LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 8

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **Conditional Use Permit (CUP) – Virginia Episcopal School (VES) – 400 VES Road**

RECOMMENDATION: Approval of the CUP petition.

SUMMARY: Virginia Episcopal School is petitioning for a CUP at 400 VES Road to allow the construction of a seventy-eight (78) space parking area in an R-1, Low Density, Single-Family Residential District. The parking area would support sporting events at the existing "Moore Field" and as replacement parking while the "King" Building is being renovated for use as an auditorium. The Planning Commission recommended approval of the petition because:

- The *Comprehensive Plan 2013 – 2030* recommends an Institutional use for the property. Schools and accessory uses are compatible in these areas.
- Schools and their accessory uses are permitted in R-1, Low Density Residential Districts upon approval of a CUP by Council.
- An increase in the number of students is not proposed as part of the petition.

PRIOR ACTION(S):

June 25, 2014: The Planning Division recommended approval of the CUP petition.

The Planning Commission recommended approval (3-0 with one absent (Swienton) and two abstentions (Light and Marion) of the CUP petition.

FISCAL IMPACT: N/A

CONTACT(S): Tom Martin, City Planner - 455-3900
Kent White, Director of Community Development – 455-3900

ATTACHMENT(S):

- Resolution
- Planning Commission Report & Minutes – June 25, 2014
- Vicinity Zoning Pattern Map
- Vicinity Proposed Land Use Map
- Watershed Location Map
- Planimetric and Topographic Map
- Concept Plan and Narrative
- Property Photograph
- Speaker Signup Sheet

REVIEWED BY: lkp

RESOLUTION:

A RESOULUTION GRANTING A CONDITIONAL USE PERMIT TO VIRGINIA EPISCOPAL SCHOOL TO ALLOW THE CONSTRUCTION OF A SEVENTY-EIGHT (78) SPACE PARKING AREA IN AN R-1, LOW DENSITY, SINGLE FAMILY RESIDENTIAL DISTRICT.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF LYNCHBURG that the petition of Virginia Episcopal School for a conditional use permit to allow the construction of a seventy-eight (78) space parking area at 400 VES Road is hereby approved subject to the following conditions:

1. The property shall be developed in substantial compliance with the site plan “CUP Plan for King/Garmey Theater Arts Parking” as prepared by Hurt & Proffitt, Inc., and dated May 20, 2014.
2. All lighting shall be glare shielded and non-directional to prevent illumination beyond the property lines.

Adopted:

Certified: _____
Clerk of Council

091K

The Department of Community Development

City Hall, Lynchburg, VA 24504 **434-455-3900**

To: Planning Commission
From: Planning Division
Date: June 25, 2014
Re: **Conditional Use Permit (CUP) – Virginia Episcopal School – 400 VES Road**

I. PETITIONER

Virginia Episcopal School, 400 VES Road, Lynchburg, VA 24503
Representative: Mr. Scott Beasley, Hurt & Proffitt, Inc., 2524 Langhorne Road, Lynchburg, VA 24501

II. LOCATION

The subject property is a tract of approximately forty-eight (48) acres located at 400 VES Road. The disturbed area for the parking area is approximately two and two tenths (2.2) acres.
Property Owner: Virginia Episcopal School, 400 VES Road, Lynchburg, VA 24503

III. PURPOSE

The purpose of the petition is to allow the construction of a seventy eight (78)-space parking area which would support sporting events at the existing "Moore Field" and as replacement parking while the "King" Building is undergoing renovations for use as an auditorium.

IV. SUMMARY

- The *Comprehensive Plan 2013-2030's Future Land Use Map* (*FLUM*) recommends an Institutional use for the property.
- Schools and their accessory uses are permitted within R-1, Low Density, Single-Family Residential Districts upon approval of a CUP by Council.
- An increase in the number of students is not proposed as part of the petition.

The Planning Division recommends approval of the CUP petition.

V. FINDINGS OF FACT

1. **Comprehensive Plan.** The *Comprehensive Plan 2013-2030* recommends an Institutional use for the property. Institutional uses include religious, educational and other nonprofit entities within the City. Examples include churches, cemeteries, private schools and universities, private nonprofit hospitals, service clubs and organizations and other nonprofit institutions. (***pg. 76***)
2. **Zoning.** The subject property was annexed into the City in 1926. The existing R-1, Low Density Residential District was established in 1978. The existing school is operating under a CUP approved by Council on October 9, 1990.
3. **Board of Zoning Appeals (BZA).** The Zoning Official has determined that no variances are needed for the development of the property as proposed.
4. **Surrounding Area.** There have been several items requiring Council approval in the immediate area:

- On November 13, 1979, Council approved the petition of J. Griggs for Bear Run to allow the construction of apartments at 600 Reusens Road.
- On June 10, 1980, Council approved the CUP petition of Virginia Episcopal School for a CUP for a Master Development Plan at 400 VES Road.
- On October 8, 1985, Council approved the CUP petition of Virginia Episcopal School to allow the construction of a gymnasium addition at 400 VES Road.
- On December 10, 1985, Council approved the CUP petition of Virginia Episcopal School to allow the construction of an athletic field at 340 VES Road.
- On May 13, 1986, Council approved the CUP request of Virginia Episcopal School to allow the construction of a new dormitory and entrance drives at 400 VES Road.
- On June 14, 1988, Council approved the CUP petition of Peakland Baptist Church to allow the construction of a parking area at 4018 Peakland Place.
- On March 13, 1990, Council approved the CUP petition of Lynchburg City Schools to allow the construction of a classroom addition, paved play court and additional parking spaces at 4641 Locksview Road.
- On April 10, 1990, Council approved the CUP petition of Virginia Episcopal School to allow the construction of a maintenance building and driveway at 400 VES Road.
- On June 12, 1990, Council approved the CUP petition of Westminster Canterbury to allow a building and parking addition at 501 VES Road.
- On October 9, 1990, Council approved the CUP petition of Virginia Episcopal School to allow an amendment to the Master Plan at 400 VES Road.
- On November 25, 1990, Council approved the CUP petition of Presbyterian Home & Family Services to allow the Genesis House at 150 Linden Avenue.
- On November 11, 1995, Council approved the CUP petition of Westminster Canterbury to allow the addition of a cottage program at 501 VES Road.
- On August 11, 1998, Council approved the CUP petition of Presbyterian Homes & Family Services to allow the construction of a student activity center and parking area at 150 Linden Avenue.
- On July 13, 1999, Council approved the CUP petition of Westminster Canterbury to allow the addition of a wellness center and swimming pool at 501 VES Road.
- On October 10, 2000, Council approved the CUP petition of Peakland Baptist Church to allow the construction of a columbarium at 4018 Peakland Place.
- On January 9, 2001, Council approved the CUP petition of Westminster Canterbury to allow the construction of building and parking additions at 501 VES Road.
- On January 14, 2003, Council approved the CUP petition of John Paul & Alice Jones to allow the use of an existing structure as a guest home at 711 Old Trents Ferry Road.

- On February 9, 2010, Council approved the rezoning request of the City of Lynchburg Planning Commission to rezone 4005-4225 Hydro Street from I-3, Heavy Industrial District to B-2, Low-Medium Density, Single-Family Residential District.
- On March 9, 2010, Council approved the CUP petition of Cole Brothers Circus to allow a temporary circus at 150 Linden Avenue.
- On November 10, 2010, Council approved the CUP petition of Peakland Baptist Church to allow a parking area expansion at 4006 and 4018 Peakland Place.

5. **Site Description.** The subject property is a tract of approximately forty-eight (48) acres located at 400 VES Road. The disturbed area for the parking area is approximately two and two tenths (2.2) acres. The area proposed for the parking area is open and relatively flat with a slope of five percent (5%) to the northeast. The property is bound to the north, east, south and west by land owned by Virginia Episcopal School.
6. **Proposed Use of Property.** The purpose of the petition is to allow the construction of a seventy-eight (78) space parking area to support athletic events at "Moore" Field and to facilitate the renovation of an existing building.
7. **Transportation & Parking.** The City's Transportation Engineer had no comments of concern regarding the proposed parking area. The property is served by the Greater Lynchburg Transit Company Route "3C". Bus stops are located on both sides of VES Road in the vicinity of the "King" Field House.
8. **Stormwater Management.** A stormwater management /quality plan will be required prior to final site plan approval. Stormwater is proposed to be mitigated by the use of a sediment forebay and bioretention filter to be located on the eastern side of the proposed parking area. Stormwater would be discharged into a natural receiving channel located on Virginia Episcopal School property (north of the bioretention filter. Calculations completed by the petitioners engineer indicate that the receiving channel is adequate to accept stormwater associated with the construction of the parking area.
9. **Emergency Services:** The City Fire Marshal noted that the parking area as originally submitted did not provide a turnaround for fire apparatus in accordance with City of Lynchburg Site Design Requirements (Dead ends greater than 150 feet in length). The revised site plan indicates an emergency vehicle access constructed with a grass paver system to alleviate the concerns of the Fire Marshal. The City's Police Department had no comments of concern regarding the proposed parking area.
10. **Impact.** The subject property is recommended for an Institutional use on the City's *Future Land Use Map* and contains a school founded in 1916. According to city records, the oldest building on the property is the Langhorne Chapel constructed in 1919. The property contains several other buildings, including classrooms, dormitories, residences, gymnasiums, dining halls and a field house. The Virginia Episcopal School web site indicates a total of two hundred fifteen (215) students are enrolled in grades 9-12. The number of student enrollment is not proposed to be increased as part of this petition. The proposed parking area is intended to support athletic events at the existing "Moore" Field and to support a renovation to the "King" building. The King building renovation will create a larger auditorium area to replace auditorium area existing within the same complex. Property immediately adjacent and across VES Road is currently owned by the petitioner. The parking area as proposed should have little if any impact on the area.

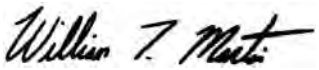
11. **Technical Review Committee.** The Technical Review Committee (TRC) reviewed the conditional use permit on June 3, 2014. Comments have or will be addressed by the petitioner prior to final site plan approval.

VI. PLANNING DIVISION RECOMMENDATION

Based on the preceding Findings of Fact, the Planning Commission recommends to City Council approval of the petition of Virginia Episcopal School for a conditional use permit at 400 VES Road to allow the construction of a seventy-eight (78) space parking area subject to the following conditions:

1. **The property shall be developed in substantial compliance with the site plan "CUP Plan for King/Garmey Theater Arts Parking" as prepared by Hurt & Proffitt, Inc., and dated May 20, 2014.**
2. **All lighting shall be glare shielded and non-directional to prevent illumination beyond the property lines.**

This matter is respectfully offered for your consideration.



William T. Martin, AICP
City Planner

pc: Mr. L. Kimball Payne, III, City Manager
Ms. Bonnie M. Svrcek, Deputy City Manager
Mr. Walter C. Erwin, City Attorney
Mr. Kent L. White, Director of Community Development
Mr. J. Lee Newland, City Engineer
Ms. Cynthia Kozerow, Lynchburg Police Department
Captain Thomas Mack, Acting Fire Marshal
Mr. Doug Saunders, Building Commissioner
Mr. Robert Fowler, Zoning Administrator
Mr. Tommy Battle, Petitioner
Mr. Scott Beasley, Representative

VII. ATTACHMENTS

1. **Zoning Map**
2. **Future Land Use Map**
3. **Watershed Map**
4. **Planimetric and Topographic Map**
5. **Concept Plan**
6. **Narrative**

7. **Campus Map**
8. **Property Photograph**

MINUTES FROM THE JUNE 25, 2014 PLANNING COMMISSION MEETING (MINUTES HAVE NOT BEEN APPROVED):

Mr. Tom Martin summarized the report for the commissioners. The property was annexed into the City in 1926 and the existing R-1 zoning has been operating under a conditional use permit approved in 1990. The *FLUM* recommends an Institutional use for the property. The petitioner is requesting a 78-space parking lot which would support events at the Moore soccer field and serve as replacement parking while the King building is undergoing renovations for use as an auditorium.

Stormwater management is proposed to be mitigated by the use of a sediment forebay and bioretention filter to be located on the eastern side of the proposed parking area. Stormwater would be discharged into a natural receiving channel located on VES property to the north. This parking lot should have minimal impact on the surrounding area and the Planning Division recommends approval of the CUP petition.

Mr. Scott Beasley of Hurt and Proffitt was present to represent the petition. He did not have any comments to add to Mr. Martin's summary of the project. Vice-Chair Johnston asked if there was anyone present who wished to speak in favor or in opposition to the petition. No one came forward and she closed the public hearing portion of the petition.

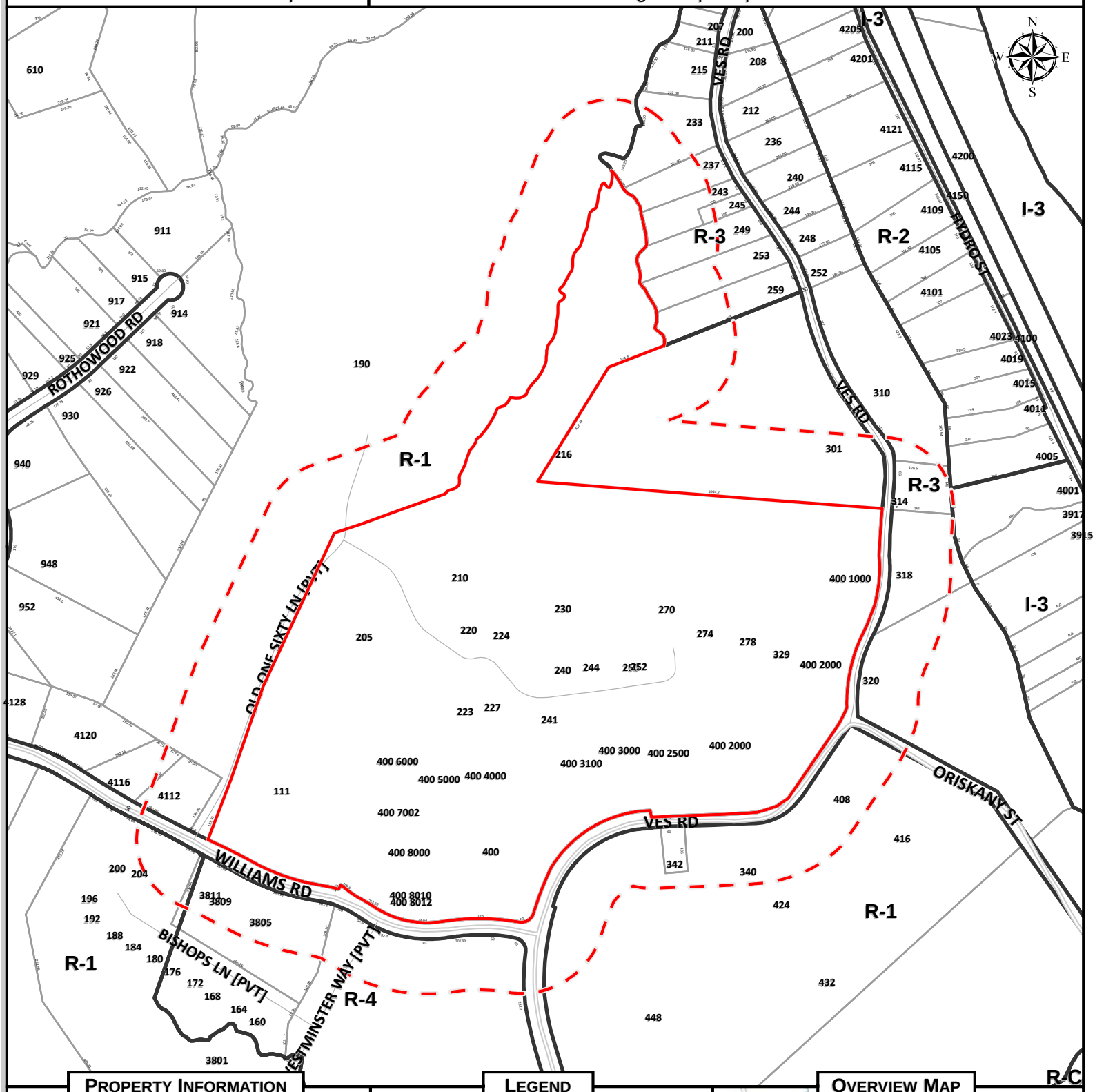
Commissioner Perault asked Mr. Martin if a requirement for handicapped parking is a part of the site plan review process. Mr. Martin explained that ADA requirements such as handicapped parking fall under the building code. Since there is no building as a part of this site plan, there is no requirement for handicapped parking. Mr. Beasley pointed out on the site plan that there have been four handicapped parking spaces voluntarily provided. Mr. Beasley also noted that they provided an emergency vehicle access point after receiving a comment regarding access from the fire department.

