BB&T BANK AT BEACON HILL

6618 RICHMOND HIGHWAY

LEE DISTRICT - FAIRFAX COUNTY, VIRGINIA

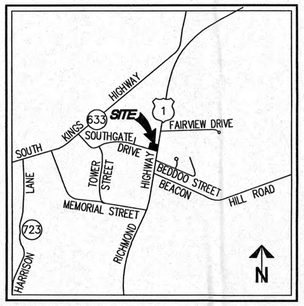
SPECIAL EXCEPTION PLAT

NOTES

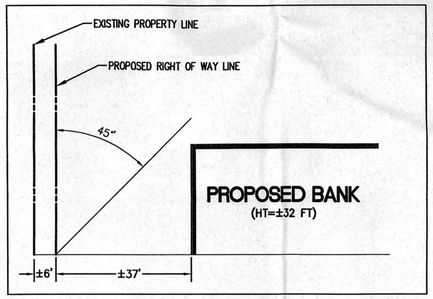
1. OWNER/APPLICANT:
   MOUNT VERNON NATIONAL BANK AND TRUST CO.
   PO BOX 1290
   WINSTON SALEM, NC 27102
2. THE PROPERTY SHOWN ON THIS PLAN IS IDENTIFIED AS MAP #93-1-27, PARCELS 1B AND 3C ON THE FAIRFAX COUNTY TAX MAP.
3. THE CURRENT SITE AREA IS ±42,500 SQUARE FEET OR ±0.975 ACRES.
4. THIS PROPERTY IS CURRENTLY ZONED C-6, COMMUNITY RETAIL COMMERCIAL DISTRICT AND IS LOCATED WITHIN THE HIGHWAY CORRIDOR OVERLAY DISTRICT AND THE RICHMOND HIGHWAY COMMERCIAL REVITALIZATION DISTRICT. A CATEGORY 6 SPECIAL EXCEPTION IS REQUIRED FOR USE OF A BANK WITH A DRIVE-THRU WITHIN THE HIGHWAY CORRIDOR OVERLAY DISTRICT ON THIS PROPERTY.
5. THE BOUNDARY AND TOPOGRAPHIC SURVEY WAS ASSEMBLED USING A FIELD RUN SURVEY DONE BY THIS FIRM. CONTOUR INTERVAL IS TWO (2) FEET.
6. PROPERTY IS SERVED BY PUBLIC WATER AND SEWER.
7. A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP FOR FAIRFAX COUNTY, VIRGINIA (COMMUNITY-PANEL NUMBER 515525 0150 D), REVISED MARCH 05, 1990, DESIGNATES THE PROPERTY AS BEING IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN.
8. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SITE.
9. TO THE BEST OF OUR KNOWLEDGE, ALL UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE ON THIS PROPERTY ARE SHOWN.
10. THE EXISTING BUILDING IS TO BE REMOVED.
11. SIGNAGE TO BE PROVIDED IN ACCORDANCE WITH ARTICLE 12 OF THE ZONING ORDINANCE.
12. THE OWNER AGREES TO PROVIDE INTERPARCEL ACCESS TO TAX PARCEL 93-1-27-0001 IN LOCATION SHOWN ON SHEET 3 AT SUCH TIME AS (a) RICHMOND HIGHWAY ADJACENT TO THE PROPERTY IS WIDENED AND IMPROVED TO ITS ULTIMATE SECTION AND THE CURRENTLY EXISTING SERVICE LANES ABUTTING THE PROPERTY ARE CLOSED, AND (b) THE OWNER OF TAX PARCEL 93-1-27-001 ABUTTING THE PROPERTY (i) GRANTS TO OWNER AN INTERPARCEL ACCESS EASEMENT TO PERMIT ACCESS OVER SUCH TAX PARCEL TO RICHMOND HIGHWAY AND (ii) CONSTRUCTS SUCH INTERPARCEL ACCESS.

WAIVERS/MODIFICATIONS

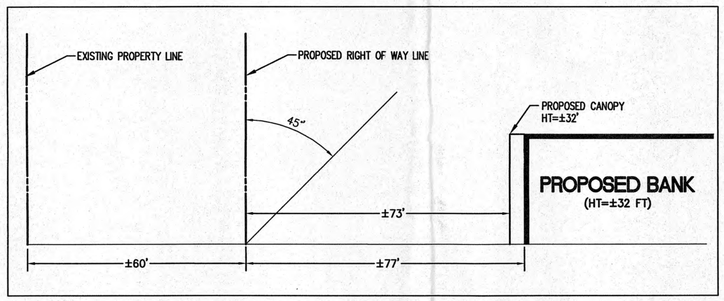
1. REQUEST A WAIVER OF THE CONSTRUCTION OF THE ON-ROAD BIKE ROUTE ALONG RICHMOND HIGHWAY.
2. REQUEST A WAIVER OF THE CONSTRUCTION OF FRONTAGE IMPROVEMENTS ALONG RICHMOND HIGHWAY.
3. REQUEST A WAIVER OF THE LOADING SPACE REQUIREMENT.
4. REQUEST A WAIVER OF THE MINIMUM LOT WIDTH DUE TO EXISTING CONDITIONS.
5. REQUEST A WAIVER OF THE FUTURE SERVICE DRIVE REQUIREMENT.
6. REQUEST A MODIFICATION OF THE LOT SIZE DUE TO POSE DEDICATION AREA.
7. REQUEST A MODIFICATION OF THE FRONT YARD SETBACK.
8. REQUEST A MODIFICATION OF THE RICHMOND HIGHWAY CORRIDOR STREETSCAPE IMPROVEMENT REQUIREMENTS.
9. REQUEST A WAIVER OF THE INTERPARCEL ACCESS REQUIREMENT.
10. REQUEST A WAIVER OF THE PERIPHERAL PARKING LOT LANDSCAPING WIDTH ALONG RICHMOND HIGHWAY.



VICINITY MAP SCALE: 1"=2000'



SOUTHGATE DRIVE - ROUTE 1779
ANGLE OF BULK PLANE DETAIL
SCALE 1"=20'



RICHMOND HIGHWAY - ROUTE 1
ANGLE OF BULK PLANE DETAIL
SCALE 1"=20'

ZONING TABULATION

EXISTING ZONE: C-6, COMMUNITY RETAIL COMMERCIAL DISTRICT
THE SITE IS LOCATED WITHIN THE FOLLOWING DISTRICTS:
HIGHWAY CORRIDOR OVERLAY DISTRICT (HCOD)
RICHMOND HIGHWAY COMMERCIAL REVITALIZATION DISTRICT (CRD)
SITE AREA: ±42,500 SF OR ±0.975 AC *

	REQUIRED	PROVIDED
MIN. LOT AREA:	40,000 SF	±42,500 SF
MIN. LOT WIDTH:	200 FT	±170 FT**
MAX. BLD. HT:	40 FT	±32 FT
MIN. YARD REQUIREMENTS:		
FRONT	45'; BUT NOT LESS THAN 40 FT	±37 FT; ±77 FT (SEE NOTE BELOW)
SIDE	NONE	N/A
REAR	20 FT	BUILDING = ±37 FT; ±48 FT CANOPY = ±17 FT***
MAX. FAR:	0.40	±0.11*
OPEN SPACE	15%	±20%

* SITE AREA IS BASED ON PRE-DEDICATION
** EXISTING CONDITION
*** CANOPY WILL BE AT LEAST 10' ABOVE FINISHED GRADE, THEREFORE IT CAN EXTEND THREE FEET INTO ANY MINIMUM REQUIRED YARD

FRONT YARD NOTE: THE CRD ALLOWS FOR A REDUCTION TO 20'. THE TEMPORARY TRAILER WILL HAVE A FRONT YARD SETBACK OF LESS THAN 20'.

