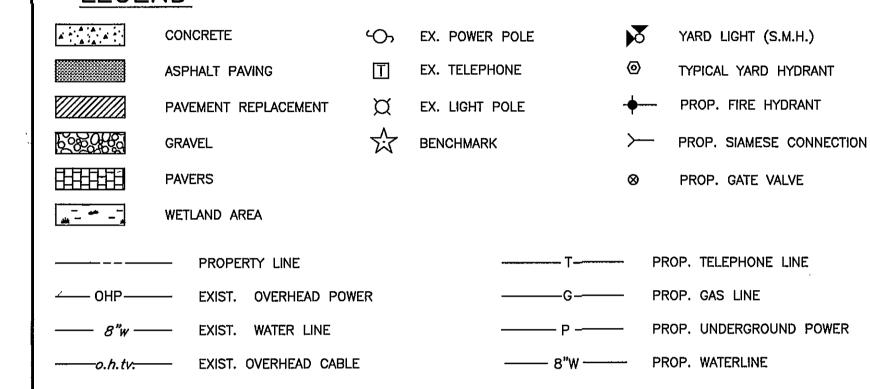
WESTERN VIRGINIA WATER AUTHORITY

SANITARY SEWER EASEMENT

PUBLIC UTILITY EASEMENT

# **LEGEND**

VICINITY MAP



## STANDARD CITY OF ROANOKE CONSTRUCTION PROCEDURE REQUIREMENTS

CITY INSPECTIONS: TO ENSURE THE COORDINATION OF TIMELY AND PROPER INSPECTIONS, A PRECONSTRUCTION CONFERENCE SHALL BE INITIATED BY THE CONTRACTOR WITH THE CITY OF ROANOKE DEVELOPMENT INSPECTOR, Mr. WINSTON CORBETT AT (540)853-1227 TO ARRANGE A CONFERENCE AT LEAST THREE (3) DAYS PRIOR TO ANTICIPATED CONSTRUCTION.

RIGHT-OF-WAY EXCAVATION PERMIT: PRIOR TO THE COMMENCEMENT OF ANY DIGGING, ALTERATION, OR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY (STREETS, ALLEYS, PUBLIC EASEMENTS) A RIGHT-OF-WAY EXCAVATION PERMIT SHALL BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR FROM THE CITY OF ROANOKE.

PLANS AND PERMITS: A COPY OF THE PLANS APPROVED BY THE CITY OF ROANOKE (SIGNED BY THE PROPER CITY OFFICIALS) AND ALL PERMITS ISSUED BY THE CITY SHALL BE MADE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES OF ONGOING

LOCATION OF UTILITIES: THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONSTRUCTION ENTRANCE: THE CONTRACTOR SHALL INSTALL AN ADEQUATE CONSTRUCTION ENTRANCE FOR ALL CONSTRUCTION-RELATED EGRESS FROM THE SITE. THE SIZE AND COMPOSITION OF THE CONSTRUCTION ENTRANCE SHALL BE DETERMINED BY THE CITY OF ROANOKE SITE PLAN INSPECTOR.

STREETS TO REMAIN CLEAN: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE PUBLIC STREET ADJACENT TO THE CONSTRUCTION ENTRANCE REMAINS FREE OF MUD, DIRT, DUST, AND/OR ANY TYPE OF CONSTRUCTION MATERIALS OR LITTER AT ALL TIMES.

BARRICADES/DITCHES: THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXCAVATED DITCHES AND SHALL FURNISH AND ENSURE THAT ALL BARRICADES PROPER AND NECESSARY FOR THE SAFETY OF THE PUBLIC ARE IN PLACE.

SEWER AND PAVEMENT REPLACEMENT: CONSTRUCTION OF SANITARY SEWERS AND THE REPLACEMENT OF PAVEMENT SHALL BE IN ACCORDANCE WITH APPROVED STANDARDS AND SPECIFICATIONS OF THE CITY OF ROANOKE.