Commissioners Light and Marion both expressed that they would be abstaining from the vote. Commissioner Marion has a business relationship with VES and Commissioner Light is a member of a board at the school. Commissioner Coleman made the following motion, which was seconded by Commissioner Light and passed by the following vote:

> **"That the Planning Commission recommends to City Council approval of the petition of Virginia Episcopal School for a conditional use permit at 400 VES Road to allow the construction of a seventy-eight (78)-space parking area subject to the following conditions:**
>
> 1. **The property shall be developed in substantial compliance with the site plan "CUP Plan for King/Garmey Theater Arts Parking" as prepared by Hurt & Proffitt, Inc., and dated May 20, 2014.**
>
> 2. **All lighting shall be glare shielded and non-directional to prevent illumination beyond the property lines."**

AYES:	Coleman, Johnston, Perault and Swienton	4
NOES:		0
ABSTENTIONS:	Light and Marion	2
ABSENT:		0
VACANCIES:		0

Zoning Map	VES KING/GARMEY PARKING LOT
Conditional Use Permit Request	Virginia Episcopal School



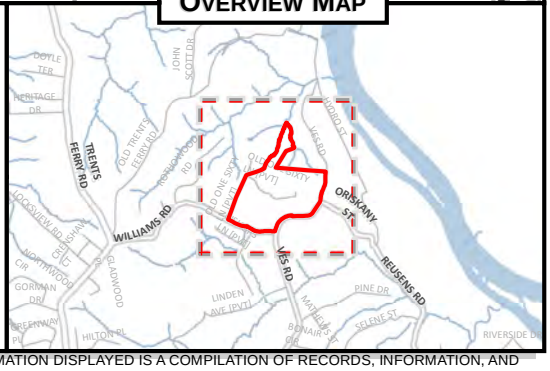
Property Information

Parcel ID	Address
10001024	400 VES RD

Legend

- Subject Property
- 215' Buffer
- Zoning Boundary

Overview Map



Map Scale: 1 " to 400 ' **Date Printed:** 6/4/2014

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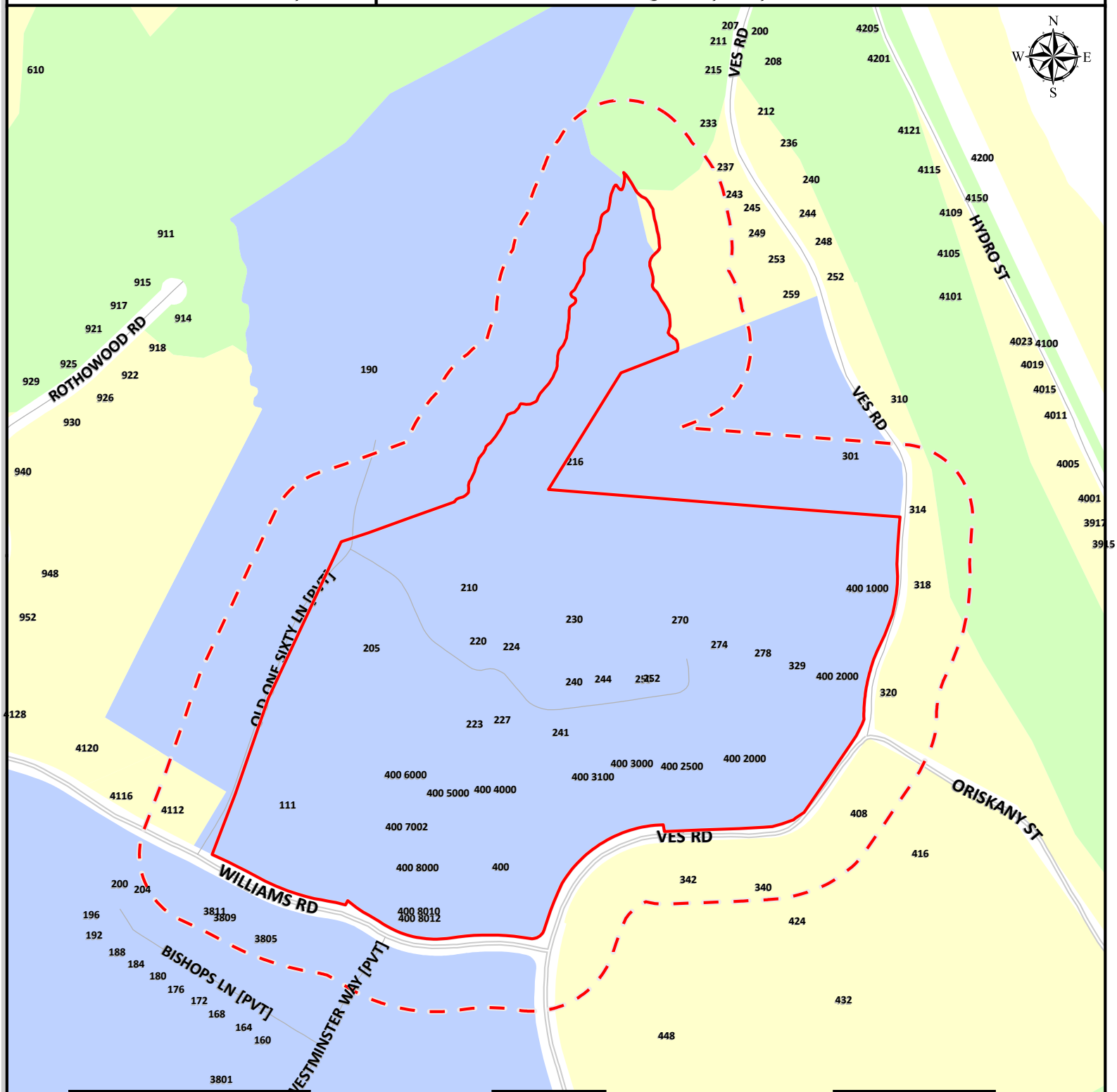
Parcel ID	Address	Owner
10001005	4001 HYDRO ST	BRC RAIL CAR SERVICE COMPANY INC
10001030	237 VES RD	CARTER, EDWARD L & DOROTHY A
10001027	253 VES RD	DORSEY, GREGORY L
10001039	4116 WILLIAMS RD	FARMER, JAMES S
10001038	4112 WILLIAMS RD	FARMER, MARION L
10001028	249 VES RD	GRAHAM, LAWRENCE R
10001054	245 VES RD	GRAHAM, LAWRENCE R
10001029	243 VES RD	GUION, JOYCE D
10001031	233 VES RD	REEVES, TRACEY FITCH
07003012	342 VES RD	SCOTT CEMETERY
10001026	259 VES RD	SMITH, JERRY B & MARTHA C
07003001	320 VES RD	VIRGINIA EPISCOPAL SCHOOL
07003011	340 VES RD	VIRGINIA EPISCOPAL SCHOOL
10001023	318 VES RD	VIRGINIA EPISCOPAL SCHOOL
10001053	314 VES RD	VIRGINIA EPISCOPAL SCHOOL
10001025	301 VES RD	VIRGINIA EPISCOPAL SCHOOL
10001022	310 VES RD	VIRGINIA EPISCOPAL SCHOOL
10001036	190 OLD ONE SIXTY LN	VIRGINIA EPISCOPAL SCHOOL
10001024	400 VES RD	VIRGINIA EPISCOPAL SCHOOL
06801002	3805 WILLIAMS RD	VIRGINIA EPISCOPAL SCHOOL
06801003	501 VES RD	WESTMINSTER CANTERBURY OF LYNCHBURG
06801018	3801 WILLIAMS RD	WESTMINSTER CANTERBURY OF LYNCHBURG

FLUM Map	VES KING/GARMEY PARKING LOT
Conditional Use Permit Request	Virginia Episcopal School



Property Information

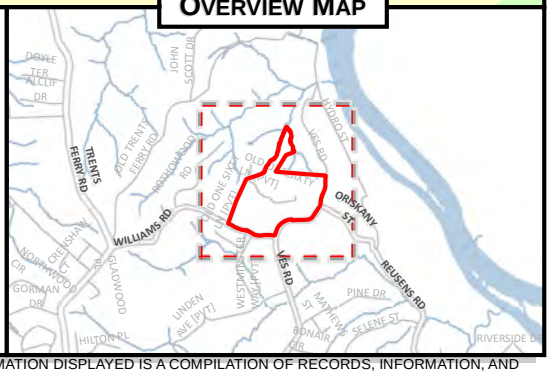
Parcel ID	Address
10001024	400 VES RD

Legend

- Local Historic District
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Employment 1
- Employment 2
- Downtown
- Institution
- Public Use
- Public Parks
- Resource Conservation
- Mixed Use

Map Scale: 1 " to 400 ' **Date Printed:** 6/4/2014

Overview Map



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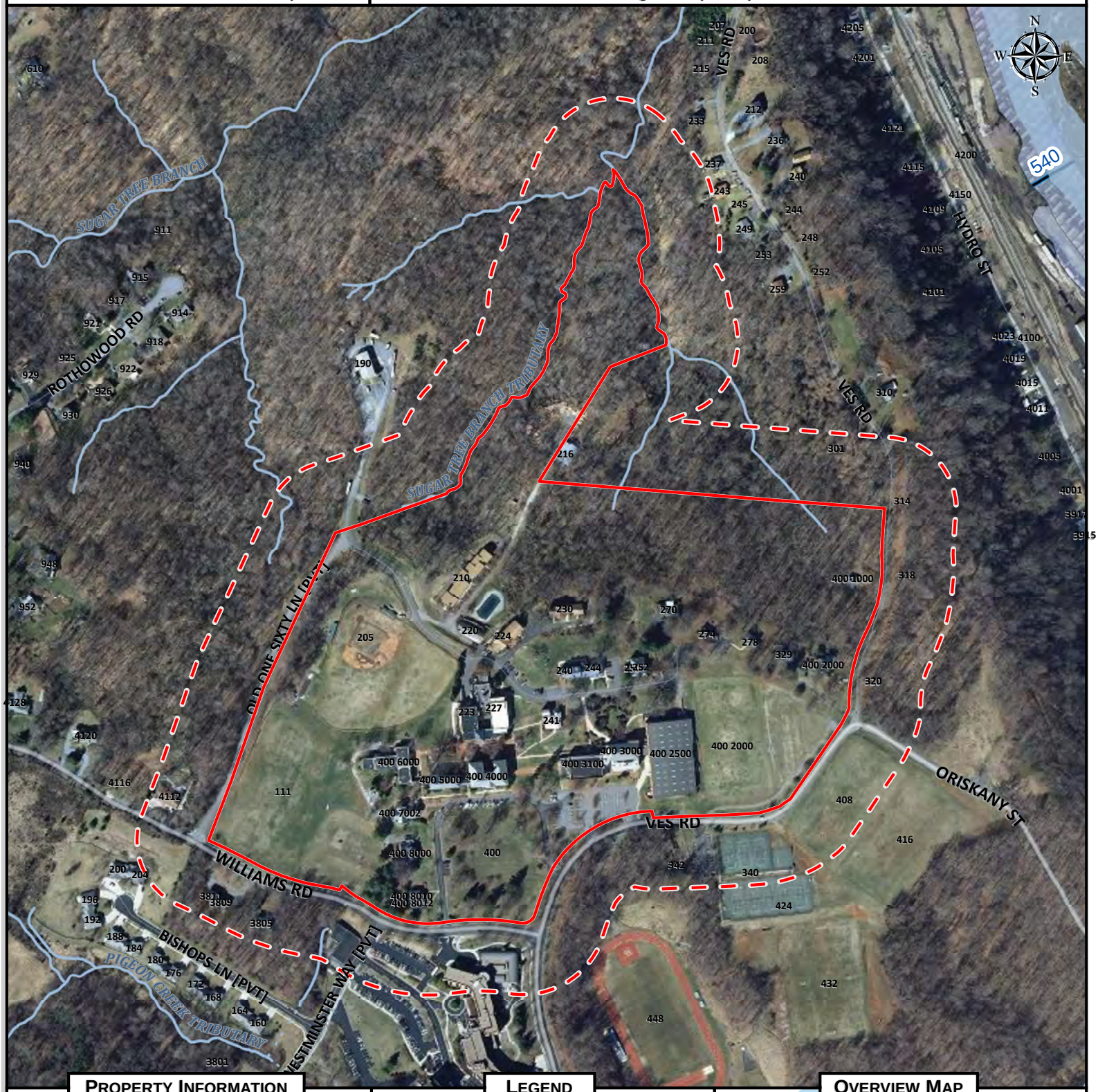
Watershed Map	VES KING/GARMEY PARKING LOT
Conditional Use Permit Request	Virginia Episcopal School



Property Information

Parcel ID	Address
10001024	400 VES RD

Legend

- Subject Property
- Base Flood Elevation
- Floodway
- Floodzone
- River / Lake / Stream