PARKING TABULATION

USE: DRIVE-IN BANK
RATE: 4 SP/1000 SF OF GFA, PLUS 5 STACKING FOR THE FIRST 2 DRIVE THRU WINDOWS AND 2 FOR EACH ADDITIONAL WINDOW

±4,500/1000 X 4 = 18 SPACES
18 x 20% CRD REDUCTION = 15

PARKING REQUIRED = 15 SPACES

PARKING PROVIDED = 18 SPACES (INCL. 1 HANDICAP)

* A 20% PARKING REDUCTION IS ALLOWED PER THE CRD

Application No. SE 2009-LE-022 Staff B. Cho
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 1 of 9

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNLAP
Lic. No. 1309-B
3/16/10
LAND SURVEYOR

RECEIVED
Department of Planning & Zoning
MAR 16 2010
Zoning Evaluation Division

SHEET INDEX

1. COVER SHEET
2. EXISTING CONDITIONS EXHIBIT/EXISTING VEGETATION MAP
3. SPECIAL EXCEPTION PLAT
4. CONCEPTUAL LANDSCAPE PLAN
5. INTERIM TRAILER LOCATION EXHIBIT
6. PRELIMINARY STORMWATER MANAGEMENT/BEST MANAGEMENT PRACTICES PLAN
7. PRELIMINARY OUTFALL ANALYSIS
8. ARCHITECTURAL ELEVATIONS – SIDE
9. ARCHITECTURAL ELEVATIONS – FRONT AND REAR

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1901 WWW.WLPINC.COM

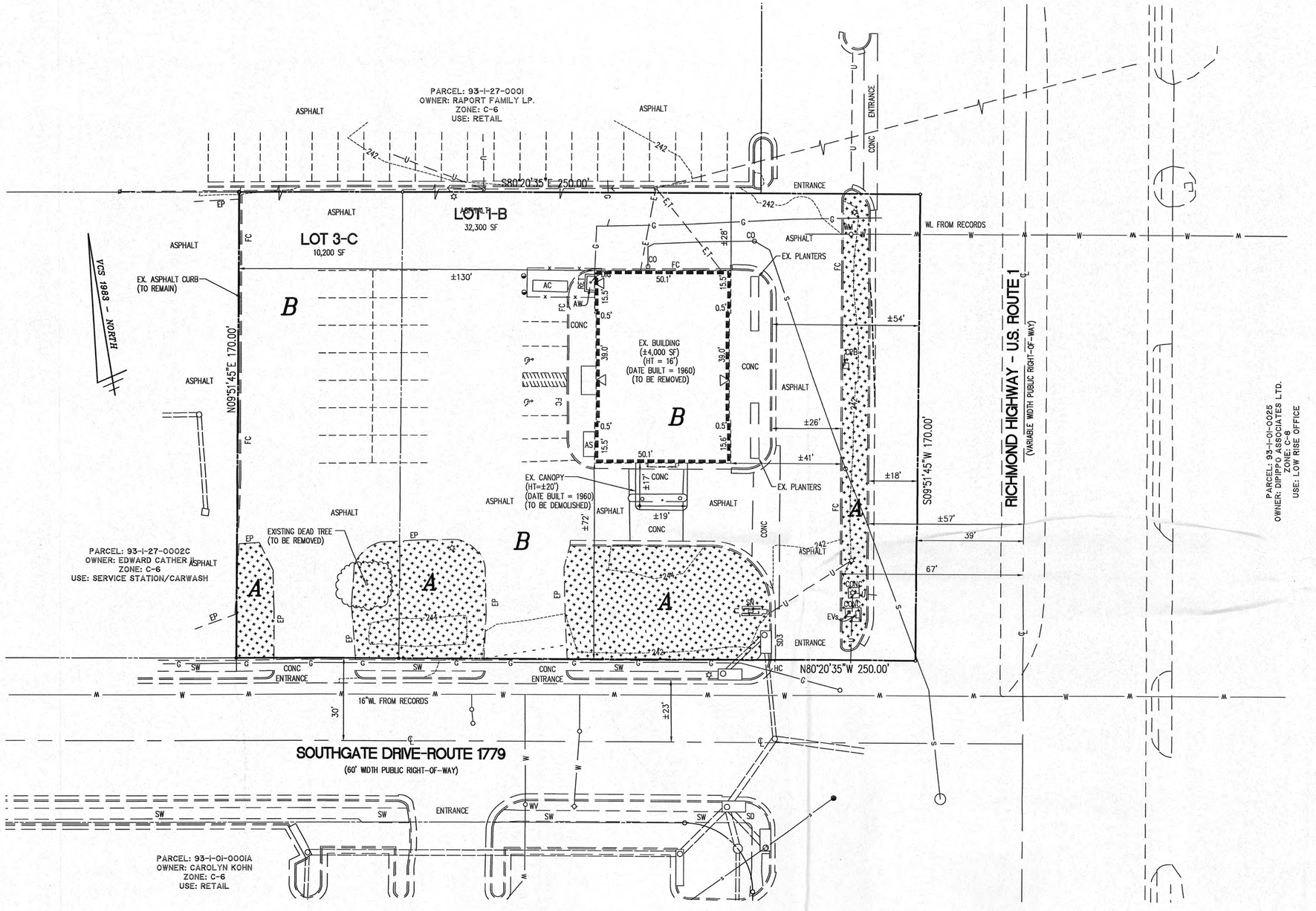
DATE: 8/5/09; REV: 9/2/09;12/7/09;1/15/10
REV: 2/4/10; 2/24/10; 3/1/10
DRAWN: MRW
SCALE: 1" = 20'

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

COVER SHEET

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA



LEGEND

DESCRIPTION
CURB & GUTTER CG-2
SANITARY SEWER
SL — SANITARY LATERAL
STORM SEWER
WATER MAIN
FIRE HYDRANT
PLUG
OVERHEAD WIRES
UTILITY POLE
FENCE
LIGHT
TREES
LIMITS OF CLEARING AND GRADING

EXISTING VEGETATION MAP INFORMATION

KEY		COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
	A	MAINTAINED GRASSLANDS	GRASS AND LANDSCAPE AREAS	N/A	FAIR TO GOOD	±7,020 SF OR ±0.161 AC	ONE DEAD TREE LOCATED ON SITE TO BE REMOVED
	B	DEVELOPED	BUILDING AND ASPHALT	N/A	N/A	±35,480 SF OR ±0.814 AC	

TOTAL SITE AREA: **±42,500 SF OR ±0.975 AC**

0 10 20 40

(IN FEET)
1 INCH = 20'

Application No. SE 2009-LE-022 Staff B. Cho
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 2 of 9

File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\84041SE Xref:

SHEET: 2 OF 9

EXISTING CONDITIONS EXHIBIT/EXISTING VEGETATION MAP

REVISION APPROVED BY

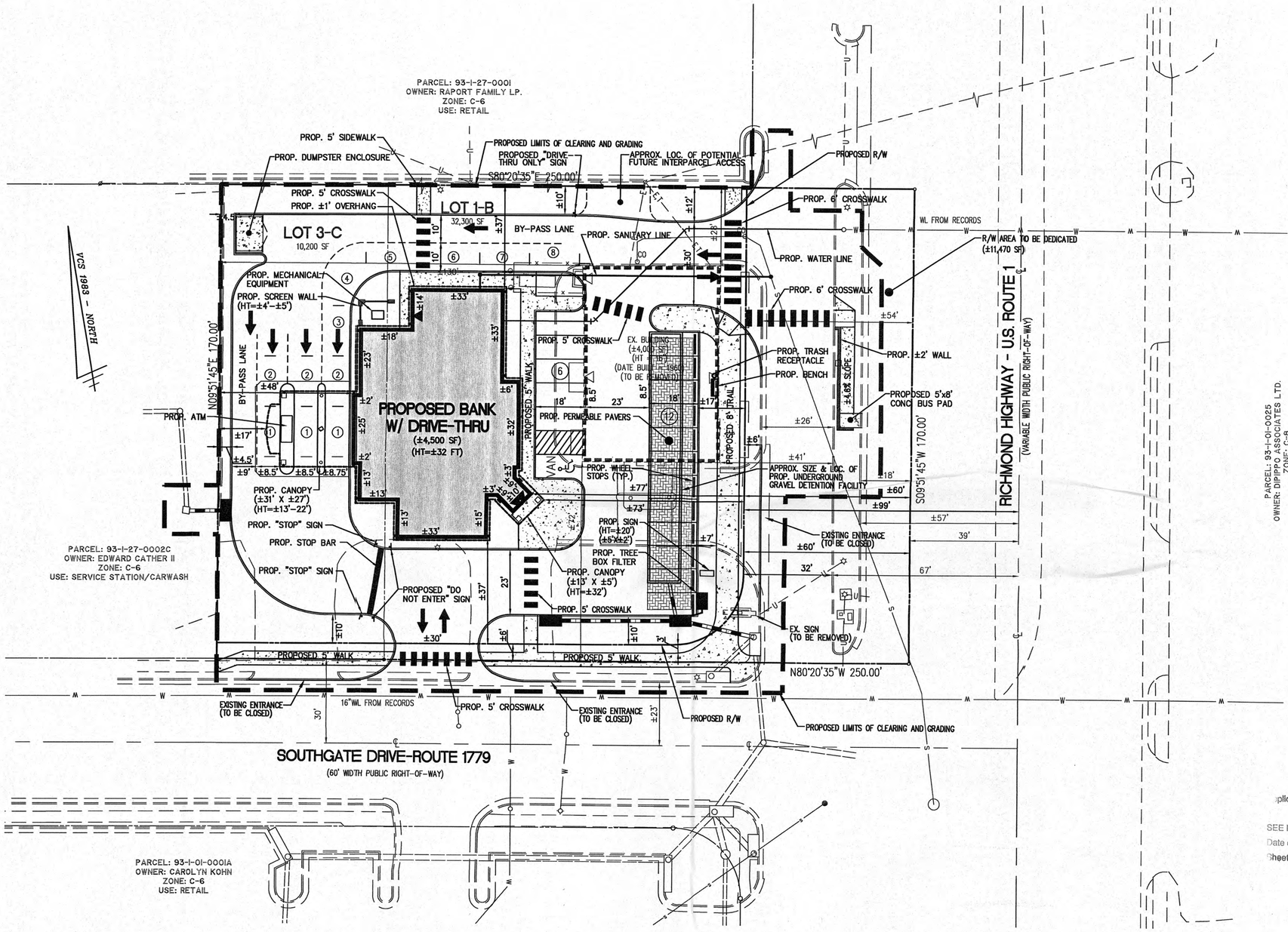
NO.	DESCRIPTION	DATE	REV. BY	APPROVED

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301 WWW.WLPINC.COM

DATE: 8/5/09; REV. 9/2/09;12/7/09;1/15/10; REV. 2/4/10; 2/24/10; 3/1/10
DRAWN: MRW
SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNLAP
Lic. No. 1309-B
8/5/09
LAND SURVEYOR



0 10 20 40
(IN FEET)
1 INCH = 20'

NOTES:

1. UTILITY CONNECTIONS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING.
2. MAXIMUM PROPOSED SIGN SIZE TO BE IN ACCORDANCE WITH ARTICLE 12 OF THE ZONING ORDINANCE.