APPROVED PLANS/CONSTRUCTION CHANGES: ANY CHANGE OR VARIATION FROM CONSTRUCTION DESIGN AS SHOWN ON THE OFFICIALLY APPROVED PLANS SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO SAID CHANGES OR VARIATIONS ON CONSTRUCTION BEING MADE.

FINAL ACCEPTANCE/CITY: THE DEVELOPER OR CONTRACTOR MAY BE REQUIRED TO FURNISH THE CITY OF ROANOKE WITH A SET OF AS-BUILT PLANS PRIOR TO FINAL ACCEPTANCE BY THE CITY.

NOTICE TO ALL LANDOWNERS, DEVELOPERS, AND CONTRACTORS: FAILURE TO COMPLY WITH THE CONSTRUCTION PROCEDURE REQUIREMENTS LISTED ABOVE MAY RESULT IN THE COSTLY REMOVAL OF STRUCTURES, TIME DELAYS, OR THE ISSUANCE OF A STOP WORK ORDER.

# **ENGINEERS NOTES**

---- 18"rcp --- EXIST. STORM SEWER

\_WETLAND BOUNDARY

EXIST. TREELINE

EXIST. CENTERLINE OF ROAD

EXIST. EDGE OF PAVEMENT

---- RMA---- RESOURCE MANAGEMENT AREA BOUNDARY

----- RPA---- RESOURCE PROTECTION AREA BOUNDARY

BALZER AND ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

BC=351.45

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER. BALZER AND ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE PLANS OR WILL NOT BE RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING

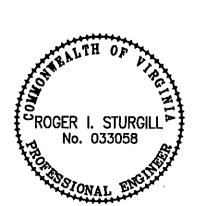
SOURCE OF TOPOGRAPHIC MAPPING IS CITY OF ROANOKE AERIAL MAPPING, DATED APRIL, 1996 AND SUPPLEMENTED BY FIELD SURVEYS PROVIDED BY BALZER AND ASSOCIATES, INC.

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



AGENT— CITY OF ROANOKE PLANNING COMMISSION	DATE
DIRECTOR OF W.V.W.A.	DATE
DIRECTOR OF TRANSPORTATION	DATE
DIRECTOR OF ENGINEERING	DATE
APPROVAL BLOCK	





"VINYARD PARK"

PROP. SANITARY SEWER LINE

PROP. STORM SEWER LINE

EXIST. INDEX CONTOURS

EXIST. SPOT ELEVATION

EXIST. INTERMEDIATE CONTOURS

PROP. TOP & BOTTOM OF CURB

PROP. CONTOURS

PROP. TREELINE

REFLECTING TOMORROW www.balzer.cc PLANNERS • ARCHITECTS ENGINEERS • SURVEYORS

1208 Corporate Circle Roanoke, Virginia 24018 Phone: 540/772-9580 FAX: 540/772-8050

501 Branchway Road Richmond, Virginia 23236 Phone: 804/794-0571 FAX: 804/794-2635

880 Technology Park Drive Suite 200 Gien Allen, Virginia 23059 FAX, 804/553-0133

448 Peppers Ferry Road Christiansburg, Virginia 24073 Phone, 540/381-4290 FAX: 540/381-4291

1557 Commerce Road Sulle 201 Verona, Virginia 24482 Phone: 540/248-3220

FAX, 540/248-3221

S COVER

CO

DRAWN BY: CPB DESIGNED BY: CPB

CHECKED BY: JVJ

06/12/2006 REVISIONS: 08/31/06 PER CITY OF ROANOKE 1ST REVIEW

10/03/06 PER CITY OF ROANOKE 2ND REVIEW 10/17/06 PER CITY OF ROANOKE 3RD REVIEW 01/19/07 PER CITY OF ROANOKE 4TH REVIEW 03/28/07 PER STORM

DRAIN REVISION

N/A

SCALE:

SHEET NO.

JOB NO. R0500378.01