Map Scale: 1 " to 400 ' **Date Printed:** 6/4/2014

Overview Map

Judith Creek-James River

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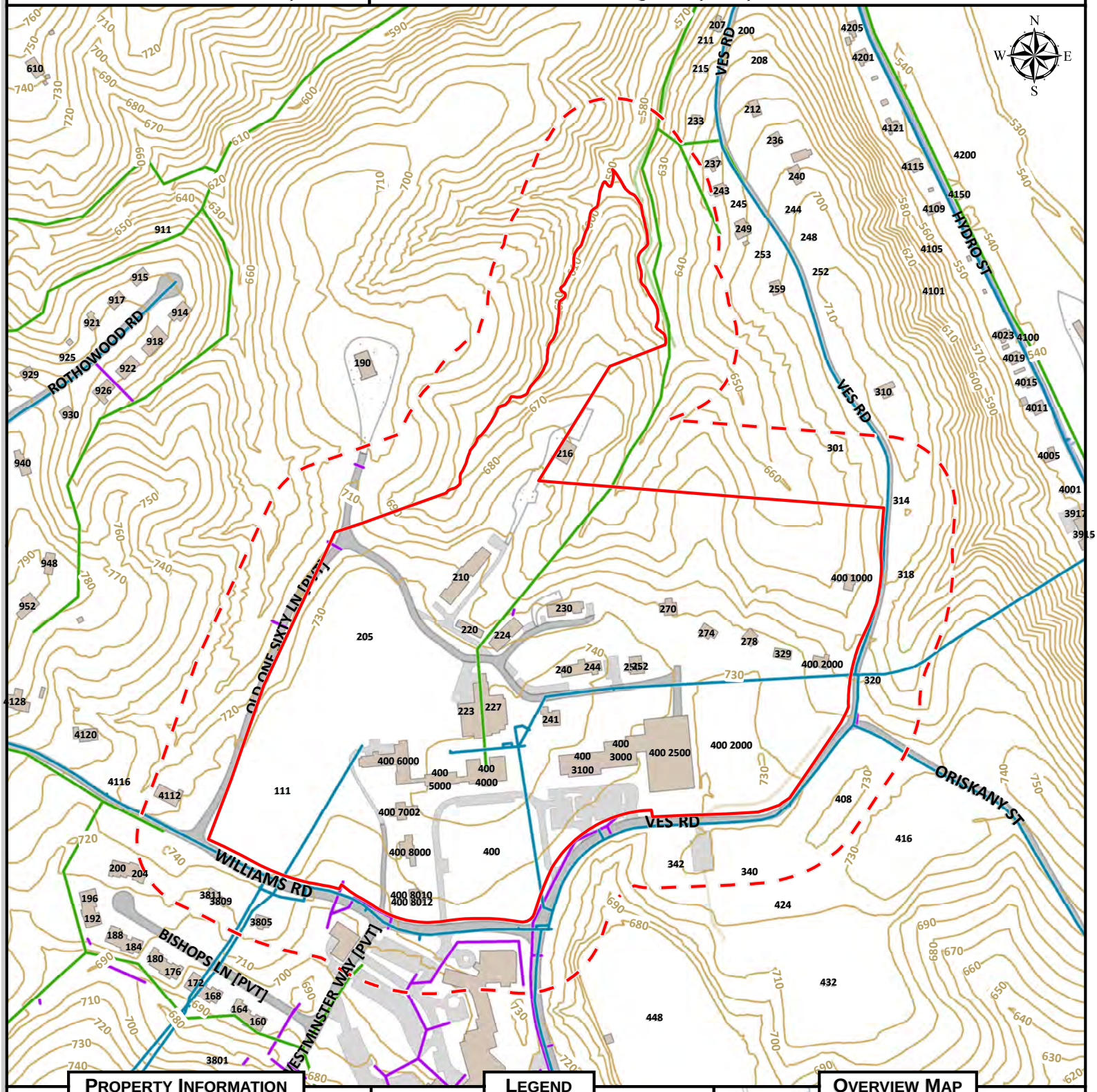
Planimetric and Topographic Map

VES KING/GARMEY PARKING LOT

Conditional Use Permit Request

Virginia Episcopal School



Property Information

Parcel ID	Address
10001024	400 VES RD

Legend

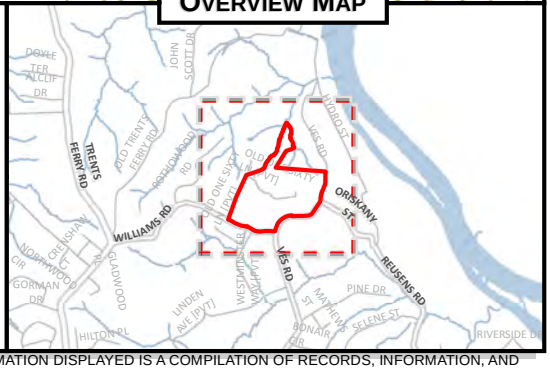
		Active	Proposed	Abandoned
Utilities	Water			
	Sanitary			
	Storm			

		Paved	Unpaved	Other
Planimetrics	Structure	-	-	
	Roadway			-
	Parking			-
	Sidewalk		-	-
	Driveway	-	-	

		10'	10' Obs
Topography	Contour		

Map Scale: 1 " to 400 ' **Date Printed:** 6/4/2014

Overview Map



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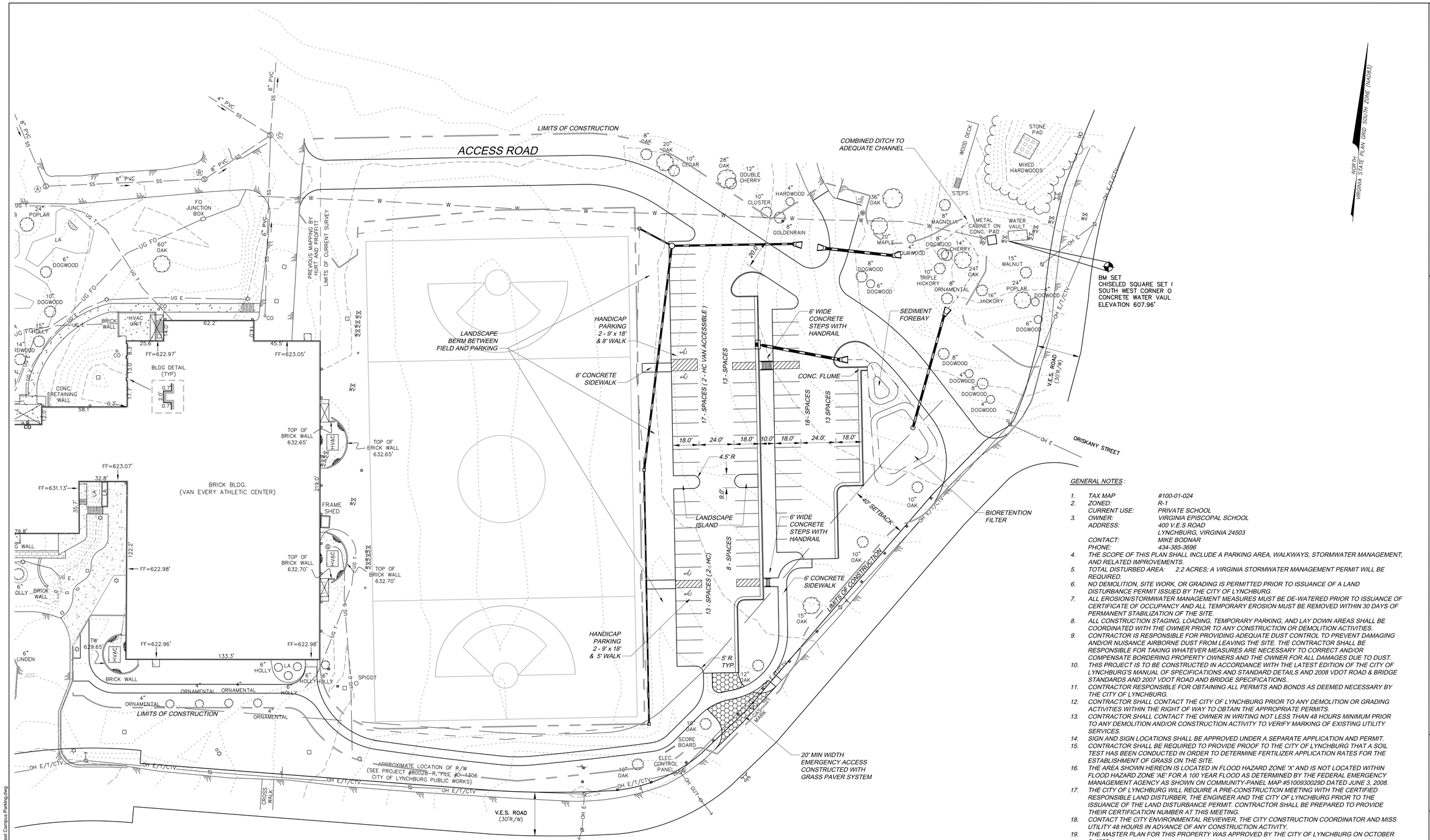

GENERAL NOTES :

1. TAX MAP #100-01-024
2. ZONED: R-1
   CURRENT USE: PRIVATE SCHOOL
3. OWNER: VIRGINIA EPISCOPAL SCHOOL
   ADDRESS: 400 V.E.S ROAD
   LYNCHBURG, VIRGINIA 24503
   CONTACT: MIKE BODNAR
   PHONE: 434-385-3696
4. THE SCOPE OF THIS PLAN SHALL INCLUDE A PARKING AREA, WALKWAYS, STORMWATER MANAGEMENT, AND RELATED IMPROVEMENTS.
5. TOTAL DISTURBED AREA: 2.2 ACRES; A VIRGINIA STORMWATER MANAGEMENT PERMIT WILL BE REQUIRED.
6. NO DEMOLITION, SITE WORK, OR GRADING IS PERMITTED PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT ISSUED BY THE CITY OF LYNCHBURG.
7. ALL EROSION/STORMWATER MANAGEMENT MEASURES MUST BE DE-WATERED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND ALL TEMPORARY EROSION MUST BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.
8. ALL CONSTRUCTION STAGING, LOADING, TEMPORARY PARKING, AND LAY DOWN AREAS SHALL BE COORDINATED WITH THE OWNER PRIOR TO ANY CONSTRUCTION OR DEMOLITION ACTIVITIES.
9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL TO PREVENT DAMAGING AND/OR NUISANCE AIRBORNE DUST FROM LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING WHATEVER MEASURES ARE NECESSARY TO CORRECT AND/OR COMPENSATE BORDERING PROPERTY OWNERS AND THE OWNER FOR ALL DAMAGES DUE TO DUST.
10. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LYNCHBURG'S MANUAL OF SPECIFICATIONS AND STANDARD DETAILS AND 2008 VDOT ROAD & BRIDGE STANDARDS AND 2007 VDOT ROAD AND BRIDGE SPECIFICATIONS.
11. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL PERMITS AND BONDS AS DEEMED NECESSARY BY THE CITY OF LYNCHBURG.
12. CONTRACTOR SHALL CONTACT THE CITY OF LYNCHBURG PRIOR TO ANY DEMOLITION OR GRADING ACTIVITIES WITHIN THE RIGHT OF WAY TO OBTAIN THE APPROPRIATE PERMITS.
13. CONTRACTOR SHALL CONTACT THE OWNER IN WRITING NOT LESS THAN 48 HOURS MINIMUM PRIOR TO ANY DEMOLITION AND/OR CONSTRUCTION ACTIVITY TO VERIFY MARKING OF EXISTING UTILITY SERVICES.
14. SIGN AND SIGN LOCATIONS SHALL BE APPROVED UNDER A SEPARATE APPLICATION AND PERMIT.
15. CONTRACTOR SHALL BE REQUIRED TO PROVIDE PROOF TO THE CITY OF LYNCHBURG THAT A SOIL TEST HAS BEEN CONDUCTED IN ORDER TO DETERMINE FERTILIZER APPLICATION RATES FOR THE ESTABLISHMENT OF GRASS ON THE SITE.
16. THE AREA SHOWN HEREON IS LOCATED IN FLOOD HAZARD ZONE 'X' AND IS NOT LOCATED WITHIN FLOOD HAZARD ZONE 'AE' FOR A 100 YEAR FLOOD AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY AS SHOWN ON COMMUNITY-PANEL MAP #51009300290D DATED JUNE 3, 2008.
17. THE CITY OF LYNCHBURG WILL REQUIRE A PRE-CONSTRUCTION MEETING WITH THE CERTIFIED RESPONSIBLE LAND DISTURBER, THE ENGINEER AND THE CITY OF LYNCHBURG PRIOR TO THE ISSUANCE OF THE LAND DISTURBANCE PERMIT. CONTRACTOR SHALL BE PREPARED TO PROVIDE THEIR CERTIFICATION NUMBER AT THIS MEETING.
18. CONTACT THE CITY ENVIRONMENTAL REVIEWER, THE CITY CONSTRUCTION COORDINATOR AND MISS UTILITY 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
19. THE MASTER PLAN FOR THIS PROPERTY WAS APPROVED BY THE CITY OF LYNCHBURG ON OCTOBER 9, 1990.
20. ALL WATER AND SEWER UTILITIES SHOWN HEREON ARE PRIVATELY OWNED AND MAINTAINED. NO NEW PUBLIC WATER OR SEWER CONNECTIONS ARE PROPOSED.

ENGINEERING >> SURVEYING >> PLANNING
HURT & PROFFITT
INCORPORATED
2524 LANGHORNE ROAD
LYNCHBURG VA. 24501
800.242.4996 TOLL FREE
434.847.7795 MAIN
434.847.0047 FAX

CUP PLAN
FOR
KING/GARMEY THEATER ARTS PARKING
LYNCHBURG, VIRGINIA

PROJECT NO.	20140391
G.L. NO.	
FILE NO.	
DATE:	5/20/14
DRAWN BY:	PSB
CHECKED BY:	

COMMONWEALTH OF VIRGINIA
P. SCOTT BRADSLEY
Lic. No. 041801
PROFESSIONAL ENGINEER
PRELIMINARY

HURT & PROFFITT

SHEET NO.
C3.0

Jun 11, 2014 - 1:32pm \\Data01\projects\20140391\CAD\SITE PLAN-East Campus Parking.dwg

Hurt & Proffitt, Inc.
Engineering • Surveying • Environmental
Materials Testing • Geotechnical
Site Planning
2524 Langhorne Road • Lynchburg, VA 24501
(434) 847-7796 • FAX (434)847-0047

CUP NARRATIVE

May 20, 2014
Revised June 11, 2014

VES – King Theater Arts Parking Lot
400 VES Road, Parcel #100-01-024
Lynchburg, Virginia
Hurt & Proffitt Project #20140391

PROJECT DESCRIPTION

The King building on the VES campus is being renovated to provide a 350-seat auditorium to replace existing auditorium area in the same complex. A new parking lot is being provided to support the building project. The parking lot will be located on the east side of Moore Field, between the field and VES Road. The parking lot will also be used during sporting events held on the Moore Field and will serve as replacement parking when the King/Garmey Theater Arts project is under construction because the existing lot on the south side of King will be used to store construction materials. A walkway will be constructed connecting the parking to the southwest side of the Van Every field house. No new students will be added as a result of this renovation and addition.

STORMWATER MANAGEMENT

Runoff from the project area currently flows to the northeast where it is conveyed under an existing driveway and enters a large natural drainage area. Drainage from the proposed parking lot will be collected by pipe and concrete flume and discharged into a bioretention basin with a sediment forebay.

Water Quantity

The bioretention basin (rain garden) reduces the post developed runoff rate to below pre-development levels.

Water Quality

The proposed bioretention area reduces the amount of phosphorus to below pre-development levels.

ADEQUATE CHANNEL

Stormwater is discharged from the bioretention basin into a large natural drainage area. Calculations show that the drainage channel is adequate.

This property is located in Flood Zone "X" and is not located in the 100-year floodplain.

PARKING

The project must meet the current City of Lynchburg parking requirements. The City of Lynchburg's ordinance requires one (1) parking space for every four (4) occupants in the place of assembly. There are 350 proposed seats, which would require 88 spaces. Because the proposed auditorium will replace an existing, though smaller, place of assembly, not all of the parking spaces are required for this project. The new lot will serve other functions as well. During athletic events, the parking lot will provide spectators with better access to the fields. Berms will be located on the west side of the lot to screen the parking area and to provide a place to watch sporting events. During construction of the King Theater Arts project, the parking area will also serve as a replacement parking lot for the lot on the south side of King that will be used by the construction crews. Proposed parking spaces for the project are shown on the Site Plan.

Provided:

Auditorium = 78 spaces (includes 4 handicap spaces)

LIGHTING

Lighting shall be in accordance with the Lynchburg Code of Ordinances - Sec. 35.1-43.26. Lighting. Exterior lighting shall be controlled so that no direct illumination will occur beyond any property line. A note is provided on the attached plan.

LANDSCAPING/OTHER

The clearing and grading limits are shown on the site plan. Grading will be limited to this area, which is what is required to construct the parking lot, access drive, asphalt path, stormwater management facility, and other improvements.

In order to achieve the grades shown on the site plan, a small amount of fill material may be required. The source of fill will be determined prior to construction. A note will be placed on the cover sheet indicating that a plan amendment must be provided that identifies the location of the approved off-site material.

Landscape plantings will be as provided per the landscape ordinance. Shade trees will be located in interior medians within parking areas and at the ends of all parking rows. No more than twenty (20) consecutive parking spaces will be located between islands. Parking lots will be screened from the public street (VES Road). Tree and shrub types will be provided on the landcape plan.