Application No. SE 2009-LE-022 Staff B. Cho
APPROVED SE/SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 3 of 9

SPECIAL EXCEPTION PLAT

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301
WWW.WLPINC.COM

DATE: 8/3/09; REV. 9/2/09; 12/7/09; 1/15/10 REV. 2/4/10; 2/24/10; 3/11/10
DRAWN: MRW
SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNLAP
Lic. No. 1309-B
8/3/09
LAND SURVEYOR

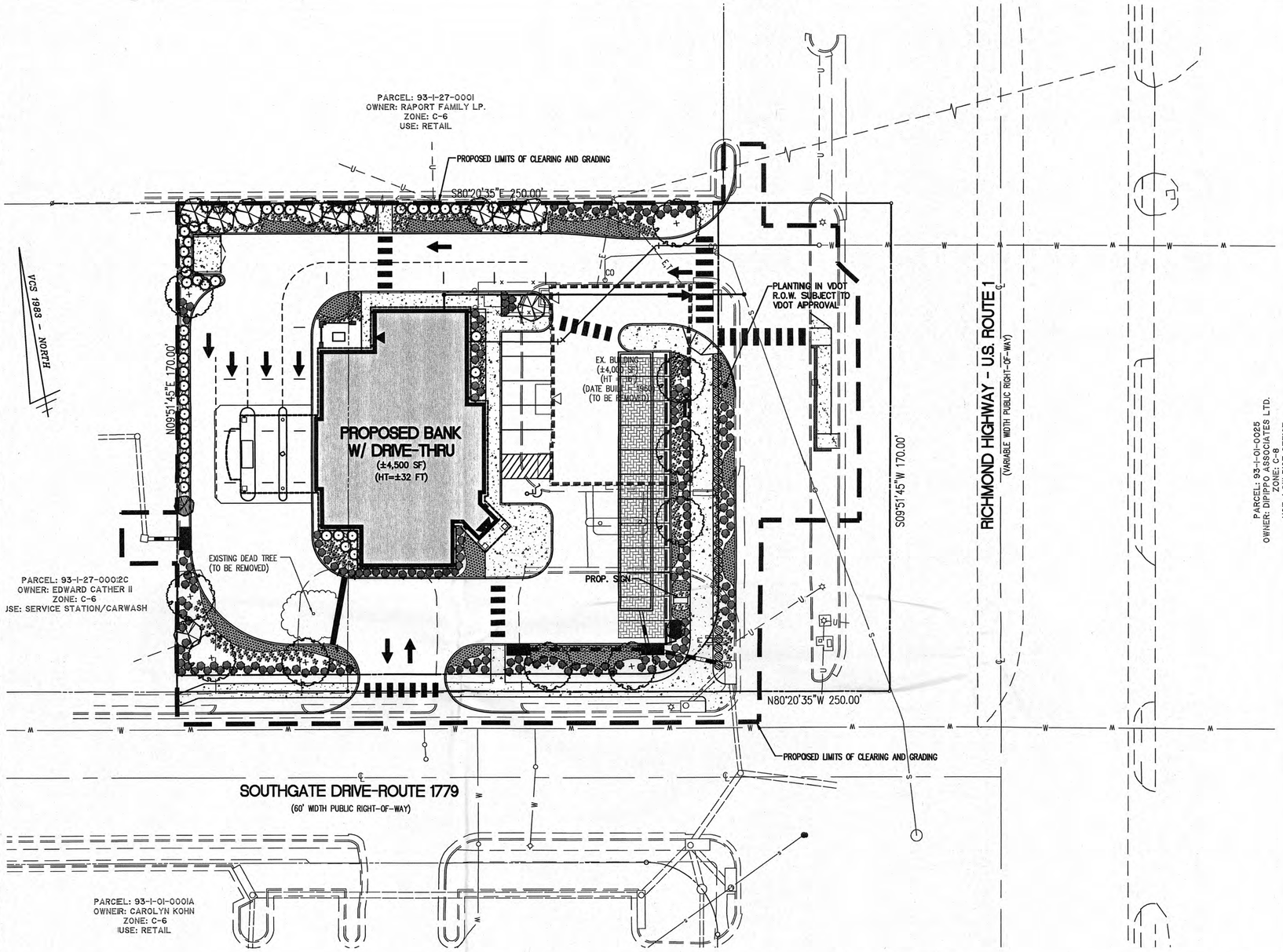
REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\84041SE Xref:

Table 12.12 10-year Tree Canopy Calculation Worksheet

Step		Totals	Reference
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	SEE TABLE 12.3 (THIS SHEET)	see § 12-0507.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area =	42,500	§ 12-0510.1A
B2	Subtract area dedicated to parks, road frontage, and		§ 12-0510.1B
B3	Subtract area of exemptions =	– 11,470	§ 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1 – B2) =	31,030	
B5	Identify site's zoning and/or use	C-6	
B6	Percentage of 10-year tree canopy required =	10%	§ 12-509.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B5) =	3,103	
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located	N/A	Sheet number
C. Tree Preservation			
C1	Tree Preservation Target Area =	0	SEE TABLE 12.3, THIS SHEET
C2	Total canopy area meeting standards of § 12-0200 =	0	
C3	C2 x 1.25 =	0	§ 12-0509.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities =	0	
C5	C4 x 1.5 =		§ 12-0509.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees =	0	
C7	C6 x 1.5 to 3.0 =		§ 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	0	
C9	C8 x 1.0 =		§ 12-0509.3C(1)
C10	Total of C3, C5, C7 and C9 =	0	If area of C10 is less than B7 remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10) =	3,103	
D2	Area of canopy Planted for air quality benefits =	0	
D3	x 1.5 =		§ 12-0509.4B(1)
D4	Area of canopy planted for energy conservation =	0	
D5	x 1.5 =		§ 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits =	0	
D7	x 1.25 =		§ 12-0509.4B(3
D8	Area of canopy planted for wildlife benefits =	0	
D9	x 1.5 =		§ 12-0509.4B(4)
D10	Area of canopy provide by native trees =	0	
D11	x 1.5 =		§ 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	2,700	
D13	X1.25	3,375	§ 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings =	0	§ 12-0509.4D(1)
	x1.0		
D15	Area of canopy provided through native shrubs or woody seed mix =	0	§ 12-0509.4D(1)(a)
	x1.0		§ 12-0509.4D(1)(a)
D16	Percentage of D14 represented by D15=		Must not exceed 33% of D14
D17	Total of canopy area provided through tree planting =	3,375	
D18	Is an offsite planting relief requested?	NO	Yes or No
D19	Tree Bank or Tree Fund?		§ 12-0511
D20	Canopy area requested to be provided through offsite banking or tree fund	N/A	
D21	Amount to be deposited into the Tree Preservation and Planting Fund	N/A	
E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10) =	0	
E2	Total of canopy area provided through tree planting (D17) =	3,375	
E3	Total of canopy area provided through offsite mechanism (D19) =	0	
E4	Total of 10-year Tree Canopy Provided =	3,375	Total of E1 through E3. Area should meet or exceed area in B6



LEGEND

PROPOSED CATEGORY IV DECIDUOUS TREES (QUERCUS PHELLOS, ACER RUBRUM, TILIA AMERICANA)

PROPOSED CATEGORY II FLOWERING TREES (AMELAINCHIER CANADENSIS, CHIONANTHUS VIRGINICUS, CERCIS CANADENSIS, MAGNOLIA VIRGINIANA)

PROPOSED CATEGORY 1 OR 2 FLOWERING TREES FOR FILTERRA – APPROPRIATE TREES INCLUDE CRAPE MYRTLE, REDBUD

PROPOSED SHRUBS (ITEA VIRGINICA, ILEX GLABRA, VIBURNUM DENTATUM, HYDRANGEA QUERCIFOLIA, PRUNUS LAUROCERASUS)

PROPOSED PERENNIALS/GRASSES/GROUNDCOVER (MULHEINBERGIA CAPILLARIS, CALAMAGROSTIS X KARL FOERSTER, DAYLILY, IRIS, ASTILBE, LIRIOPE SPICATA)

TREE COVER CALCULATIONS

TOTAL SITE AREA	±42,500 S.F.
AREA TO BE DEDICATION	– ±11,470 S.F.
ADJUSTED SITE AREA	±31,030 S.F.
PERCENT REQUIRED	X 10 %
TREE COVER REQUIRED	**±3,103 S.F.**
TREE COVER PROVIDED (PLANTED)	
±8 CATEGORY IV DECIDUOUS @ 200 SF	±1,600 S.F.
±11 CATEGORY II DECIDUOUS @ 100 SF	+ ±1,100 S.F.
	±2,700 S.F.
(±2,700 x 1.25 MULTIPLIER)	= ±3,375 S.F.
EXISTING TREE COVERAGE	+ 0 S.F.
TOTAL TREE COVERAGE	**±3,375 S.F. (±10%)**

NOTE

1. THE SITE HAS A TOTAL PARKING UNDER 20 SPACES; THEREFORE, INTERIOR PARKING LOT LANDSCAPING IS NOT REQUIRED.

TABLE 12.3

TABLE 12.3 TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

A. PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EVM): 0 SF SEE SHEET 2

B. PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY: 0 %

C. PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE: 10% (3,103 SF)

D. PERCENTAGE OF 10 YEAR TREE CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION: 0%

E. PROPOSED PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION: 0%

F. HAS THE TREE PRESERVATION TARGET MINIMUM BEEN MET? YES

0 10 20 40
(IN FEET)
1 INCH = 20'

Application No. SE 2009-LE-022 Staff B. Cho
APPROVED SE SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of BOS (BZA) approval March 23, 2010
Sheet 4 of 9

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046 WWW.WLPINC.COM
(703) 532-6163 FAX (703) 533-3301

DATE: 8/3/09, REV: 9/2/09,12/7/09,1/15/10
REV: 2/4/10, 2/24/10, 3/1/10
DRAWN: MRW
SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA
CHARLES F. DIPAUL
Lic. No. 1309-B
8/3/09
LAND SURVEYOR

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

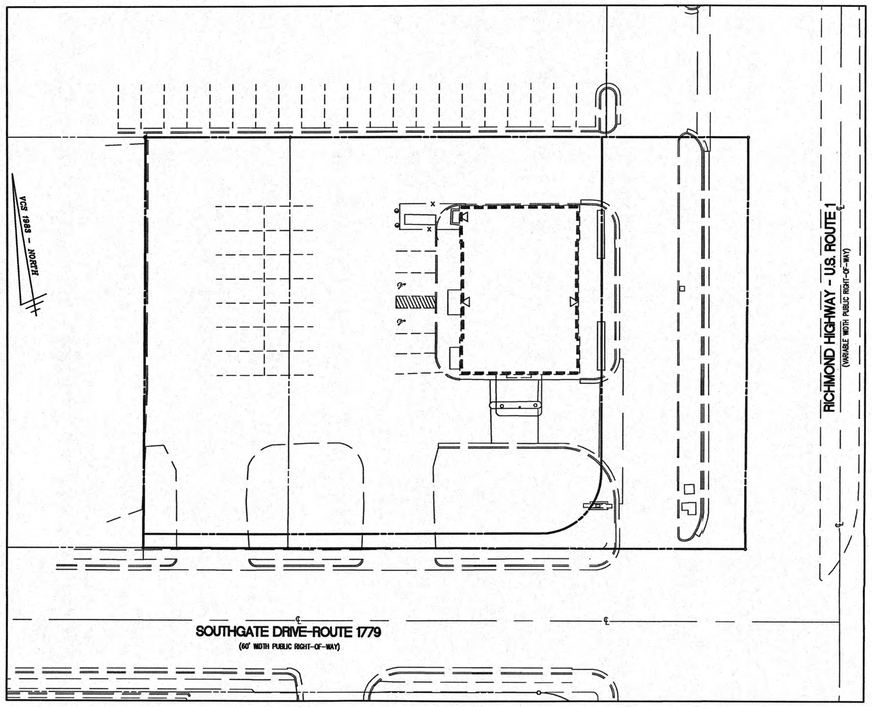
REVISION APPROVED BY

CONCEPTUAL LANDSCAPE PLAN

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

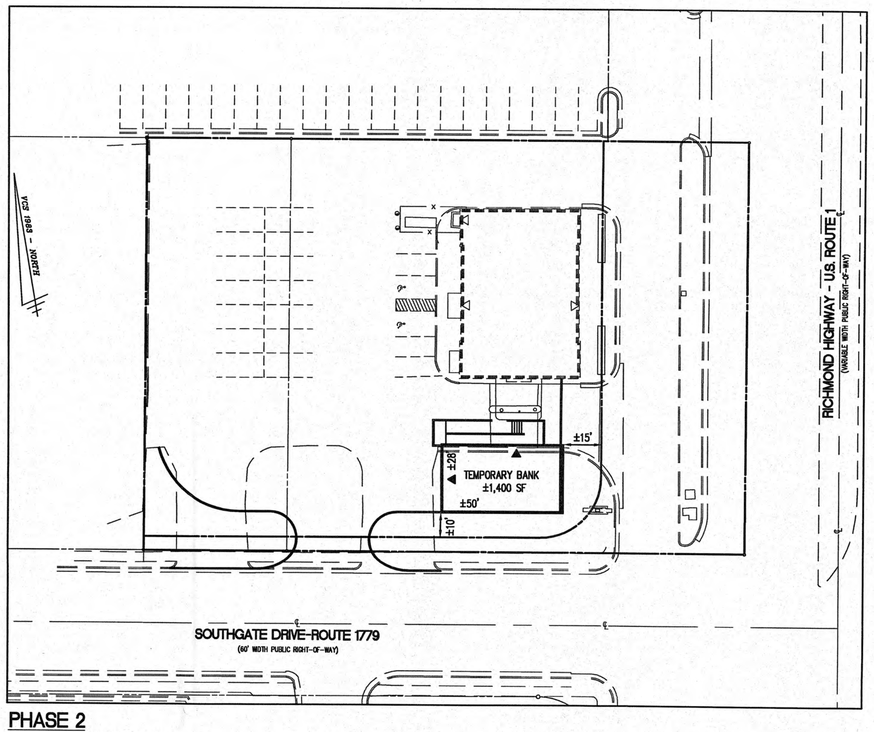
File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\84041SE Xref:

SHEET: 4 OF 9



PHASE 1

- CLOSE DRIVE-THRU
- ROUGH GRADE
- INSTALL UTILITIES (PERMENANT AND TEMPORARY)
- INSTALL PAD FOR TEMPORARY BANK

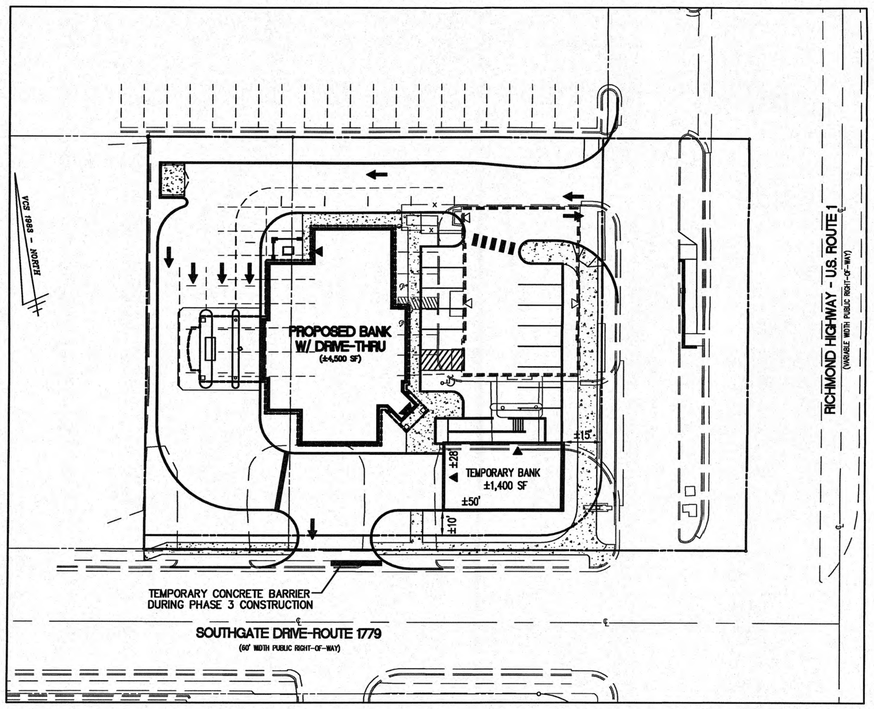


PHASE 2

- INSTALL TEMPORARY BANK
- CLOSE EXISTING BANK
- OPEN TEMPORARY BANK
- DEMOLISH EXISTING BANK

FRONT YARD NOTE

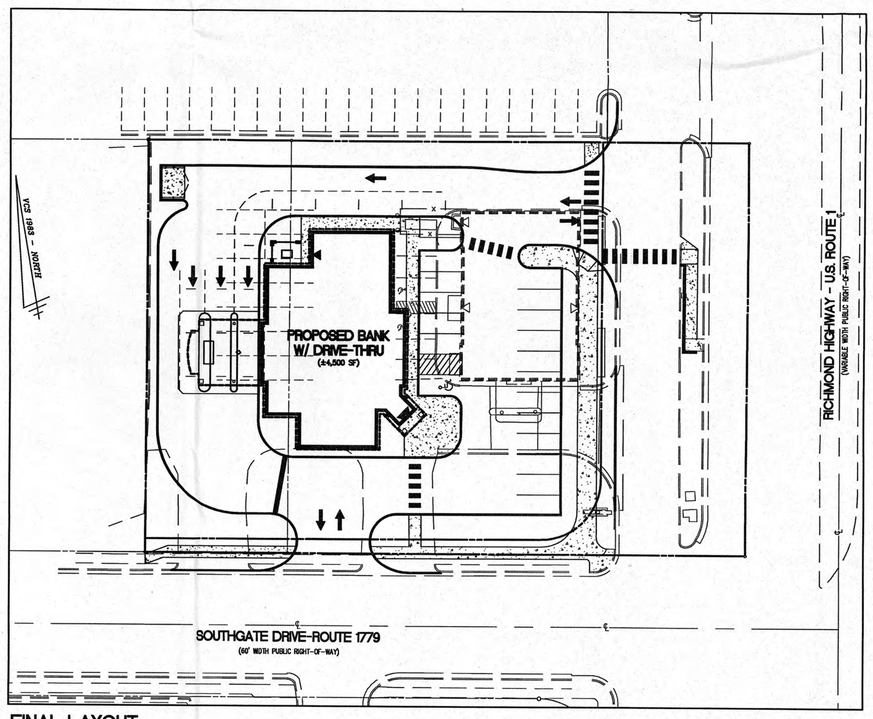
THE CRD ALLOWS FOR A REDUCTION TO 20'. THE TEMPORARY TRAILER WILL HAVE A FRONT YARD SETBACK OF LESS THAN 20'.



PHASE 3

- BUILD NEW PARKING ON RICHMOND HIGHWAY SIDE W/ PARKING DEAD ENDING AT TEMPORARY BANK
- BUILD NEW BANK
- CLOSE TEMPORARY BANK
- OPEN NEW BANK WITH DRIVE-THRU AND NO ENTRY ON SOUTHGATE DRIVE

PARKING NOTE: DURING THIS PHASE, ONLY 13 PARKING SPACES ARE AVAILABLE.



FINAL LAYOUT

- REMOVE TEMPORARY BANK
- COMPLETE REMAINING CONSTRUCTION
- OPEN DRIVE-THRU
- NEW BANK FULLY OPERATIONAL AND ALL CONSTRUCTION COMPLETE

Application No. SE 2009-LE-027 Staff R. Cho
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 5 of 9

0 10 20 40
(IN FEET)
1 INCH = 20'

File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\TEMP_TRAILER_EX Xref:

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046 WWW.WLPINC.COM
(703) 532-6163 FAX (703) 533-1301

DATE: 8/3/09; REV. 9/2/09;12/7/09;1/15/10 REV. 2/4/10; 2/24/10; 3/1/10 | DRAWN: MRW | SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA — CHARLES T. DUNLAP — Lic. No. 1309-B — 8/3/09 — LAND SURVEYOR B

NO.	DESCRIPTION	DATE	REV. BY	APPROVED

REVISION APPROVED BY

TEMPORARY TRAILER LOCATION EXHIBIT

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SHEET: 5 OF 9

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 2A (12)&(14))
Development Plans PRC District (16-302 2 & 4L)	PRC Plan (16-303 1E & 10)
FDP P Districts (except PRC) 916-502 1F & 1Q)	Amendments (18-202 10F & 10I)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100).

2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 3

3. Provide:

Facility Name/ Type & No. (e.g. dry pond A, infil. Trench, underground vault, etc.)	On-Site area served (acres)	Off-Site are served (acres)	Drainage area (acres)	Footprint area (sf.)	Storage Volume (cf.)	If pond, dam height (ft.)
UNDERGROUND	±0.04AC	–	–	±1,000SF	±750 CF	
GRAVEL DET.						
					Totals	

4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 7.

5. Maintenance accesses (road) to stormwater management facility(ies) are shown on Sheet N/A.

6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet. 4

7. A "stormwater management narrative" which contains a description of how detention and best management practices requirements will be met is provided on Sheet 6.

8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet. 7

9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 7

10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets. 1, 2

11. A submission waiver is requester for N/A.

12. Stormwater management is not required because N/A.

OVERALL SITE DRAINAGE SUMMARY:

I. PRE-DEVELOPMENT:

A. TOTAL AREA = 0.71 AC.

CONTRIBUTING AREAS:

0.61 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
0.10 AC. @ 0.30 (GREEN AREA ON-SITE)
0.71 AC.

B. WEIGHTED "C":

$$\frac{(0.61)\ (0.90) + (0.10)\ (0.3)}{0.71} = 0.80$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.80) (5.45) (0.71) = 3.10 CFS
Q10 = (0.80) (7.27) (0.71) = 4.13 CFS

II. POST-DEVELOPMENT:

A. CONTRIBUTING AREAS:

0.57 AC. @ 0.90 (IMPERVIOUS AREA ONSITE)
0.14 AC. @ 0.30 (GREEN AREA ONSITE)
0.71 AC.

B. WEIGHTED "C":

$$\frac{(0.57)\ (0.90) + (0.14)\ (0.30)}{0.71} = 0.78$$

C. RUNOFF: Q2 = (0.78) (5.45) (0.71) = 3.02 CFS
Q10 = (0.78) (7.27) (0.71) = 4.03 CFS

III. COMPARISON:

DUE TO A DECREASE IN IMPERVIOUS AREA, THE POST-DEVELOPMENT RUNOFF IS LESS THAN THE PRE-DEVELOPMENT RUNOFF. THE TOTAL DECREASE IS EQUAL TO:

Q2 = 3.10 – 3.02 = 0.08 CFS
Q10 = 4.13 – 4.03 = 0.10 CFS

SWM NARRATIVE:

THE ALLOWABLE RELEASE FROM THE SITE WITH THE PROPOSED DEVELOPMENT IS THE RELEASE FROM THE SITE IN ITS CURRENT DEVELOPED CONDITION. THE 2-YEAR ALLOWABLE RELEASE IS 3.10 CFS AND THE 10-YEAR ALLOWABLE RELEASE IS 4.13 CFS. THE POST-DEVELOPED SITE CONDITIONS RESULT IN A DECREASE IN OVERALL IMPERVIOUS AREA. THIS DECREASE IN IMPERVIOUS AREA RESULTS IN A DECREASE IN RUNOFF. THE 2-YEAR POST-DEVELOPED RUNOFF IS 3.02 CFS AND THE 10-YEAR POST-DEVELOPED RUNOFF IS 4.03 CFS. BOTH THE 2-YEAR AND 10-YEAR RUNOFF RATES ARE LESS THAN THE ALLOWABLE RELEASE RATES THEREFORE NO STORM WATER DETENTION IS NECESSARY. PROPOSED STORM INLETS AND PIPES ARE SHOWN ON THIS PLAN TO TIE INTO THE EXISTING OFF-SITE STORM SEWER SYSTEM. THE LOCATIONS OF THESE PIPES AND INLETS ARE PRELIMINARY AND MAY BE CHANGED AT TIME OF FINAL SITE PLAN.

BMP FACILITY DESIGN CALCULATIONS

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION AND DESCRIPTION (1)	"C" (2)	ACRES (3)
A_1 ONSITE DRAINAGE AREA TO FILTERRA	0.85	0.03
A_2 ONSITE UNTREATED AREA	0.77	0.68
TOTAL SITE AREA		0.71 ACRES

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 0.71 ACRES

(B) WEIGHTED AVERAGE "C" FACTOR= 0.78

(SEE OVERALL SITE DRAINAGE SUMMARY, THIS SHEET)

PART 3 – COMPUTE THE TOTAL PHOSPHOROUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION (1)	BMP TYPE (2)	EFFICENCY EFF (%) (3)		AREA RATIO (4)		"C" FACTOR (5)		PRODUCT (6)
A1	ONSITE TO FILTERRA (ROOF & PAVEMENT)	55	x	0.03/0.71	x	0.85/0.78	=	2.53

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

(A) SELECT REQUIREMENT (a) 1.92%

* WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED) = 50 %

* CHESAPEAKE BAY PRESERVATION AREA (NEW DEVELOPMENT) = 40 %

* CHESAPEAKE BAY PRESERVATION AREA (REDEVELOPMENT) =
[1–0.9 x ("I"PRE/"I"POST)] x 100 = [1–0.9 x (0.85/0.78)] x 100= 1.92%

(B) IF LINE 3(A) 2.53% > LINE 4(A) 1.92%, THEN PHOSPHOROUS REMOVAL IS SATISFIED.