1. Ainslie House
2. Banks-Gannaway Dining Hall
3. Barksdale Gymnasium
4. Buck Langhorne Field at Meador Park
5. Carrington - McGhee Memorial Track
6. Craighill Tennis Center
7. Eloise Brown Betts Pool
8. Faculty Housing
9. Jett Hall
10. Johnson Field
11. King Field House
12. Langhorne Memorial Chapel
14. Moore Field
15. Pendleton Hall
16. Perkins House
17. Pope Memorial Stadium
18. Randolph Hall
19. Shanklin Bell Tower
20. Van Every Athletic Center
21. Wilson Art Studio
22. Women's New Dorm
23. Wyatt House
24. Zimmer Science & Activity Center

Campus Map

VES Parking Lot Conditional Use Permit Application
400 VES Road
June 25, 2014

PLEASE PRINT

NAME	ADDRESS	PHONE	IN FAVOR	IN OPPOSITION	NEUTRAL
Scott Beasley	254 Longhorne Rd		✓		

LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 9

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **Rezoning: R-3, Medium Density Two-Family Residential District to B-3C, Community Business District (Conditional) – 2627 Old Forest Road, 2624 & 2700 Confederate Avenue**

RECOMMENDATION: Approval of the rezoning petition.

SUMMARY: CDDI Development Group, LLC is petitioning to rezone approximately three and forty-one hundredths (3.41) acres at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue from R-3, Medium Density Two-Family Residential District to B-3C, Community Business District (Conditional) to allow the use of the existing building as a restaurant and to allow the construction of a special events center and associated parking. The Planning Commission recommended approval of the petition because:

- The *Future Land Use Map* (*FLUM*) recommends Medium Density Residential uses for the area and the proposed use fits as an alternate use listed within the Medium Density Residential description.
- Voluntarily submitted proffers adequately address impacts associated with the proposed development.
- The development of the site will enhance and rehabilitate a significant historic resource within the City.
- The site will adhere to precise design criteria as it is within a Local Historic District.
- A Conditional Use Permit (CUP) granted from the Board of Zoning Appeals (BZA) allows operation of a restaurant and special events in the existing house.

PRIOR ACTION(S):

June 11, 2014: The Planning Division recommended approval of the rezoning petition.

The Planning Commission recommended approval (5-0; 1 member absent, Swienton) of the rezoning with proffers voluntarily submitted by the petitioner.

FISCAL IMPACT: N/A

CONTACT(S): Kevin Henry, Planner II – 455-3900
Tom Martin, City Planner - 455-3900
Kent White, Director of Community Development – 455-3900

ATTACHMENT(S):

- Ordinance
- Planning Commission Report and Minutes – June 11, 2014
- Vicinity Zoning Pattern Map
- Vicinity Future Land Use Map
- Watershed Location Map
- Planimetric and Topographic Map
- Rezoning Plan
- Proffer Letter
- Property Photograph
- Signup Sheet

REVIEWED BY: lkp

UNCODIFIED ORDINANCE:

AN ORDINANCE CHANGING A CERTAIN AREA LOCATED AT 2627 OLD FOREST ROAD, 2624 AND 2700 CONFEDERATE AVENUE FROM R-3, MEDIUM DENSITY TWO-FAMILY RESIDENTIAL DISTRICT TO B-3C, COMMUNITY BUSINESS DISTRICT (CONDITIONAL).

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LYNCHBURG that in order to promote the public necessity, convenience, welfare and good zoning practice that Chapter 35.1 of the Code of the City of Lynchburg, 1981, as amended, be and the same is hereby further amended by adding thereto Section 35.1-76__, which section shall read as follows:

Section 35.1-76__. Change of a certain area located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue from R-3, Medium Density Two-Family Residential District to B-3C, Community Business District (Conditional).

The area embraced within the following boundaries:

TMP 16610001
Beginning at a point common with the intersection of a paper street named Boxwood Place and its intersection with Old Forest Road, at the north end of the property with said point being an iron rebar and moving in a southerly direction along the right-of-way of Old Forest Road along a curve with a chord bearing of S36°35'33"E at a chord distance of 77.54' to an iron rebar; thence S39°16'19"E at a distance of 137.86' to an iron rebar; thence along a curve with a chord bearing of S44°15'54"E at a chord distance of 152.8' to an iron rebar corner of property thence turning a westerly direction with a common property side line moving from Old Forest Road towards the rear of the property S55°28'26"W for 277.51' to an iron rebar corner; thence S36°40'14"E for 325.70' to an iron rebar corner; thence N63°04'14"E at a distance of 108.97' to an iron bar corner; thence along the right-of-way at Confederate Ave N26°55'46"W for 72.66' to an iron rebar corner; thence N63°04'14"E for 351.14' to the point of beginning.

The property described contains approximately 2.432 Acres. The description of the property has been taken from a plat entitled Barksdale Place, dated February 7, 2014 by Acres of Virginia.

TMP 16610009
Beginning at a point in common with the right-of-way at Confederate Avenue at the northern end of the property moving in an easterly direction towards Old Forest Road at N63°04'14"E for 108.97' to an iron rebar corner; thence S36° 40'14"E for 165.12' to an iron rebar corner; thence N63° 04'14"E for 136.44' to an iron rebar corner common with the right-of-way with Confederate Avenue; thence on a curve with a chord bearing of N28° 15'36"W at a chord distance of 20.07' to an iron rebar along Confederate Avenue in a northerly direction N26° 55'46"W at 142.67' to the point of beginning.

The property described contains 0.459 Acres. The description of the property has been taken from a plat entitled Barksdale Place, dated February 7, 2014 by Acres of Virginia.

TMP 16610010
Beginning at a point in common with the right-of-way at Confederate Avenue at the northern end of the property moving in an easterly direction towards Old Forest Road at N63° 04'14"E at 136.44' to an iron rebar corner; thence S36° 40'14"E for 160.59' to an iron rebar corner; thence S55° 28'26"W for 119.09' to an iron rebar corner in common with the right-of-way at Confederate Avenue; thence moving in a northerly direction along the right-of-way with Confederate Avenue on a curve with a chord bearing of N41° 36'13"W at a chord distance of 179.88' to the point of beginning.

The property described contains 0.518 Acres. The description of the property has been taken from a plat entitled Barksdale Place, dated February 7, 2014 by Acres of Virginia.

…is hereby changed from R-3, Medium Density Two-Family Residential to B-3C, Community Business District (Conditional), subject to the conditions set out herein below which was voluntarily proffered in writing by the petitioner, CDDI Development Group, LLC, to wit:

1. Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.
2. We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.

And the Director of Community Development shall forthwith cause the "Official Zoning Map of Lynchburg, Virginia," referred to in Section 35.1-4 of this chapter to be amended in accordance therewith.

Adopted:

Certified: _____

Clerk of Council

088K

The Department of Community Development

City Hall, Lynchburg, VA 24504 **434-455-3900**

To: Planning Commission
From: Planning Division
Date: June 11, 2014
Re: **Rezoning: R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional) – 2627 Old Forest Road, 2624 and 2700 Confederate Avenue**
Local Historic District Property Designation: Locust Thicket Historic District – 2624 and 2700 Confederate Avenue

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I. PETITIONER

CDDI Development Group LLC, 2627 Old Forest Road, Lynchburg, VA 24501
Representative: Trent Warner, Warner White Engineering Partners, 118 Cornerstone Street, Lynchburg VA 24502, and Mr. Paul Hughes, 2023 Ravenwood Drive, Lynchburg, VA 24503

II. LOCATION

The subject property includes three (3) tracts totaling approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue, Lynchburg, VA 24501
Property Owners:
CDDI Development Group LLC, 2627 Old Forest Road, Lynchburg, VA 24501
Vance & Winifred Driskill, 2624 and 2700 Confederate Avenue, Lynchburg, VA 24501

III. PURPOSE

The purpose of the petition is to designate 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District and to rezone approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road and 2624 and 2700 Confederate Avenue from R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional), to allow the use of the existing building as a restaurant and to allow the construction of a special events center and associated parking.

IV. SUMMARY

- The *Future Land Use Map* (*FLUM*) recommends a Medium Density Residential use for this property.
- The Historic Preservation Commission (HPC) recommended including the properties at 2624 and 2700 Confederate Avenue in the Locust Thicket Local Historic District because until their 2002 subdivision, these properties were part of the Locust Thicket property.
- Petition agrees with the *Zoning Ordinance* which permits banquet halls and restaurants in a B-3, Community Business District.

The Planning Division recommends approval of the rezoning petition.

The Historic Preservation Commission recommends approval of the designation of 2624 and 2700 Confederate Avenue in the Locust Thicket Local Historic District.

V. FINDINGS OF FACT

1. **Comprehensive Plan.** The *FLUM* of the *Comprehensive Plan 2013-2030* recommends a Medium Density Residential use for the area. Medium Density Residential areas "are characterized by small-lot, single family detached housing, duplexes and townhouses at densities up to 12 units per acre. Where neighborhoods already exist, infill development should be at a compatible density and housing type. In addition to residential uses, they may include public and institutional uses compatible in scale with single-family residential homes. Private recreation uses, including country clubs, swim and racquet clubs, and private open space are also appropriate." (***pg. 72***).

   The Planning Division sees the proposed use of the property for a restaurant in the existing manor house and special events center as compatible with other alternate uses included in Medium Density Residential Areas.

   Adjacent land uses are also designated for Medium Density Residential by the *FLUM*. When addressing compatibility between adjacent land uses, building orientation, building location, parking locations, parking design, lighting, walkways and other building and site design factors should be considered (***pg. 16, Policy LU-3.7***).

2. **Zoning.** The subject property was annexed into the City in 1958. The existing R-3, Medium Density, Two-Family Residential District zoning was established in 1978 with the adoption of the current Zoning Ordinance.

3. **Proffers.** The petitioner has voluntarily submitted the following proffers:

   a. Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.

   b. We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.

   By submission of these proffers, it is intended that the site be developed in substantial compliance with the concept plan, dated May 28, 2014, which includes the construction of a three thousand (3,000) square foot, one and a half (1.5) story events center/tavern, a small, approximately three hundred and fifty (350)-square foot secondary food/beverage gift shop area, a three hundred (300)-square foot addition to the existing manor house, access roads and associated parking areas containing eighty-two (82) parking spaces. The concept plan also includes the restoration of historic features of the site, landscape improvements including photo gardens, two fountains, a brick terrace and gravel pathways connecting features to each other.

4. **Board of Zoning Appeals (BZA).** The Zoning Official has determined that no variances would be needed for the development of the property as proposed.

5. **Surrounding Area.** There have been several items requiring City Council approval in the immediate area:

   - On December 10, 1985, City Council approved the CUP petition of George T. Stewart to rezone approximately one and nine tenths (1.9) acres at 2909 and 2913 Old Forest Road and an unopened portion of Confederate Avenue from R-3, Two-Family Residential District, and B-1, Limited Business District, to R-3, Community Business District to allow the construction of an addition to an existing restaurant at 3009 Old Forest Road, the future construction of several retail/office buildings, and the construction of additional parking areas.

- On May 9, 2006, City Council approved the petition of Rick Krason (1) to rezone approximately seven tenths (.7) of an acre located at 2901 Old Forest Road and (2) for a CUP to construct an animal medical facility.
- On October 10, 1989, City Council approved the petition of William N. Riley to rezone approximately one (1) acre from B-1, Limited Business District, to B-3C, Community Business District (Conditional) to allow construction of a retail space with parking area and to rezone approximately nine-tenths (.9) acre at the rear of the property from R-2 Single-Family Residential District to B-1C, Limited Business District (Conditional), to allow the construction of an office building and parking area at 2728 Old Forest Road.
- On February 13, 2001, City Council approved the petition of John Grier to (1) rezone approximately fourteen (14) acres at 2713 Old Forest Road from R-4 (Conditional), Multi-Family Residential District, to R-3, Two-Family Residential District, to remove the restriction of previously approved proffers and allow the construction of a Planned Unit Development (PUD), and (2) for a CUP to construct a PUD, *Legacy Oaks Villas,* with eighty-seven (87) single family detached dwelling units.

6. **Site Description.** The subject property includes an existing historic house, a walled cemetery and ice well. The property is bound on all sides by existing single-family and two-family dwellings.

7. **Proposed Use of Property.** If the rezoning petition is approved, the existing restaurant/special events center would be expanded with the construction of a new one and a half (1.5) story special events center building/tavern, a secondary food/beverage gift shop and a kitchen extension to the existing manor house. Additionally, the petition includes the historic restoration of the cemetery; old water well and ice well foundations, and the construction of external features such as patios, gardens, and associated parking for the uses. All proposed improvements are still subject to Historic Preservation Commission (HPC) review.

8. **Traffic, Parking and Public Transit.** The proposed development would generate approximately three hundred and eighty-eight (388) trips per day and thirty (30) peak hour trips not surpassing the City thresholds for requiring a Traffic Impact Study (TIS) of five hundred (500) daily and fifty (50) peak hour trips. The proposed development does not trigger any traffic concerns.

   Boxwood Place, a portion of unimproved right-of-way to the north of the property is proposed to be vacated in conjunction with this development. The vacation of the unused right-of-way allows the site plan to accommodate the amount of parking required on the site. Assuming the right-of-way is vacated, the concept plan provides eighty-two (82) parking spaces, which meets the requirements of the City of Lynchburg *Zoning Ordinance* for potential occupants and staff for the site.

   The property is served by Greater Lynchburg Transit Company's Route 8, which runs along Old Forest Road with a bus stop in front of the property at the intersection Confederate Avenue and Old Forest Road.

9. **Stormwater Management.** The proposed project is required to treat stormwater runoff for quantity and quality. The concept plan indicates that stormwater requirements will be addressed through low-impact design strategies with the use of rain gardens and grass swales as needed. The site has a couple of potential channels for discharge with roadside ditches on adjacent streets and a city storm inlet to the north of the site. These may need to be

improved to adequately accommodate increased runoff from the site. A site plan will be required which fully addresses quality, quantity and adequate channel requirements at the time of site plan review.

10. **Emergency Services.** The City Fire Marshal provided comments regarding site design requirements of the City of Lynchburg and the Virginia Statewide Fire Prevention Code. The City's Police Department provided general comments related to site safety and security. These comments have or will be addressed by the petitioner prior to final site plan approval.

11. **Impact.** If approved, the subject property at 2624 and 2700 Confederate Avenue will comply with the City's Local Historic Districts Zoning Overlay (Section 35.1-44.1). By including the two properties within the Locust Thicket Local Historic District, the historic site is regaining pieces of the original property that had been subdivided from the manor house property in 2002.

    Approval of the rezoning petition will provide for the restoration of the historic features of the site and the construction of a three thousand (3,000) square foot, one and a half (1.5) story events center/tavern, a small, approximately three hundred and fifty (350) square foot secondary food/beverage gift shop area, a three hundred (300) square foot addition to the existing manor house, access roads and associated parking areas containing eighty-two (82) parking spaces so that the property can be used for a restaurant and to host special events such as weddings. As all improvements and changes to the property will undergo a review by the Historic Preservation Commission (HPC) as required and the petitioner has proffered to abide by HPC recommendations, the final product of this rezoning should be a great asset to the city. The development will provide a historic and picturesque reuse of one of Lynchburg's oldest country houses and blend into the surrounding neighborhood with landscaping.

12. **Historic Preservation Commission.** The Historic Preservation Commission (HPC) reviewed the petition on May 19, 2014. The HPC felt the inclusion of the 2624 and 2700 Confederate Avenue properties was easily justified as the properties had been integral with the Locust Thicket manor house until as late as 2002. The HPC unanimously recommended the subject properties be included within the Locust Thicket Local Historic District by a vote, (6-0-1, with one abstention, Smith).