BMP NARRATIVE:

THE PROPOSED CONSTRUCTION IS CONSIDERED REDEVELOPMENT. THE C-FACTOR DECREASES FROM 0.82 PRE-DEVELOPMENT TO 0.78 POST-DEVELOPMENT. THE PHOSPHOROUS REMOVAL REQUIREMENT FOR THIS SITE IS 1.92%, THEREFORE A BMP FACILTY IS REQUIRED ON THIS SITE. THE PHOSPHORUS REMOVAL REQUIREMENT WILL BE MET THROUGH THE USE OF A FILTERRA TREE BOX FILTER. A TOTAL OF 0.03 AC WILL DRAIN TO THE TREE BOX FILTER RESULTING IN A PHOSPORUS REMOVAL OF 2.53%. 2.53% IS GREATER THAN THE REQUIRED 1.92% THEREFORE THE BMP REQUIREMENT FOR THIS SITE IS SATISFIED.

THIS DESIGN IS PRELIMINARY AND SUBJECT TO CHANGES AT TIME OF FINAL SITE PLAN. THE ENGINEER RESERVES THE RIGHT TO ACHIEVE THE BMP REMOVAL THROUGH THE USE OF ANY SIMILAR TYPE OF FILTERS OR LOW IMPACT DEVELOPIMENT FACILITIES SITED IN OTHER LOCATIONS ON THE SITE. THE 1.92% PHOSPORUS REMOVAL MUST STILL BE MET.

Application No. SE 2009-LE-022 Staff B. Cho
APPROVED (SE) / SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 6 of 9

PRELIMINARY STORMWATER MANAGEMENT/BEST MANAGEMENT PRACTICES PLAN

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046 WWW.WLPINC.COM
(703) 532-6163 FAX (703) 533-1901

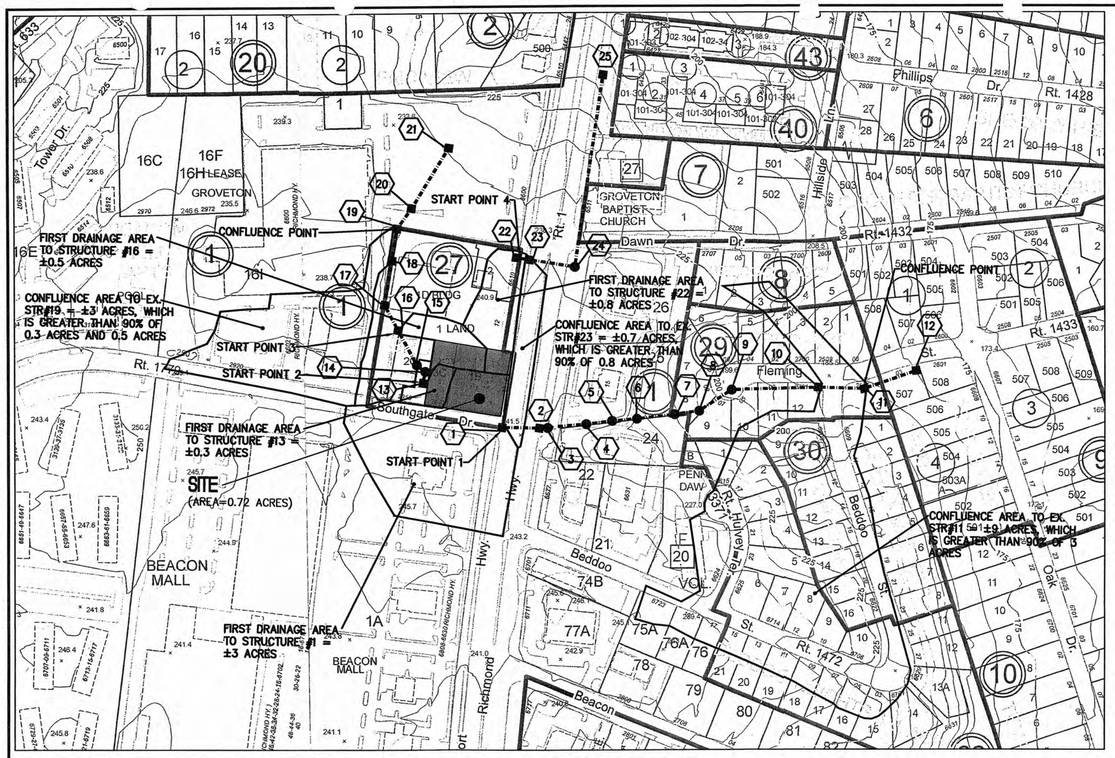
DATE: 8/5/09; REV. 9/2/09;12/7/09;1/15/10 REV. 2/4/10, 2/24/10, 3/1/10 | DRAWN: MRW | SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA CHARLES F. DUNLAP Lic. No.1309-B 6/3/09

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\84041_SWMBMP Xref:

SHEET: 6 OF 9



1" = 200'

OVERALL DRAINAGE AREA MAP

STORM SEWER COMPUTATIONS

FROM POINT	TO POINT	AREA "A" ACRES	RUN-OFF COEF. C	CA INCRE-MENT	CA ACCUM-ULATED	INLET TIME MIN	RAIN FALL IN/HR	RUNOFF Q INCRE-MENT C.F.S.	RUNOFF Q ACCUM-ULATED C.F.S.	LENGTH FT.	SLOPE FT./FT.	MANNING'S 'n'	DIA. IN.	CAPA-CITY C.F.S.
1	2	3.00	0.85	2.55	2.55	5.00	7.27	18.54	18.54	100	0.0500	0.013	24	50.44
2	3	0.42	0.90	0.38	2.93	5.00	7.27	2.75	21.29	15	0.0200	0.013	30	57.88
3	4	2.30	0.45	1.04	3.96	5.00	7.27	7.52	28.81	80	0.0253	0.013	30	65.10
4	5	0.00	0.00	0.00	3.96	5.00	7.27	0.00	28.81	73	0.0479	0.013	30	89.58
5	6	0.00	0.00	0.00	3.96	5.00	7.27	0.00	28.81	80	0.0979	0.013	30	128.06
6	7	0.00	0.00	0.00	3.96	5.00	7.27	0.00	28.81	173	0.0660	0.013	30	105.15
7	8	1.28	0.70	0.90	4.86	5.00	7.27	6.51	35.32	72	0.0221	0.013	30	60.84
8	9	0.00	0.00	0.00	4.86	5.00	7.27	0.00	35.32	128	0.0342	0.013	30	75.69
9	10	0.00	0.00	0.00	4.86	5.00	7.27	0.00	35.32	232	0.0190	0.013	36	91.79
10	11	4.72	0.60	2.83	7.69	5.00	7.27	20.59	55.91	124	0.0310	0.013	36	117.25
11	12	9.00	0.65	5.85	13.54	5.00	7.27	42.53	98.44	150	0.0420	0.013	36	136.48
13	14	0.28	0.90	0.25	0.25	5.00	7.27	1.83	1.83	25	0.0050	0.013	15	4.55
14	15	0.00	0.00	0.00	0.25	5.00	7.27	0.00	1.83	24	0.0060	0.013	15	4.98
15	16	0.00	0.00	0.00	0.25	5.00	7.27	0.00	1.83	105	0.0050	0.013	15	4.55
16	17	0.46	0.90	0.41	0.67	5.00	7.27	3.01	4.84	75	0.0157	0.013	15	8.06
17	18	0.79	0.85	0.67	1.34	5.00	7.27	4.88	9.72	133	0.0300	0.013	18	18.12
18	19	1.27	0.90	1.14	2.48	5.00	7.27	8.31	18.03	80	0.0529	0.013	18	24.07
19	20	3.00	0.85	2.55	5.03	5.00	7.27	18.54	36.57	66	0.0206	0.013	33	75.77
20	21	0.20	0.90	0.18	5.21	5.00	7.27	1.31	37.88	95	0.0206	0.013	33	75.77
22	23	0.80	0.90	0.72	0.72	5.00	7.27	5.23	5.23	36	0.0108	0.013	15	6.68
23	24	0.70	0.90	0.63	1.35	5.00	7.27	4.58	9.81	113	0.0087	0.013	18	9.76
24	25	0.25	0.90	0.23	1.58	5.00	7.27	1.64	11.45	523	0.0422	0.013	18	21.50

Application No. SE 2009-LE-022 Staff 8.Lee
APPROVED (SP)/ SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 7 of 9

OUTFALL NARRATIVE

THIS SITE IS LOCATED IN THE BELLE HAVEN WATERSHED. THE SITE HAS FOUR OUTFALL LOCATIONS. TWO OUTFALLS (FLOWING FROM START POINTS 2&3) FLOW WEST AND THEN NORTH THROUGH THE SAME EXISTING OFFSITE STORM SEWER SYSTEM. ONE OUTFALL (FLOWING FROM START POINT 1) FLOWS EAST INTO THE EXISTING STORM SEWER SYSTEM. THE FOURTH OUTFALL (FLOWING FROM START POINT 4) FLOWS NORTH INTO ANOTHER EXISTING STORM SEWER SYSTEM. THE EXISTING DRAINAGE DIVIDES AND EXISTING OFFSITE STORM SEWER SYSTEM WERE DETERMINED USING RECORD, AS-BUILT AND TOPOGRAPHY INFORMATION, AS WELL AS INFORMATION GATHERED IN THE FIELD.

THE OUTFALL ANALYSIS FOR ALL FOUR OUTALL LOCATIONS UTILITZES THE 90% RULE PER THE FX. CO. PFM SECTION 6-0203.2A. A FIRST DRAINAGE AREA IS MET BY A CONFLUENCE DRAINAGE AREA THAT IS AT LEAST 90% OF THE FIRST DRAINAGE AREA. THE OUTFALL ANALYSIS CAN BE ENDED 150' DOWNSTREAM OF THE CONFLUENCE POINT, PROVIDED THE OUTFALL IS ADEQUATE. THE FIRST DRAINAGE AREAS AS WELL AS THE CONFLUENCE AREAS ARE SHOWN ON THE OVERALL DRAINAGE AREA MAP, THIS SHEET AND ARE DESCRIBED BELOW.

START POINT 1
FIRST DA = 3 AC ; CONFLUENCE DA =9 AC

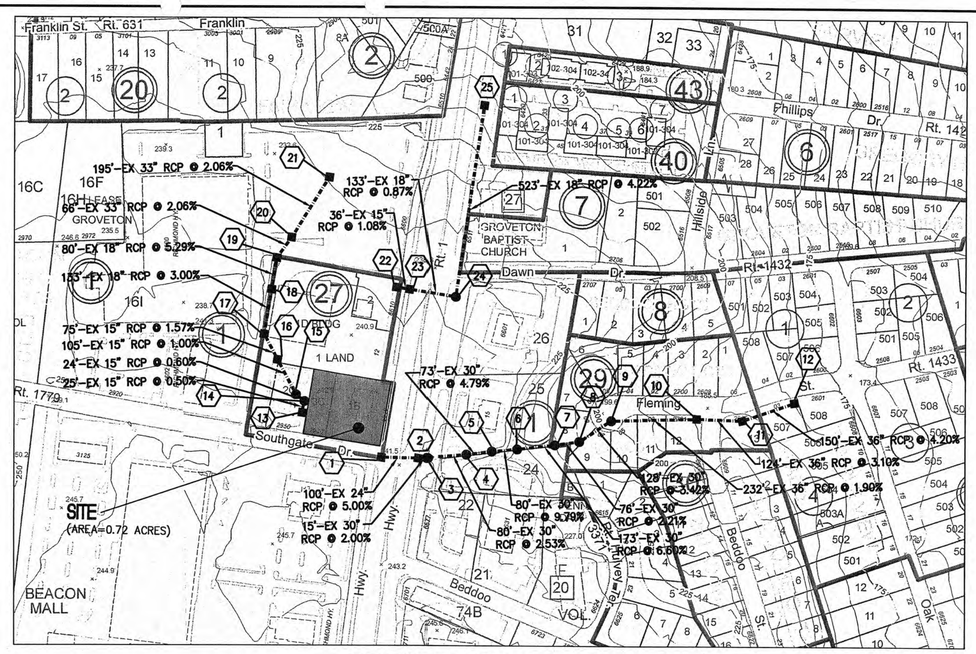
START POINTS 2 & 3
FIRST DA = 0.3 AC & 0.5 AC ; CONFLUENCE DA = 3 AC

START POINT 4
FIRST DA = 0.8 AC ; CONFLUENCE DA = 0.7 AC

THE STORM SEWER COMPUTATIONS FOR ALL OF THE EXISTING STORM PIPES ARE SHOWN ON THIS SHEET. AS YOU CAN SEE FROM THE COMPUTATIONS, MOST PIPES ARE ADEQUATE TO CONVEY THE 10-YR STORM, HOWEVER PIPE 23 TO 24 IS FLOWING UNDER PRESSURE. AS SHOWN ON THE HYDRAULIC GRADELINE COMPUTATIONS, THIS SHEET, THE PIPE IS STILL ADEQUATE TO CONVERY THE 10-YR STORM. THE WATER SURFACE ELEVATION STAYS BELOW THE RIM ELEVATION.

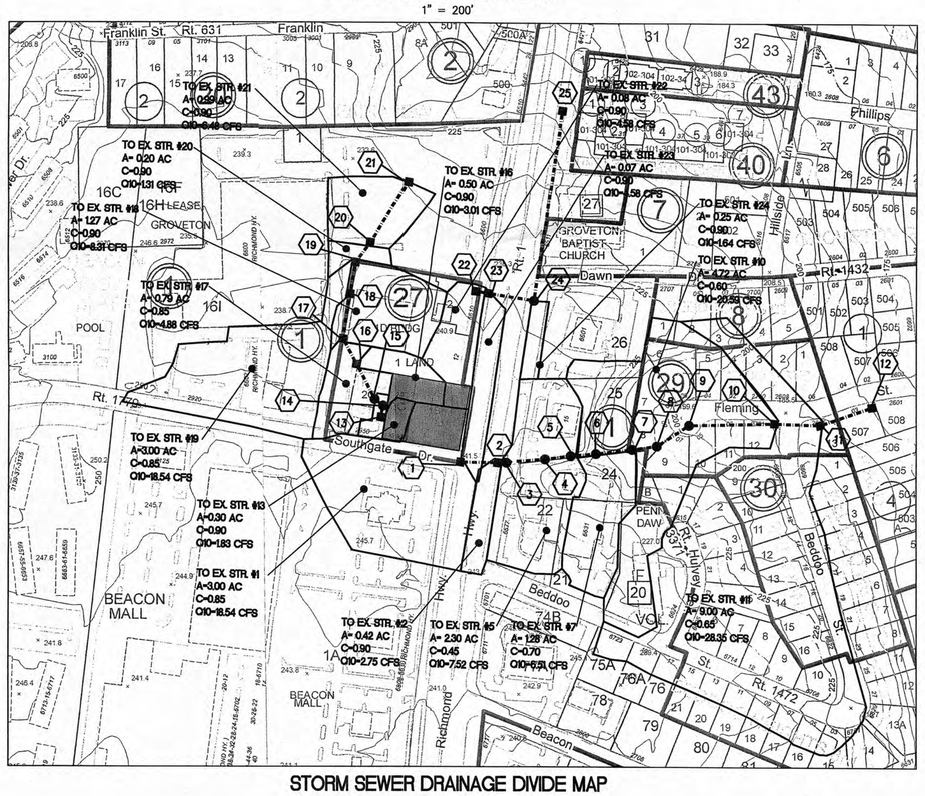
BASED ON THIS PRELIMINARY ANALYSIS, THE EXISTING CONVEYANCE SYSTEM IS ADEQUATE TO CONVEY THE DESIGN STORM, THEREFORE IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE OUTFALL IS ADEQUATE.

THIS ANALYSIS IS PRELIMINARY AND IS SUBJECT TO CHANGES AT TIME OF FINAL SITE PLAN. THE ENGINEER RESERVES THE RIGHT TO CREATE A PROPORTIONAL IMPROVEMENT AND NO ADVERSE IMPACTS THROUGH THE USE OF METHODS OUTLINED IN THE PFM.



STORM SEWER OUTFALL MAP

1" = 200'



STORM SEWER DRAINAGE DIVIDE MAP

1" = 200'

HYDRAULIC GRADELINE COMPUTATIONS

Inlet Station	Structure Type (M,I)	Outlet Water Surface Elevation	D_o (in)	Q_o	L_o	S_{f_o}	H_f	Junction Loss														Final H	Inlet Water Surface Elevation	Max Water Surface Elevation	Difference	Fix?
								V_o	H_v	D_i (in)	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_j	Angle (°)	H_{coeff}	Ht	1.3Ht	.5(Ht)	Ht					
1*	*	2*	3*	4*	5*	6	7	8	9	*	10*	11	12		13	14*	15	16	17	18	19	20	*			
24	M	211.82	33	11.45	523	0.000	0.25	1.93	0.00	18	9.81	5.55	54.51	0.48	0.05	90	0.20	0.25	---	0.13	0.37	212.19	237.93	25.74	OK
23	I	212.19	18	9.81	113	0.009	0.99	5.55	0.02	15	5.23	4.27	22.33	0.28	0.03	0	0.00	0.05	0.07	0.03	1.02	213.21	238.47	25.26	OK
22	I	213.21	15	5.23	36	0.007	0.24	4.27	0.01	---	---	---	---	---	---	0	0.00	0.01	0.02	0.01	0.25	213.46	238.02	24.56	OK

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE, FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301 WWW.WLPINC.COM