13. **Technical Review Committee.** The Technical Review Committee (TRC) reviewed the preliminary rezoning plan on April 22, 2014. Comments related to the proposed use have or will be addressed by the petitioner prior to final site plan approval.

VI. PLANNING DIVISION RECOMMENDATION

Based on the preceding Findings of Fact, the Planning Commission recommends to City Council approval of the petition of CDDI Development Group LLC to:

1. **Waive the twenty-one (21)-day submittal requirement for proffers.**
2. **Rezone approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue from R-3, Medium Density, Two-Family Residential District to B-3C,**

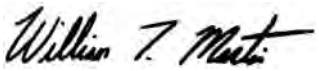
Community Business District (Conditional), subject to the following voluntarily submitted proffers:

a. **Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.**

b. **We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.**

3. **Designate the properties at 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District.**

This matter is respectfully offered for your consideration.



William T. Martin, AICP
City Planner

pc: Mr. L. Kimball Payne, III, City Manager
Ms. Bonnie M. Svrcek, Deputy City Manager
Mr. Walter C. Erwin, City Attorney
Mr. Kent L. White, Director of Community Development
Mr. J. Lee Newland, City Engineer
Ms. Cynthia Kozerow, Lynchburg Police Department
Battalion Chief Greg Wormser, Fire Marshal
Mr. Don DeBerry, Transportation Engineer
Mr. Doug Saunders, Building Commissioner
Mr. Robert Fowler, Zoning Administrator
Mr. Paul Hughes, Locust Thicket
Ms. Winifred Driskill, 2624 and 2700 Confederate Avenue
Mr. Vance Driskill, 2624 and 2700 Confederate Avenue

VII. ATTACHMENTS

1. **Vicinity Zoning Pattern Map**
2. **Vicinity Proposed Land Use Map**
3. **Watershed Location Map**
4. **Planimetric and Topographic Map**
5. **Concept Plan**
6. **Resident Letter**
7. **Property Photograph**

MINUTES FROM THE JUNE 11, 2014 PLANNING COMMISSION MEETING (MINUTES HAVE NOT BEEN APPROVED):

Petition of CDDI Development Group to rezone approximately 3.41 acres located at 2627 Old Forest Road and 2624 and 2700 Confederate Avenue from R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional) to allow the use of the existing building as a restaurant and to allow the construction of a special events center and associated parking.

Mr. Henry explained that the request is to use the property for a restaurant and event center. The *Future Land Use Map* designation for the property is Medium Density Residential. This land use does allow for public and institutional uses that are compatible in scale and character with single-family homes. Private recreational uses such as country clubs and swim clubs, as well as private open spaces are also appropriate. It was staff's determination that the proposed use outlined in this petition would fit with this *FLUM* designation.

The proffers offered by the petitioner indicate strict compliance with the concept plan and the guidelines of the Historic Preservation Commission. The concept plan indicates that there will be a small addition to the existing structure, as well as new structures for a tavern and gift shop. The concept plan also shows proposed parking and other hardscapes such as walkways. The petitioner is also proposing a new entrance off Old Forest Road, which requires the vacation of an area of unopened City right-of-way known as Boxwood Place. The petitioner is currently going through the public hearing process to have the street vacation approved by Council.

The average daily trips are projected to be 388 with 30 being peak hour trips; therefore, a traffic study was not required. Mr. Henry noted that the City's Transportation Engineer did not have any traffic concerns and also pointed out that the site is served by GLTC. Stormwater management will be done through low impact measures such as rain gardens and grass swales. Staff recommends approval of the rezoning petition.

Mr. Paul Hughes of CDDI Development came forward to represent the petition. He gave some history of the property as well as noting that since its annexation from Campbell County, the property has been allowed to continue as a commercial use through a Board of Zoning Appeals conditional use permit. This conditional use permit is extended to the property owner and has to be reapplied for if the property changes ownership. It can also be revoked by the City at any time with 30 days' notice. It is the desire of the current owners to maintain the property, as well as restoring some of the historic features of the property. He mentioned that the property will be much like what you think of when you think of Colonial Williamsburg on a much smaller scale. Since the restoration of historic properties can be an expensive undertaking, it is their desire to change the zoning of the property from R-3 with a BZA conditional use permit to B-3C. Their intent is to only use the property as outlined in this proposal in perpetuity.

Mr. Hughes mentioned that in reaching out to adjoining property owners, it was determined that it would be beneficial to obtain the two other parcels that were once part of the home tract of 2627 Confederate Avenue. They are also in the process of vacating a paper street between Old Forest Road and Confederate Avenue. Obtaining these properties and vacating the paper street will allow them to restore an historic ice well, provide additional buffering as well as overflow parking.

Mr. Hughes remarked that this commercial venture will increase the City's revenues through meals, real estate, personal property and licensing taxes. He noted that Locust Thicket has operated without complaint as a commercial use since 1958 and he is asking for Planning Commission's support in their efforts to restore this important historic site and increase its commercial viability, which will in turn increase revenues for the City.

Mr. Vance Driskill came forward to speak. He thinks this is a great use of the property and noted that he has not had any complaints or problems with Mr. Hughes. Anything Mr. Hughes has said he would do he has done and he thinks they will make great neighbors.

Mr. Sam Waddell of 1501 Club Drive came forward to speak. He is happy to see that someone is willing to come into his neighborhood and invest a substantial amount of money. He mentions this because of the recent closing of the Kroger on Linkhorne Drive which made him wonder if his neighborhood is going into a decline. He thinks that this use of Locust Thicket will be very vibrant and purposeful for the community.

Mr. Chris Gulliscio came forward to speak. He has seen the property vacant off and on over the years. He has seen how historic properties tend to deteriorate when they are allowed to remain vacant. He has seen what Mr. Hughes and his company have done so far and thinks Locust Thicket is an important piece of Lynchburg's history. He thinks this will be a unique use of a historic property and is an exciting opportunity for the City to be involved in preserving a local historic district.

Vice-Chair Johnston asked for anyone else who wished to speak in favor of the petition. No one came forward. She asked for anyone who wished to speak in opposition of the petition. No one came forward. She closed the public hearing portion of the petition.

Commissioner Light noted that he had prepared some comments regarding the property, however, Mr. Hughes and the other speakers have already covered his points and he would prefer to not be repetitive. He will be voting in favor of the petition.

Commissioner Perault asked for clarification that the local historic district does not extend beyond 2627 Confederate Avenue. Mr. Henry indicated that is correct and noted that they will next be hearing a petition to include the other two properties into the Locust Thicket District.

Commissioner Perault indicated that he had heard that the type of parking lot surface has not been determined. He would note that asphalt would not be compatible with a historic site. Mr. Hughes acknowledged that fact and indicated that they believe it will be pea gravel with some type of treatment under it in order to comply with the new stormwater regulations. He also indicated that they will maintain as many of the trees as possible with the site, only clearing the necessary number to put in the required number of parking spaces.

Commissioner Marion likes the proposal and is glad to see this historic house being used in this manner. She is happy to see that they are investing heavily in the property to make the proposal work and she suspects that they will make it work.

Commissioner Coleman concurred with all the other commissioners' remarks and made a motion to waive the 21-day submittal requirement for proffers. It was seconded by Commissioner Light and passed by the following vote:

AYES:	Coleman, Johnston, Light, Marion, and Perault	5
NOES:		0
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Commission Johnston indicated that she had an opportunity to tour the property and likes what has been done to it thus far. She is happy to see them investing in the City and thinks it will be a great asset to the City.

Commissioner Marion made the following motion, which was seconded by Commissioner Perault and passed by the following vote:

"That the Planning Commission waives the twenty-one (21)-day submittal requirement for proffers and recommends to City Council approval to rezone approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue from R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional), subject to the following voluntarily submitted proffers:

1. **Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.**
2. **We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.**

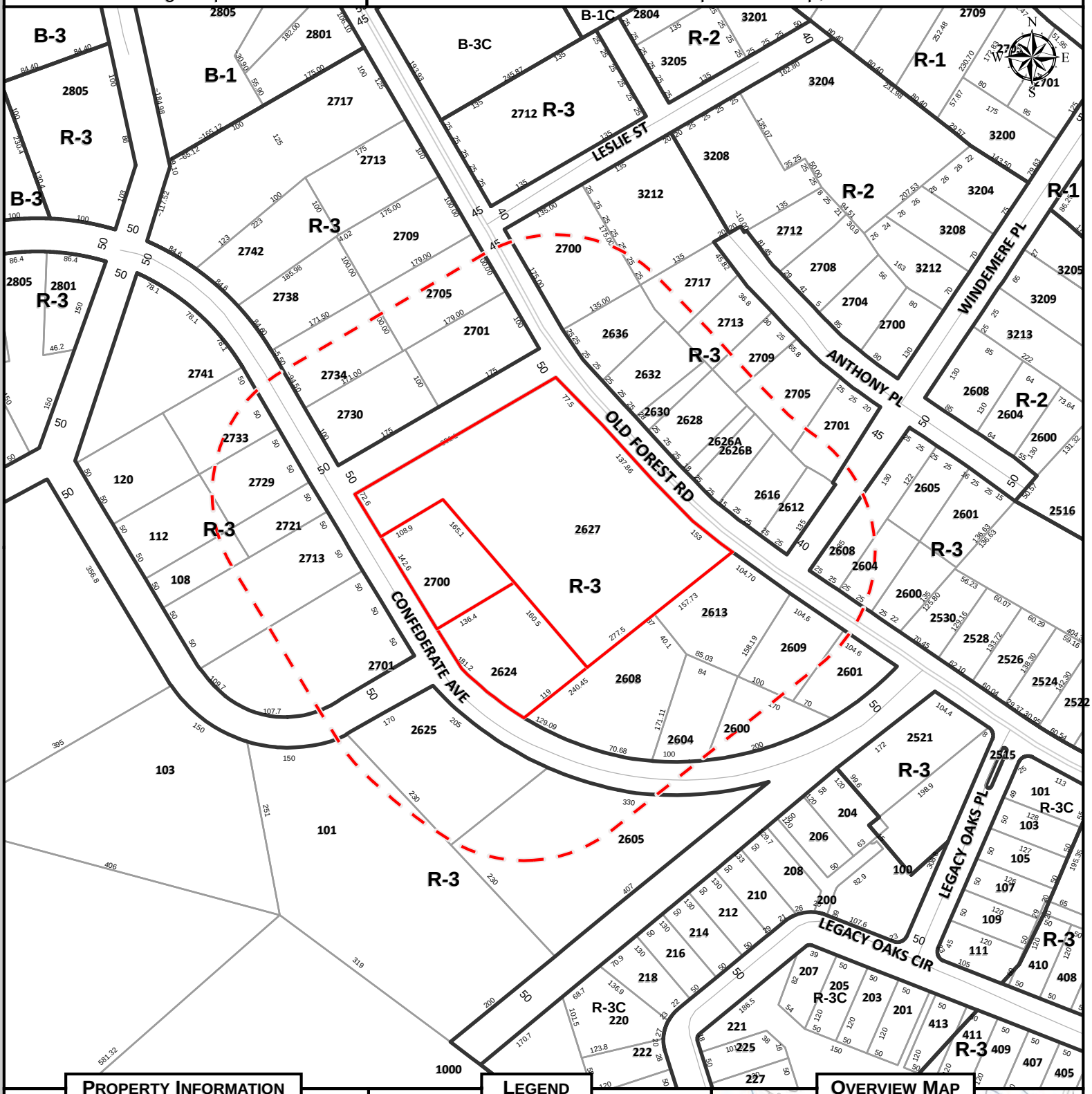
AYES:	Coleman, Johnston, Light, Marion, and Perault	5
NOES:		0
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Zoning Map

Zoning Request

LOCUST THICKET

CDDI Development Group, LLC



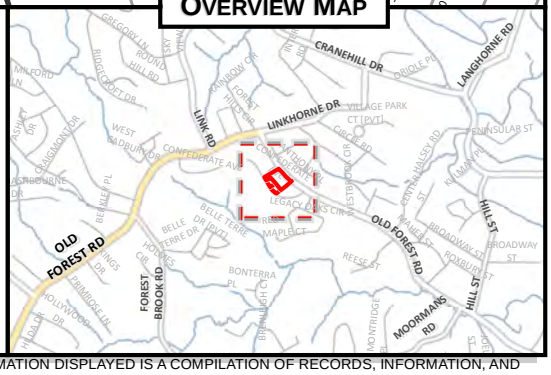
Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- Subject Property
- 215' Buffer
- Zoning Boundary