DATE: 8/3/09; REV. 9/2/09;12/7/09;1/15/10 REV. 2/4/10; 2/24/10; 3/1/10
DRAWN: MRW
SCALE: AS NOTED

COMMONWEALTH OF VIRGINIA
CHARLES T. DUNLAP
Lic. No.:1309-B
8/3/09
SURVEYOR

NO.	DESCRIPTION	DATE	REV. BY	APPROVED

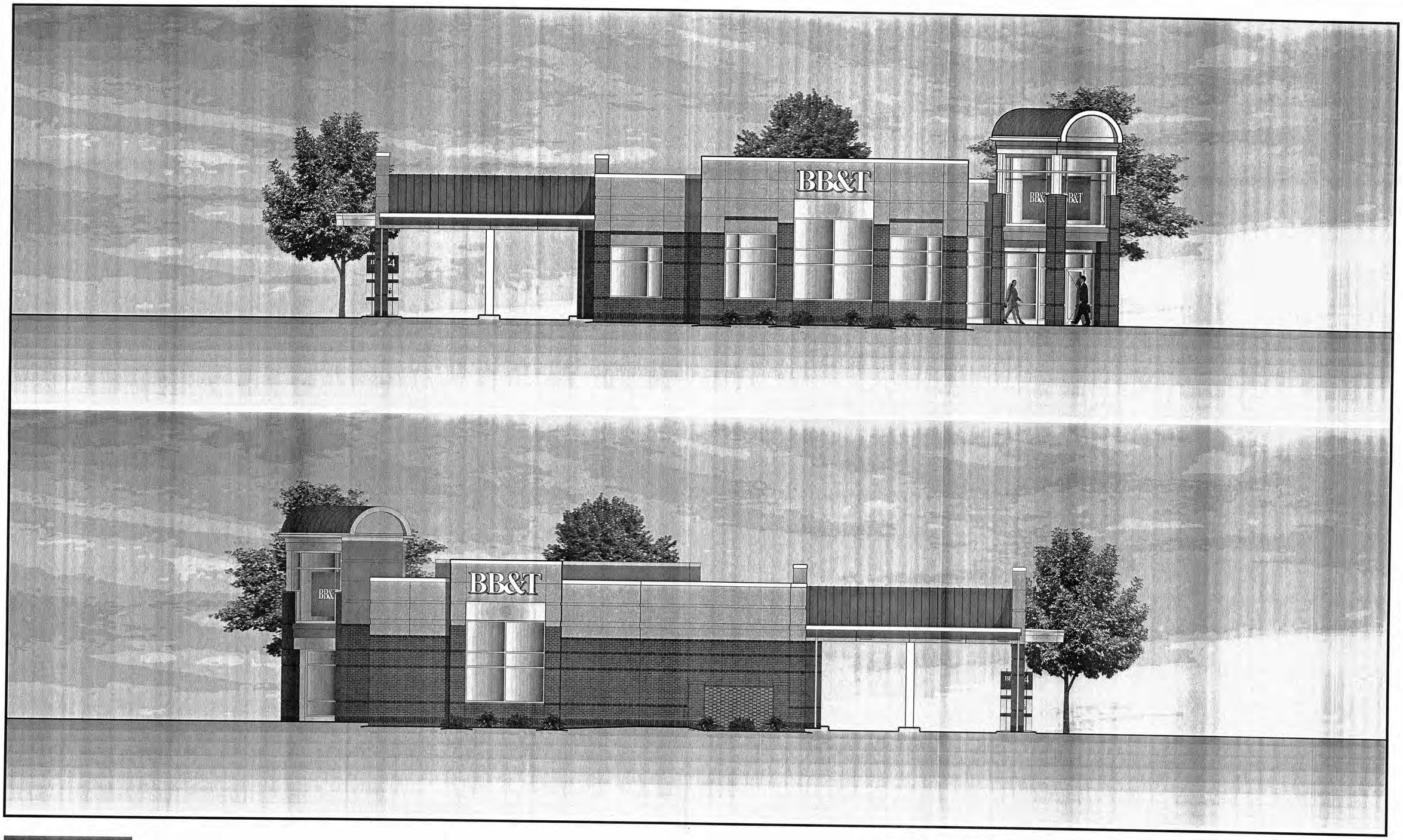
REVISION APPROVED BY

PRELIMINARY OUTFALL ANALYSIS

BB&T BANK AT BEACON HILL
6618 RICHMOND HIGHWAY
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FB-10 Tax Map No. 93-1 Job No. 84041 Cadd Dwg. File: SE\84041_OUTFALL Xref:

SHEET: 7 OF 9



BB&T

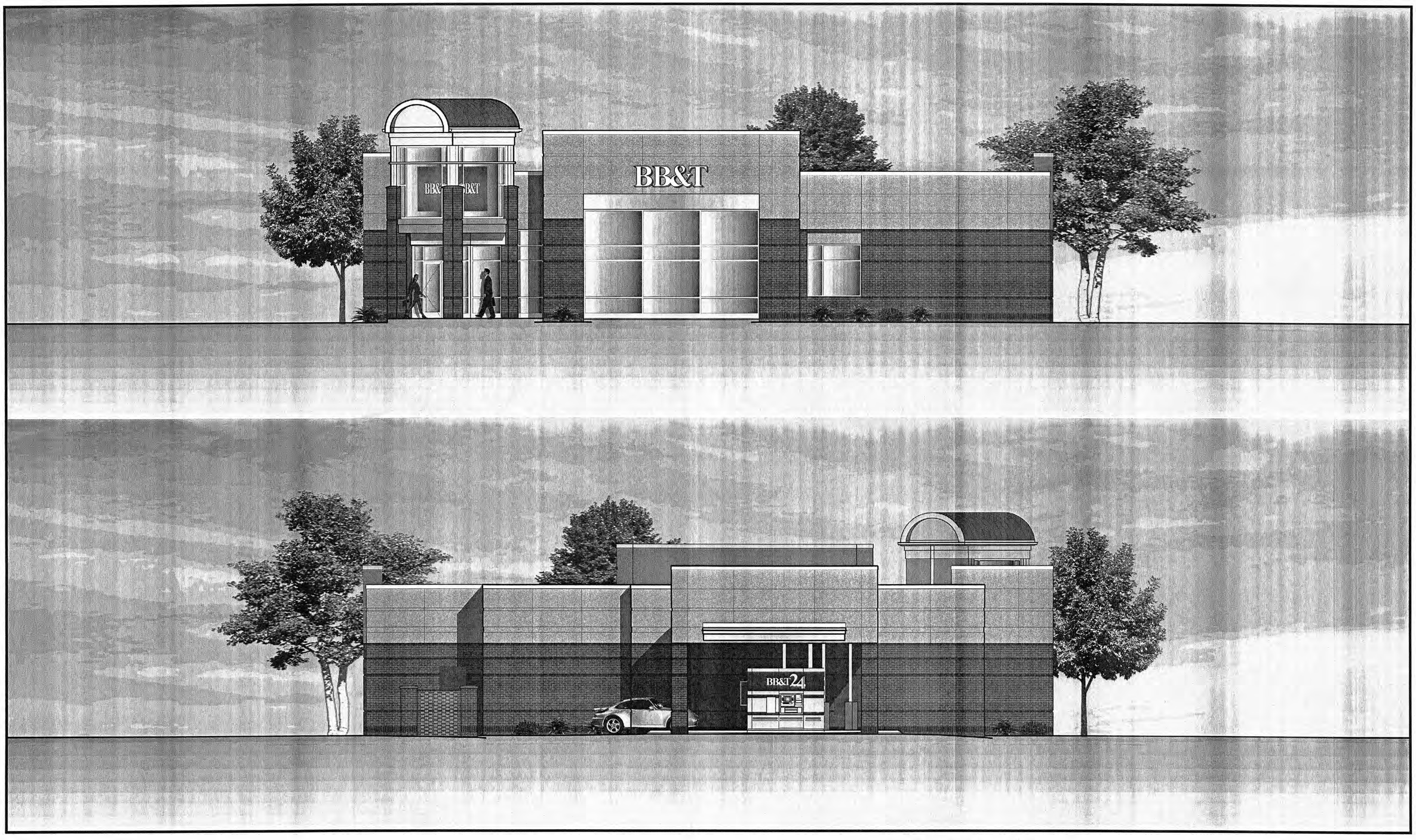
6618 Richmond Highway
Alexandria, VA 22306

SIDE ELEVATIONS

Application No. SE 2009-LE-022 Staff B. Uhd
APPROVED (SE) / ISP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 8 of 9

Scale: 3/32" = 1'-0"
Date: 01/07/2010

LAMBERT



BB&T

6618 Richmond Highway

Alexandria, VA 22306

FRONT & REAR ELEVATIONS

Application No. SE 2009-LE-023 Staff B. Cho
APPROVED (SE) / SP PLAN
SEE DEV CONDS DATED March 17, 2010
Date of (BOS) (BZA) approval March 23, 2010
Sheet 9 of 9

Scale: 3/32" = 1'-0"

Date: 01/07/2010

LAMBERT