Overview Map



Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

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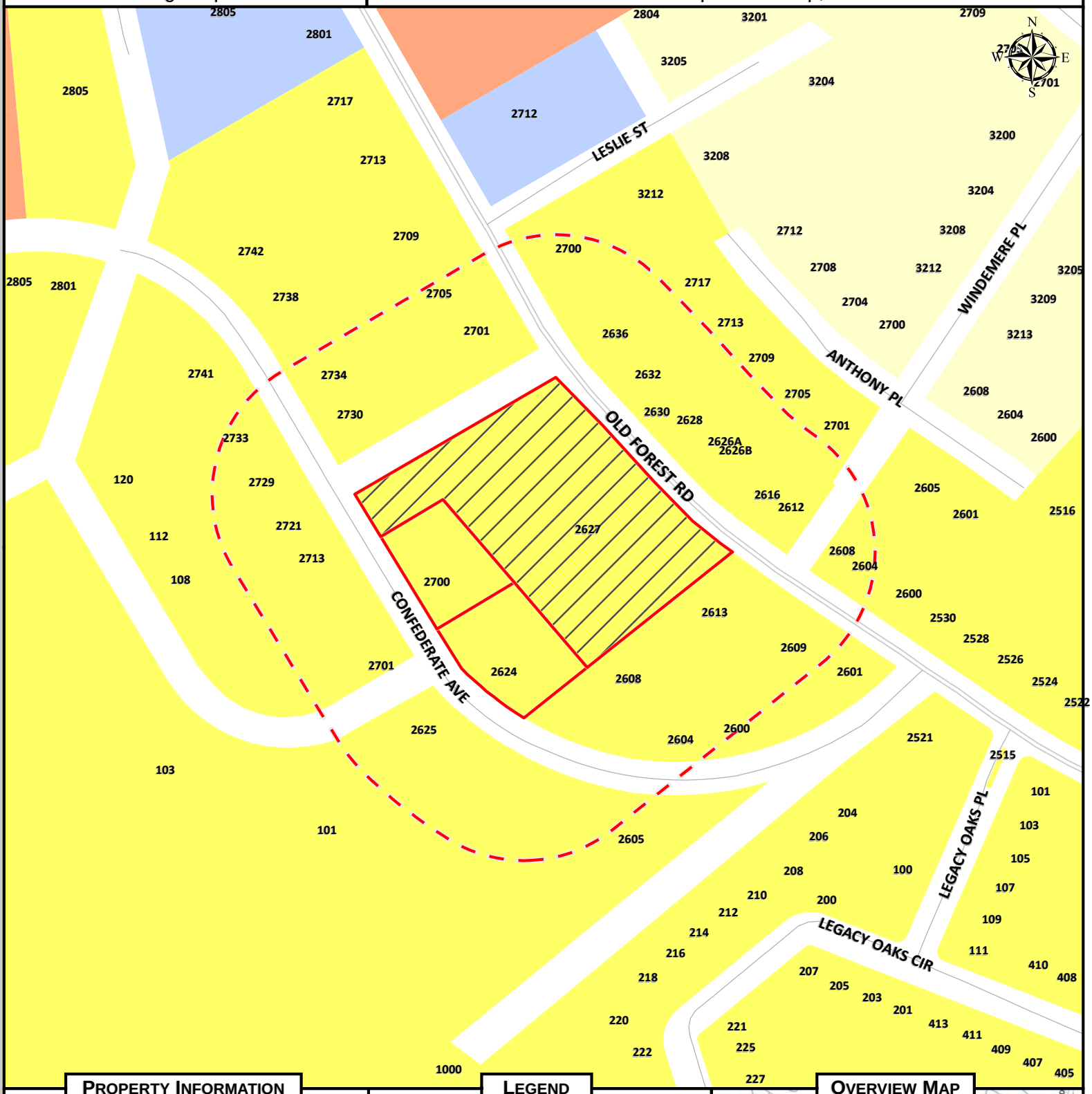
Parcel ID	Address	Owner
16610001	2627 OLD FOREST RD	CDDI DEVELOPMENT GROUP LLC
16612007	2625 CONFEDERATE AVE	CLAGAR PARTNERS
16612008	2605 CONFEDERATE AVE	CLAGAR PARTNERS
16612006	101 MANASSAS ST	CLAGAR PARTNERS
16611011	2701 CONFEDERATE AVE	CLAGAR PARTNERS
16611009	2713 CONFEDERATE AVE	CLAGAR PARTNERS
16611019	112 MANASSAS ST	CLAGAR PARTNERS
16605005	2701 OLD FOREST RD	CLAGAR PARTNERS
16605006	2730 CONFEDERATE AVE	CLAGAR PARTNERS
16605007	2734 CONFEDERATE AVE	CLAGAR PARTNERS
16609009	2612 OLD FOREST RD	CLARK, ERNESTINE
16609013	2628 OLD FOREST RD	DODGION, ROBERT W
16610003	2609 OLD FOREST RD	DRISKILL, D VANCE & WINIFRED T
16610008	2608 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16610010	2624 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16610002	2613 OLD FOREST RD	DRISKILL, D VANCE & WINIFRED T &
16610009	2700 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16609006	2705 ANTHONY PL	EVANS, TIMOTHY P & TAMMY E
16609004	2713 ANTHONY PL	FERGUSON, DANNY E & JACQUELINE M
16614042	2604 OLD FOREST RD	FRANKLIN, RICK A
16609011	2626 B OLD FOREST RD	GALLIER, BRUCE E & CAROLE T
16609012	2626 A OLD FOREST RD	GALLIER, BRUCE E & CAROLE T
16609016	2636 OLD FOREST RD	GARLAND, HERMAN T
16605004	2705 OLD FOREST RD	GARNER, MARY S & GARNER, JACK S
16609014	2630 OLD FOREST RD	GIBSON, JERRY
16609015	2632 OLD FOREST RD	GIBSON, JERRY
16609002	3212 LESLIE ST	HARTZOG, MARJORIE S
16610005	2600 CONFEDERATE AVE	NEW DAY INVESTMENTS INC
16610006	2604 CONFEDERATE AVE	NEW DAY INVESTMENTS INC
16610004	2601 OLD FOREST RD	NEW DAY INVESTMENTS INC
16609005	2709 ANTHONY PL	PAIGE, MARY R
16611006	2729 CONFEDERATE AVE	PROFFITT, PATRICK C & TERRI L
16611004	2733 CONFEDERATE AVE	QUAINTANCE, ROBBIE G
16609008	2701 ANTHONY PL	ROLLO, JOSEPH M III
16609001	2700 OLD FOREST RD	SHEPHERD, JOSEPH C
16609010	2616 OLD FOREST RD	SHOPSHIRE, JAMES M SR &
16611018	108 MANASSAS ST	STEIN, KIM O
16611008	2721 CONFEDERATE AVE	STEIN, KIM O
16609018	2717 ANTHONY PL	WIMBUSH, ANTHONY & WANDA D
16614043	2608 OLD FOREST RD	WITT, LEWIS S JR

FLUM Map

Zoning Request

LOCUST THICKET

CDDI Development Group, LLC



Property Information

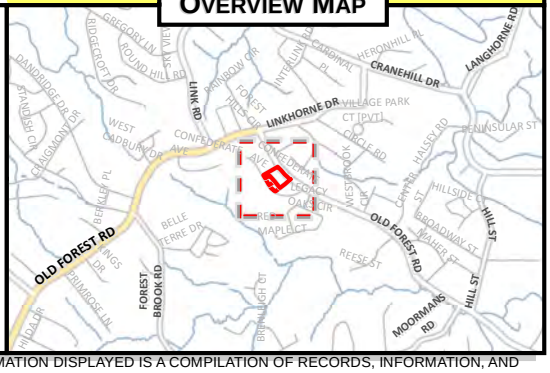
Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- Local Historic District
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Employment 1
- Employment 2
- Downtown
- Institution
- Public Use
- Public Parks
- Resource Conservation
- Mixed Use

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map



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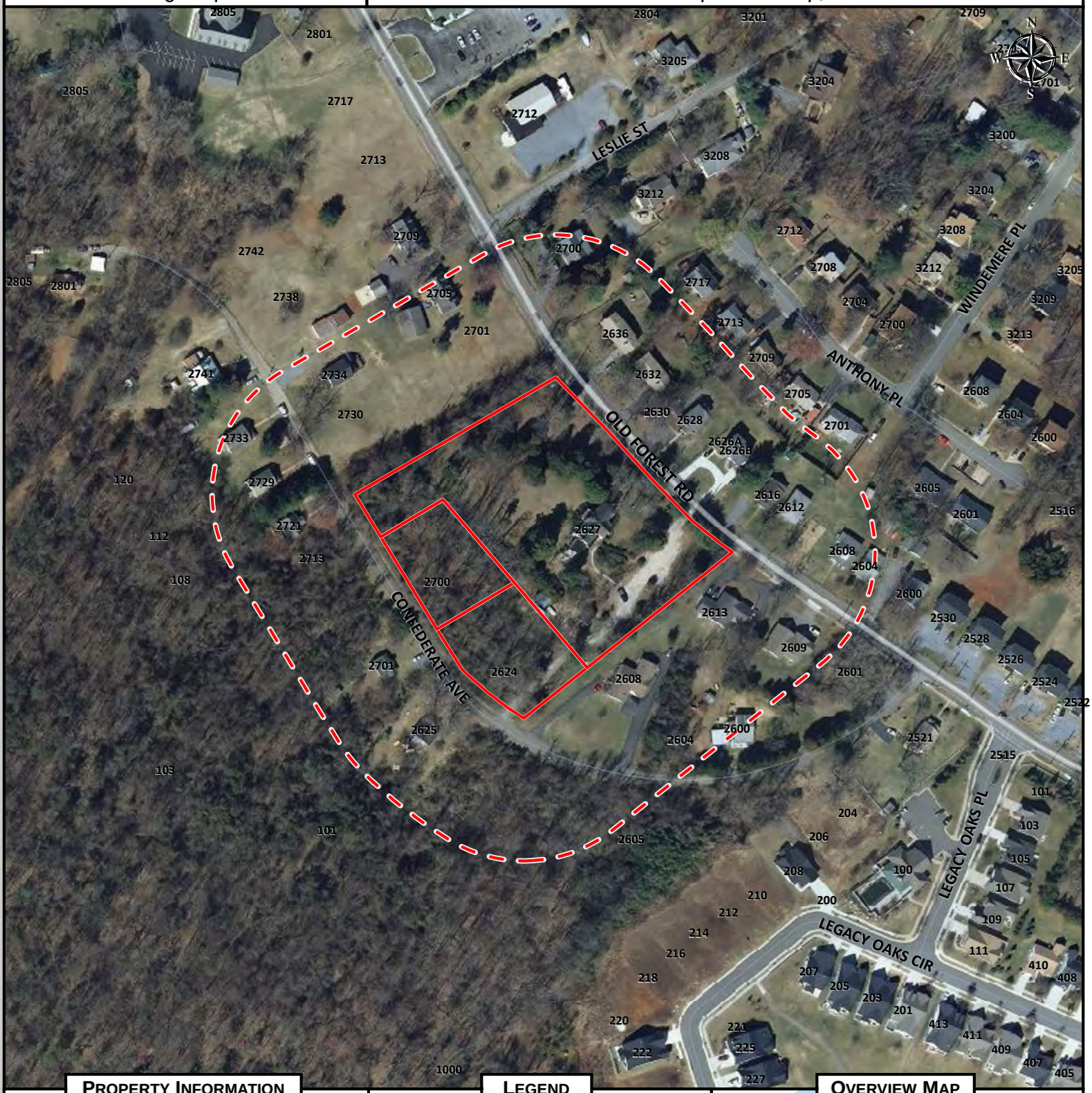
Watershed Map	LOCUST THICKET
Zoning Request	CDDI Development Group, LLC



Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- **Subject Property**
- **Base Flood Elevation**
- **Floodway**
- **Floodzone**
- **River / Lake / Stream**

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map

Blackwater Creek

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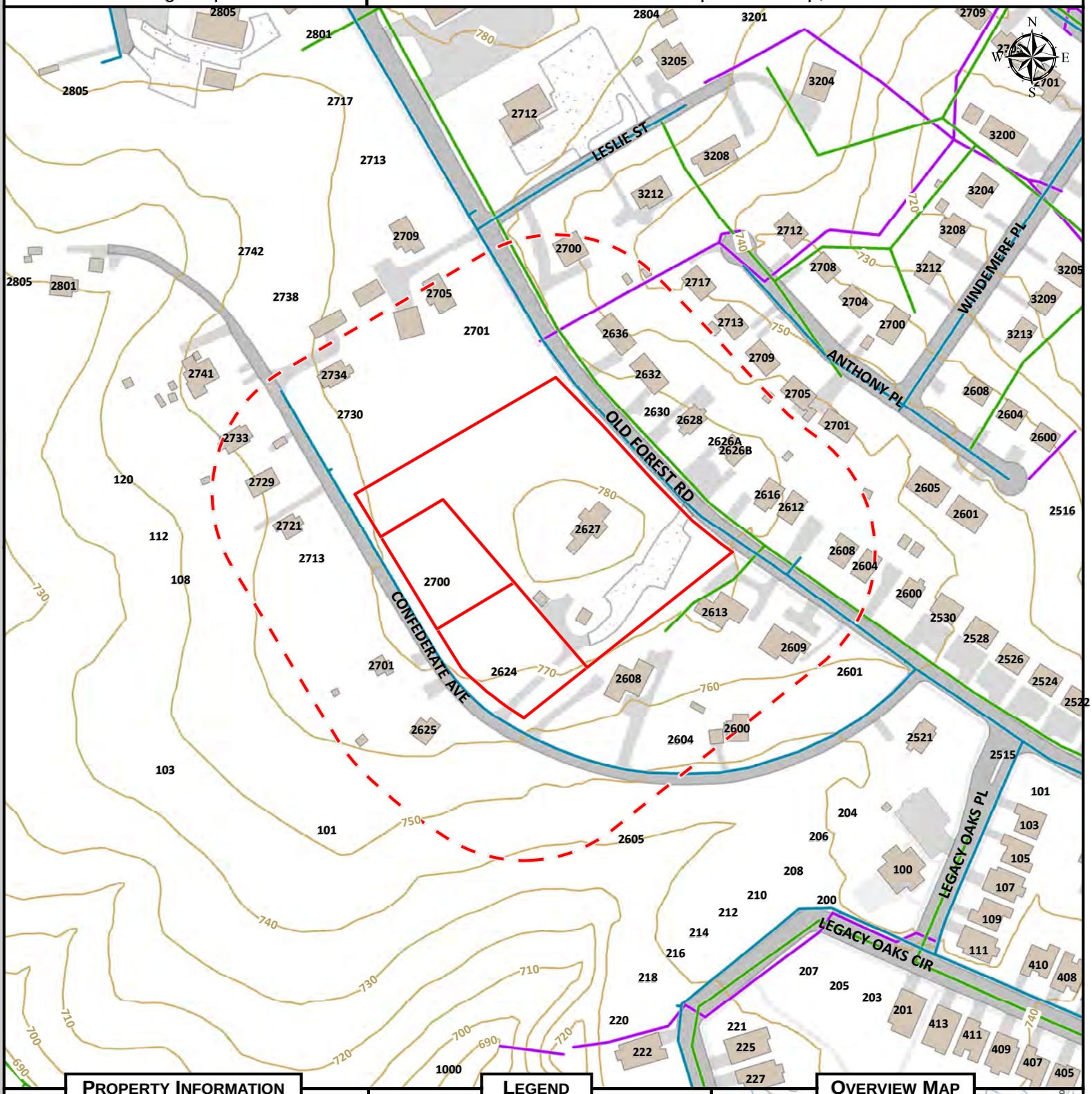
Planimetric and Topographic Map

LOCUST THICKET

Zoning Request

CDDI Development Group, LLC



Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

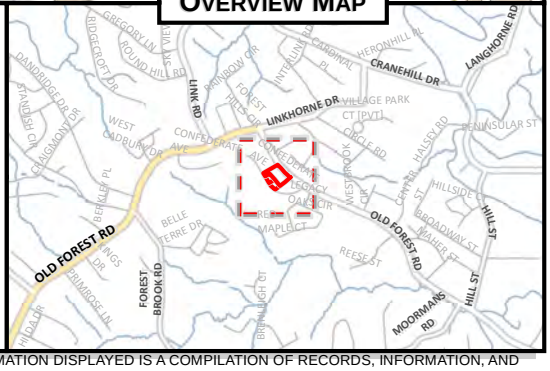
		Active	Proposed	Abandoned
Utilities	Water			
	Sanitary			
	Storm			

		Paved	Unpaved	Other
Planimetrics	Structure	-	-	
	Roadway			-
	Parking			-
	Sidewalk		-	-
	Driveway	-	-	

		10'	10' Obs
Topography	Contour		

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map



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PROJECT NARRATIVE

THIS PROJECT IS TO ADD TO THE EXISTING RESTAURANT/SPECIAL EVENTS CENTER BY INCLUDING A NEW EVENTS CENTER/TAVERN, AND TO HISTORICALLY RESTORE THE OLD WATER WELL, ICE WELL, HISTORIC FOUNDATIONS AS WELL AS TO ADD A KITCHEN EXTENSION TO THE MAIN MANOR HOUSE AND NEW HPC APPROVED EXTERNAL FEATURES AND ADDITIONAL CAR PARKING. THE NEW AREA WILL BE UTILIZED FOR SPECIAL EVENTS SUCH AS WEDDINGS. THE EXISTING MANOR HOME WAS PREVIOUSLY A RESTAURANT AND WILL BE RETAINED AS SUCH. THE ADJOINING PARCELS TMP 16610009 AND TMP 166100010 ARE TO BE INCORPORATED INTO TMP 166100001.

THE NEW EVENTS CENTER WILL HAVE A FAMILY ORIENTATED HISTORICAL TAVERN AND KITCHEN IN THE BASEMENT AND OFFICES AND BRIDAL ROOMS ON THE TOP FLOOR. THE MAIN LEVEL WILL HAVE AN ASSEMBLY AREA AND A KITCHEN. NEW FENCING AND OTHER EXTERNAL FEATURES ARE TO BE APPROVED BY THE HERITAGE PRESERVATION COMMISSION.

THE PROPERTIES ARE CURRENTLY ZONED R-3 AND A REQUEST IS BEING MADE TO CHANGE TO B-3C.

THIS SITE WILL BE SERVED BY PUBLIC WATER AND SEWER. BACKFLOW DEVICES AND FATS, OILS AND GREASE (FOG) SHALL BE PER CITY OF LYNCHBURG WATER RESOURCE STANDARDS.

BASED ON A GRAPHIC DETERMINATION, THIS PROPERTY LIES ON FEMA INSURANCE RATE MAP PANEL NUMBER 5100930037D, DATED JUNE 03, 2008. PER THE FEMA MAP THIS SITE LIES WITHIN OTHER AREAS "ZONE X" - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

SEPARATE PLANS WILL BE SUBMITTED TO THE CITY FOR CONSTRUCTION DETAILS TO INCLUDE: GRADING, STORMWATER MANAGEMENT, PERVIOUS PAVERS AND TURF PAVERS, EROSION AND SEDIMENT CONTROL, UTILITIES, LANDSCAPING, ETC.

STORMWATER MANAGEMENT

STORMWATER WILL BE ADDRESSED THROUGH A LOW-IMPACT DESIGN STRATEGY TO ADDRESS BOTH WATER QUALITY AND DETENTION. THIS WILL BE ACHIEVED BY THE USE OF ISOLATED RAIN GARDENS AND GRASS LINED SWALES. THE DISCHARGE FROM THE RAIN GARDENS WILL BE ROUTED TO AN ADEQUATE CHANNEL, SUFFICIENT TO HANDLE THE STORMWATER FROM THIS FACILITY. THE ADEQUATE RECEIVING CHANNELS WILL INCLUDE ROADSIDE DITCHES AND STORM INLETS AND PIPING ALONG CONFEDERATE AVENUE AND OLD FOREST ROAD. THE DESIGN OF THESE MEASURES WILL BE COORDINATED WITH THE CITY OF LYNCHBURG'S ENVIRONMENTAL PLANNER AND FINAL PLANS WILL BE SUBMITTED FOR REVIEW AND APPROVAL.

PARKING SCHEDULE

MAXIMUM OCCUPANCY ON SITE FORESEEN: 296 PEOPLE

MAXIMUM STAFF ON SITE FORESEEN: 24 PEOPLE

SEC 35.1-25 OFF STREET PARKING ORDINANCE:
RESTAURANTS, PLACES OF ASSEMBLY REQUIREMENT:

1 SPACE PER 4 OCCUPANTS: 296/4 = 74 SPACES

1 SPACE PER 3 STAFF MEMBERS = 24/3 = 8 SPACES

82 SPACES ARE REQUIRED
82 SPACES ARE PROVIDED

CONTACT INFORMATION

OWNER/APPLICANT: CDDI DEVELOPMENT GROUP, LLC
3023 RAVENWOOD DRIVE
LYNCHBURG VIRGINIA 24503

CONTACT: PAUL HUGHES
434-384-2630

ENGINEER: WARNER WHITE ENGINEERING PARTNERS, INC.
118 CORNERSTONE DRIVE
LYNCHBURG VIRGINIA 24502

CONTACT: TRENT J. WARNER, P.E.
434-534-3201

TRIP GENERATION TABLE	BUILDING AREA	VEHICLES/DAY	PEAK/HR
MANOR HOUSE	4,000 SF	360 (89.95 TRIPS/KSF)	30 (7.49 PEAK/KSF)
SPECIAL EVENTS	3,000 SF	28 (9.11 TRIPS/KSF)	2 (0.55 TRIPS/KSF)
TOTAL		388	32

LANDSCAPE BUFFER NOTE

EXISTING TREES ARE TO REMAIN EXCEPT FOR ONLY WHAT NEEDS TO BE TAKEN FOR CONSTRUCTION. A 20' STAGGERED ROW BUFFER SHALL BE REINFORCED AROUND THE PERIMETER ADJOINING RESIDENTIAL PROPERTY IN LOCATIONS WHERE THE EXISTING NATURAL BUFFER IS INSUFFICIENT BY THE PLANNING DEPARTMENT.

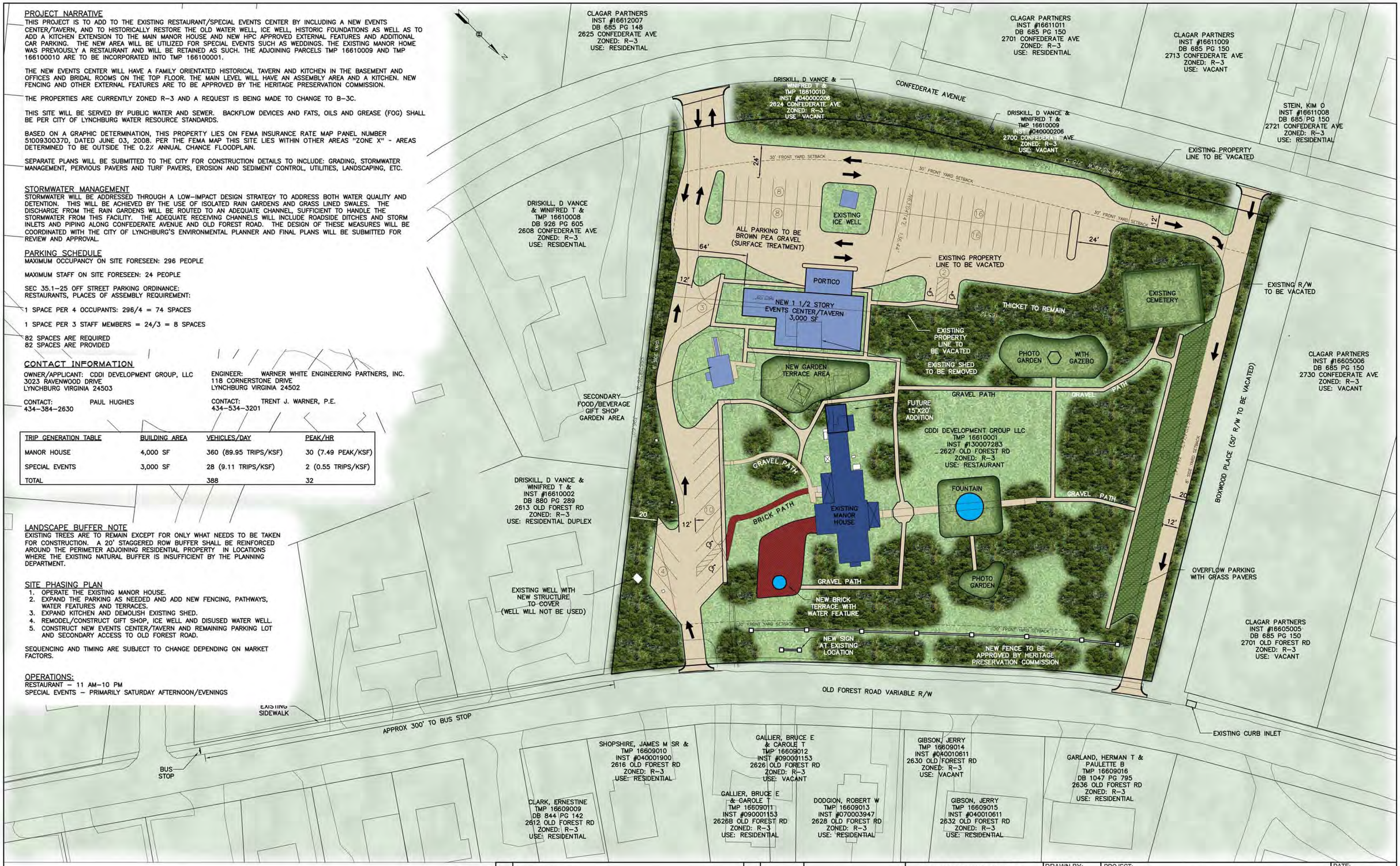
SITE PHASING PLAN

1. OPERATE THE EXISTING MANOR HOUSE.
2. EXPAND THE PARKING AS NEEDED AND ADD NEW FENCING, PATHWAYS, WATER FEATURES AND TERRACES.
3. EXPAND KITCHEN AND DEMOLISH EXISTING SHED.
4. REMODEL/CONSTRUCT GIFT SHOP, ICE WELL AND DISUSED WATER WELL.
5. CONSTRUCT NEW EVENTS CENTER/TAVERN AND REMAINING PARKING LOT AND SECONDARY ACCESS TO OLD FOREST ROAD.

SEQUENCING AND TIMING ARE SUBJECT TO CHANGE DEPENDING ON MARKET FACTORS.

OPERATIONS:

RESTAURANT - 11 AM-10 PM
SPECIAL EVENTS - PRIMARILY SATURDAY AFTERNOON/EVENINGS



IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED

30' 0 30'

NO.	REVISION	BY	DATE

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

DRAWN BY:	JLW
DESIGNED BY:	JLW
REVIEWED BY:	TJW
PROJECT No.	14013.00
SCALE:	GRAPHIC
PROJECT:	LOCUST THICKET REZONING PLAN LYNCHBURG, VIRGINIA
TITLE:	CONCEPT PLAN
DATE:	05-28-14
DRAWING No:	C1
SHEET NUMBER:	1 OF 1

FILE: P:\2014\14013.00 Locust Thicket Master Plan\Concept\14013C1.dwg

June 4, 2014

Mr. Tom Martin
City Planner
Community Planning and Development
City Hall
900 Church Street
Lynchburg, Virginia 24505

RE: Proffers for the Locust Thicket Project

Dear Tom,

Please accept the following proffer for the development that is to occur should City Council approve our petition for the Locust Thicket project off Old Forest Road and Confederate Avenue.

1. Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.
2. We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission.

Sincerely,

Mr. Paul Hughes
The CDDI Development Group, LLC.

Planning Commission Public Hearing
Rezoning for Locust Thicket
June 11, 2014

PLEASE PRINT

NAME	ADDRESS	PHONE	IN FAVOR	IN OPPOSITION	NEUTRAL
Paul Hughes	Ravenwood		Petitioner		
Vance Driskill					
Sam Waddell	1501 Club Dr				
Chris Gulluscio	1039 Alum Springs Rd				

LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 10

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **Local Historic District Property Designation - Locust Thicket District – 2624 and 2700 Confederate Avenue**

RECOMMENDATION: Approval of the petition.

SUMMARY: CDDI Development Group, LLC is petitioning to include the properties located at 2624 and 2700 Confederate Avenue into the Locust Thicket Local Historic District. These two (2) properties together with 2627 Old Forest Road will help further protect some of the original Locust Thicket property. The two (2) subject parcels were subdivided off the parent tract (2627 Old Forest Road) in 2002. The Planning Commission recommended approval of the petition because:

- The development of the site will enhance and rehabilitate a significant historic resource within the City.
- The site will adhere to precise design criteria if it is located within a Local Historic District.
- The Historic Preservation Commission (HPC) recommended including the properties at 2624 and 2700 Confederate Avenue in the Locust Thicket Local Historic District, because until their 2002 subdivision, these properties were part of the original Locust Thicket property.

PRIOR ACTION(S):

May 19, 2014: The Historic Preservation Commission (HPC) recommended approval of the petition.

June 11, 2014: The Planning Division recommended approval of the petition.
The Planning Commission recommended approval (5-0; 1 member absent: Swienton) of the petition.

FISCAL IMPACT: N/A

CONTACT(S): Kevin Henry, Planner II – 455-3900; Tom Martin, City Planner - 455-3900; Kent White, Director of Community Development – 455-3900

ATTACHMENT(S):

- Ordinance
- Historic Preservation Commission Minutes - May 19, 2014
- Planning Commission Report and Minutes - June 11, 2014
- Vicinity Zoning Pattern Map
- Vicinity Future Land Use Map
- Watershed Location Map
- Planimetric and Topographic Map
- Historic District Map
- Petitioner letter of request and attachments
- Petitioner letter to residents
- Property Photograph
- VDHR Architectural Survey Form
- Signup Sheets from HPC and Planning Commission meetings

REVIEWED BY: lkp

UNCODIFIED ORDINANCE:

AN ORDINANCE DESIGNATING THE PROPERTY LOCATED AT 2624 AND 2700 CONFEDERATE AVENUE AS PART OF THE LOCUST THICKET LOCAL HISTORIC DISTRICT

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LYNCHBURG that in order to promote the public necessity, convenience, welfare and good zoning practice that Chapter 35.1 of the Code of the City of Lynchburg, 1981, as amended, be and the same is hereby further amended by adding thereto Section 35.1-76__, which section shall read as follows:

Section 35.1-76__. Designation of the properties located at 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District.

The area embraced within the following boundaries:

The parcels of land lying and being in the City of Lynchburg, Virginia having frontage on Confederate Avenue, more specifically described as:

2624 and 2700 Confederate Avenue also assigned as: Tax Map No. 16610010 and 16610009, respectively.

…is hereby designated as part of the Locust Thicket Local Historic District.

And the Director of Community Development shall forthwith cause the “Historic District Map of Lynchburg” referred to in Section 35.1-44.1 of this chapter to be amended in accordance therewith.

Adopted:

Certified: _____
Clerk of Council

089K

MINUTES OF THE MAY 19, 2014 HISTORIC PRESERVATION COMMISSION MEETING MINUTES HAVE BEEN APPROVED):

(2) ACTION: Request of CDDI Development Group, LLC to include the properties located at 2624 and 2700 Confederate Avenue into the Locust Thicket Local Historic District.

Commissioner Smith stated that he would be abstaining from partaking in the deliberations due to a potential conflict of interest since he is working for the applicant on a historical survey of the property. Mr. Paul Hughes and Ms. Sarah Quinn, the applicants, were present to represent the application.

Chairman Bohnert called the applicants forward to explain the proposal. Mr. Hughes explained that the subdivision prior to 2002 included these two (2) properties as part of Locust Thicket.

Chairman Bohnert opened the public hearing, but no one came forward to speak. Therefore, Chairman Bohnert closed the public hearing.

Chairman Bohnert then asked if the applications committee had reviewed the proposal and if they had any comments. Commissioner Schneider stated that the committee was universally in favor of this as it restores the property to some of its original ilk.

Commissioner Schneider made a motion to approve the proposal. Commissioner Butterfield seconded the motion.

Chairman Bohnert asked if there was further discussion. There being no further discussion on the matter, Chairman Bohnert called for the vote and it passed in the following manner:

AYES:	Bohnert, Butterfield, McDonald, Morris, Roskelley, and Schneider	6
NOES:		0
ABSTENTIONS:	Smith	1
ABSENT:		0

The Department of Community Development

City Hall, Lynchburg, VA 24504 **434-455-3900**

To: Planning Commission
From: Planning Division
Date: June 11, 2014
Re: **Rezoning: R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional) – 2627 Old Forest Road, 2624 and 2700 Confederate Avenue**
Local Historic District Property Designation: Locust Thicket Historic District – 2624 and 2700 Confederate Avenue

---

I. PETITIONER

CDDI Development Group LLC, 2627 Old Forest Road, Lynchburg, VA 24501
Representative: Trent Warner, Warner White Engineering Partners, 118 Cornerstone Street, Lynchburg VA 24502, and Mr. Paul Hughes, 2023 Ravenwood Drive, Lynchburg, VA 24503

II. LOCATION

The subject property includes three (3) tracts totaling approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue, Lynchburg, VA 24501
Property Owners:
CDDI Development Group LLC, 2627 Old Forest Road, Lynchburg, VA 24501
Vance & Winifred Driskill, 2624 and 2700 Confederate Avenue, Lynchburg, VA 24501

III. PURPOSE

The purpose of the petition is to designate 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District and to rezone approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road and 2624 and 2700 Confederate Avenue from R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional), to allow the use of the existing building as a restaurant and to allow the construction of a special events center and associated parking.

IV. SUMMARY

- The *Future Land Use Map* (*FLUM*) recommends a Medium Density Residential use for this property.
- The Historic Preservation Commission (HPC) recommended including the properties at 2624 and 2700 Confederate Avenue in the Locust Thicket Local Historic District because until their 2002 subdivision, these properties were part of the Locust Thicket property.
- Petition agrees with the *Zoning Ordinance* which permits banquet halls and restaurants in a B-3, Community Business District.
- A CUP currently exists on the property which is for special events and use of the restaurant.

The Planning Division recommends approval of the rezoning petition.

The Historic Preservation Commission recommends approval of the designation of 2624 and 2700 Confederate Avenue in the Locust Thicket Local Historic District.

V. FINDINGS OF FACT

1. **Comprehensive Plan.** The *FLUM* of the *Comprehensive Plan 2013-2030* recommends a Medium Density Residential use for the area. Medium Density Residential areas "are characterized by small-lot, single family detached housing, duplexes and townhouses at densities up to 12 units per acre. Where neighborhoods already exist, infill development should be at a compatible density and housing type. In addition to residential uses, they may include public and institutional uses compatible in scale with single-family residential homes. Private recreation uses, including country clubs, swim and racquet clubs, and private open space are also appropriate." (***pg. 72***).

   The Planning Division sees the proposed use of the property for a restaurant in the existing manor house and special events center as compatible with other alternate uses included in Medium Density Residential Areas.

   Adjacent land uses are also designated for Medium Density Residential by the *FLUM*. When addressing compatibility between adjacent land uses, building orientation, building location, parking locations, parking design, lighting, walkways and other building and site design factors should be considered (***pg. 16, Policy LU-3.7***).

2. **Zoning.** The subject property was annexed into the City in 1958. The existing R-3, Medium Density, Two-Family Residential District zoning was established in 1978 with the adoption of the current Zoning Ordinance.

3. **Proffers.** The petitioner has voluntarily submitted the following proffers:

   a. Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.

   b. We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.

   By submission of these proffers, it is intended that the site be developed in substantial compliance with the concept plan, dated May 28, 2014, which includes the construction of a three thousand (3,000) square foot, one and a half (1.5) story events center/tavern, a small, approximately three hundred and fifty (350)-square foot secondary food/beverage gift shop area, a three hundred (300)-square foot addition to the existing manor house, access roads and associated parking areas containing eighty-two (82) parking spaces. The concept plan also includes the restoration of historic features of the site, landscape improvements including photo gardens, two fountains, a brick terrace and gravel pathways connecting features to each other.

4. **Board of Zoning Appeals (BZA).** A CUP currently exists on the property, which allows for special events and operation of the restaurant use.

5. **Surrounding Area.** There have been several items requiring City Council approval in the immediate area:

   - On December 10, 1985, City Council approved the CUP petition of George T. Stewart to rezone approximately one and nine tenths (1.9) acres at 2909 and 2913 Old Forest Road and an unopened portion of Confederate Avenue from R-3, Two-Family Residential District, and B-1, Limited Business District, to R-3, Community Business District to allow the construction of an addition to an existing restaurant at 3009 Old

Forest Road, the future construction of several retail/office buildings, and the construction of additional parking areas.

- On May 9, 2006, City Council approved the petition of Rick Krason (1) to rezone approximately seven tenths (.7) of an acre located at 2901 Old Forest Road and (2) for a CUP to construct an animal medical facility.
- On October 10, 1989, City Council approved the petition of William N. Riley to rezone approximately one (1) acre from B-1, Limited Business District, to B-3C, Community Business District (Conditional) to allow construction of a retail space with parking area and to rezone approximately nine-tenths (.9) acre at the rear of the property from R-2 Single-Family Residential District to B-1C, Limited Business District (Conditional), to allow the construction of an office building and parking area at 2728 Old Forest Road.
- On February 13, 2001, City Council approved the petition of John Grier to (1) rezone approximately fourteen (14) acres at 2713 Old Forest Road from R-4 (Conditional), Multi-Family Residential District, to R-3, Two-Family Residential District, to remove the restriction of previously approved proffers and allow the construction of a Planned Unit Development (PUD), and (2) for a CUP to construct a PUD, *Legacy Oaks Villas,* with eighty-seven (87) single family detached dwelling units.

6. **Site Description.** The subject property includes an existing historic house, a walled cemetery and ice well. The property is bound on all sides by existing single-family and two-family dwellings.

7. **Proposed Use of Property.** If the rezoning petition is approved, the existing restaurant/special events center would be expanded with the construction of a new one and a half (1.5) story special events center building/tavern, a secondary food/beverage gift shop and a kitchen extension to the existing manor house. Additionally, the petition includes the historic restoration of the cemetery; old water well and ice well foundations, and the construction of external features such as patios, gardens, and associated parking for the uses. All proposed improvements are still subject to Historic Preservation Commission (HPC) review.

8. **Traffic, Parking and Public Transit.** The proposed development would generate approximately three hundred and eighty-eight (388) trips per day and thirty (30) peak hour trips not surpassing the City thresholds for requiring a Traffic Impact Study (TIS) of five hundred (500) daily and fifty (50) peak hour trips. The proposed development does not trigger any traffic concerns.

   Boxwood Place, a portion of unimproved right-of-way to the north of the property is proposed to be vacated in conjunction with this development. The vacation of the unused right-of-way allows the site plan to accommodate the amount of parking required on the site. Assuming the right-of-way is vacated, the concept plan provides eighty-two (82) parking spaces, which meets the requirements of the City of Lynchburg *Zoning Ordinance* for potential occupants and staff for the site.

   The property is served by Greater Lynchburg Transit Company's Route 8, which runs along Old Forest Road with a bus stop in front of the property at the intersection Confederate Avenue and Old Forest Road.

9. **Stormwater Management.** The proposed project is required to treat stormwater runoff for quantity and quality. The concept plan indicates that stormwater requirements will be addressed through low-impact design strategies with the use of rain gardens and grass swales

as needed. The site has a couple of potential channels for discharge with roadside ditches on adjacent streets and a city storm inlet to the north of the site. These may need to be improved to adequately accommodate increased runoff from the site. A site plan will be required which fully addresses quality, quantity and adequate channel requirements at the time of site plan review.

10. **Emergency Services.** The City Fire Marshal provided comments regarding site design requirements of the City of Lynchburg and the Virginia Statewide Fire Prevention Code. The City's Police Department provided general comments related to site safety and security. These comments have or will be addressed by the petitioner prior to final site plan approval.

11. **Impact.** If approved, the subject property at 2624 and 2700 Confederate Avenue will comply with the City's Local Historic Districts Zoning Overlay (Section 35.1-44.1). By including the two properties within the Locust Thicket Local Historic District, the historic site is regaining pieces of the original property that had been subdivided from the manor house property in 2002.

    Approval of the rezoning petition will provide for the restoration of the historic features of the site and the construction of a three thousand (3,000) square foot, one and a half (1.5) story events center/tavern, a small, approximately three hundred and fifty (350) square foot secondary food/beverage gift shop area, a three hundred (300) square foot addition to the existing manor house, access roads and associated parking areas containing eighty-two (82) parking spaces so that the property can be used for a restaurant and to host special events such as weddings. As all improvements and changes to the property will undergo a review by the Historic Preservation Commission (HPC) as required and the petitioner has proffered to abide by HPC recommendations, the final product of this rezoning should be a great asset to the city. The development will provide a historic and picturesque reuse of one of Lynchburg's oldest country houses and blend into the surrounding neighborhood with landscaping.

12. **Historic Preservation Commission.** The Historic Preservation Commission (HPC) reviewed the petition on May 19, 2014. The HPC felt the inclusion of the 2624 and 2700 Confederate Avenue properties was easily justified as the properties had been integral with the Locust Thicket manor house until as late as 2002. The HPC unanimously recommended the subject properties be included within the Locust Thicket Local Historic District by a vote, (6-0-1, with one abstention, Smith).

13. **Technical Review Committee.** The Technical Review Committee (TRC) reviewed the preliminary rezoning plan on April 22, 2014. Comments related to the proposed use have or will be addressed by the petitioner prior to final site plan approval.

VI. PLANNING DIVISION RECOMMENDATION

Based on the preceding Findings of Fact, the Planning Commission recommends to City Council approval of the petition of CDDI Development Group LLC to:

1. **Waive the twenty-one (21)-day submittal requirement for proffers.**
2. **Rezone approximately three and forty-one hundredths (3.41) acres located at 2627 Old Forest Road, 2624 and 2700 Confederate Avenue**

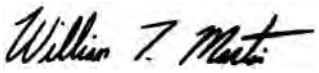
from R-3, Medium Density, Two-Family Residential District to B-3C, Community Business District (Conditional), subject to the following voluntarily submitted proffers:

a. **Ensuing site plans will be developed in strict accordance with the concept plan to be approved by Lynchburg City Council.**

b. **We confirm that all external alterations as required will be developed in strict accordance with approvals by the Historic Preservation Commission. This matter is respectfully offered for your consideration.**

3. **Designate the properties at 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District.**

This matter is respectfully offered for your consideration.



William T. Martin, AICP
City Planner

pc: Mr. L. Kimball Payne, III, City Manager
Ms. Bonnie M. Svrcek, Deputy City Manager
Mr. Walter C. Erwin, City Attorney
Mr. Kent L. White, Director of Community Development
Mr. J. Lee Newland, City Engineer
Ms. Cynthia Kozerow, Lynchburg Police Department
Battalion Chief Greg Wormser, Fire Marshal
Mr. Don DeBerry, Transportation Engineer
Mr. Doug Saunders, Building Commissioner
Mr. Robert Fowler, Zoning Administrator
Mr. Paul Hughes, Locust Thicket
Ms. Winifred Driskill, 2624 and 2700 Confederate Avenue
Mr. Vance Driskill, 2624 and 2700 Confederate Avenue

VII. ATTACHMENTS

1. **Vicinity Zoning Pattern Map**
2. **Vicinity Proposed Land Use Map**
3. **Watershed Location Map**
4. **Planimetric and Topographic Map**
5. **Concept Plan**
6. **Resident Letter**
7. **Property Photograph**

MINUTES FROM THE JUNE 11, 2014 PLANNING COMMISSION MEETING (MINUTES HAVE NOT BEEN APPROVED):

Petition of CDDI Development Group, LLC for the properties located at 2624 and 2700 Confederate Avenue, more particularly Tax Map Identification Number 16610009 and 16610010, approximately one and seventeen thousandths (1.017) acres, to be included in the Locust Thicket Local Historic District.
Historic public hearing:

Mr. Henry indicated that this request is to have the two above mentioned properties included in the Locust Thicket local historic district. These properties were subdivided from 2627 Confederate Avenue in 2002 and including these two properties will restore Locust Thicket to some of its original integrity. The Historic Preservation Commission has reviewed this petition and recommended its approval to the Planning Commission and City Council.

Mr. Hughes noted that he has the support of the Driskills and Clagar Partners and he would like to thank them publicly for their willingness to work with him. They negotiated a fair price for their properties and everyone would be pleased to see these two properties restored to the home tract and included in the local historic district.

Vice-Chair Johnston asked for anyone else who wished to speak in favor of the petition. No one came forward. She asked for anyone who wished to speak in opposition. No one came forward. She closed the public hearing. The commissioners did not have any comments or questions.

Commissioner Light made the following motion, which was seconded by Commissioner Marion, and passed by the following vote:

> **"That the Planning Commission recommends to City Council to designate the properties at 2624 and 2700 Confederate Avenue as part of the Locust Thicket Local Historic District."**

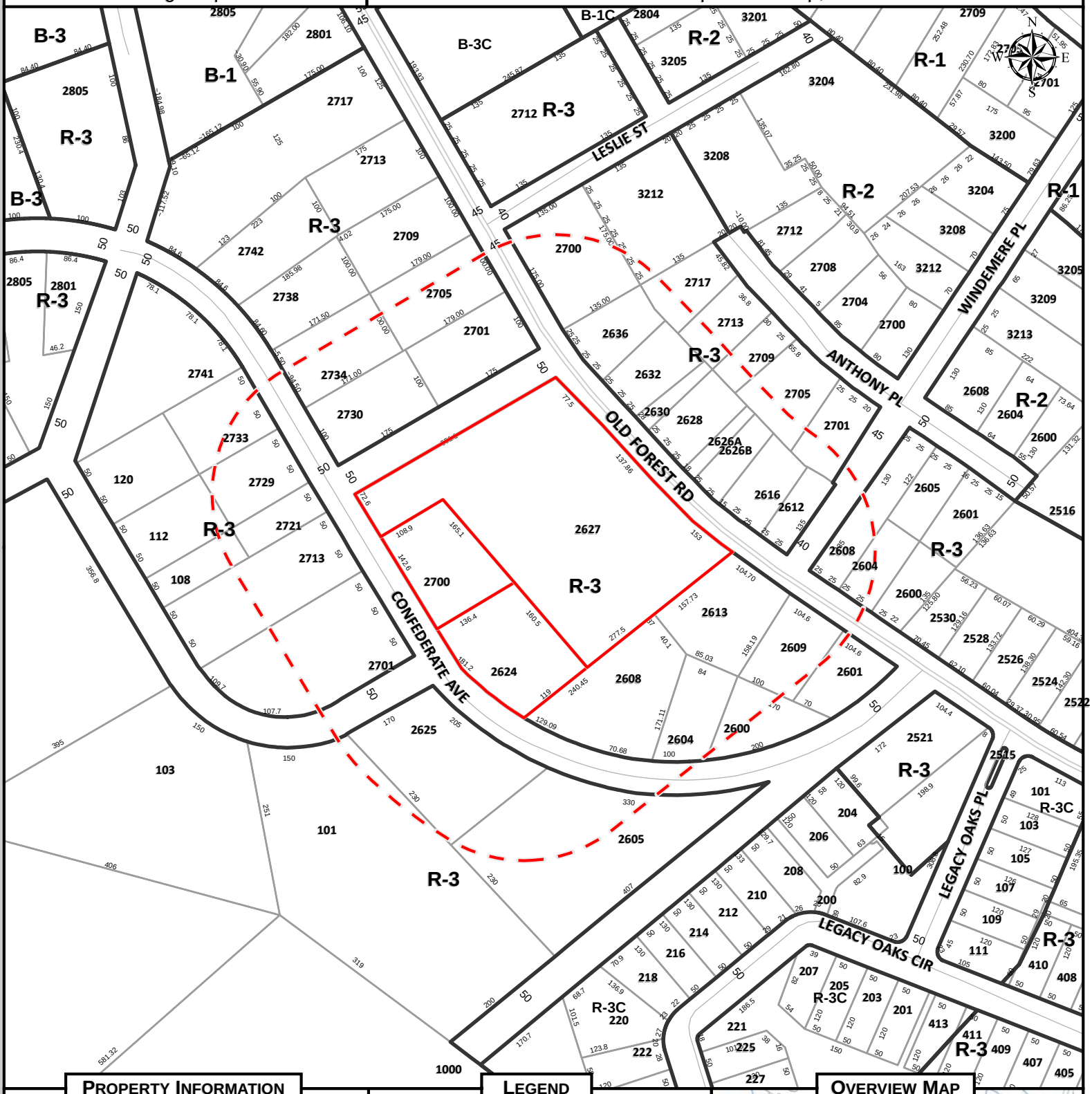
AYES:	Coleman, Johnston, Light, Marion, and Perault	5
NOES:		0
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Zoning Map

Zoning Request

LOCUST THICKET

CDDI Development Group, LLC



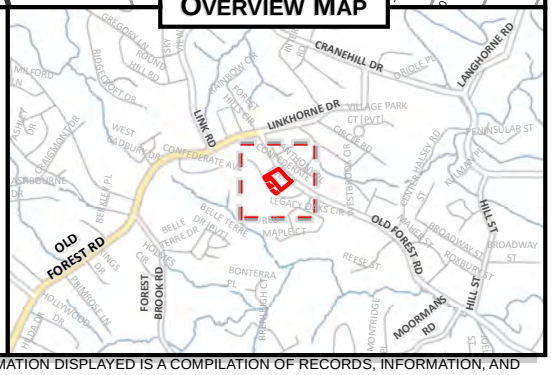
Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- Subject Property
- 215' Buffer
- Zoning Boundary

Overview Map



Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

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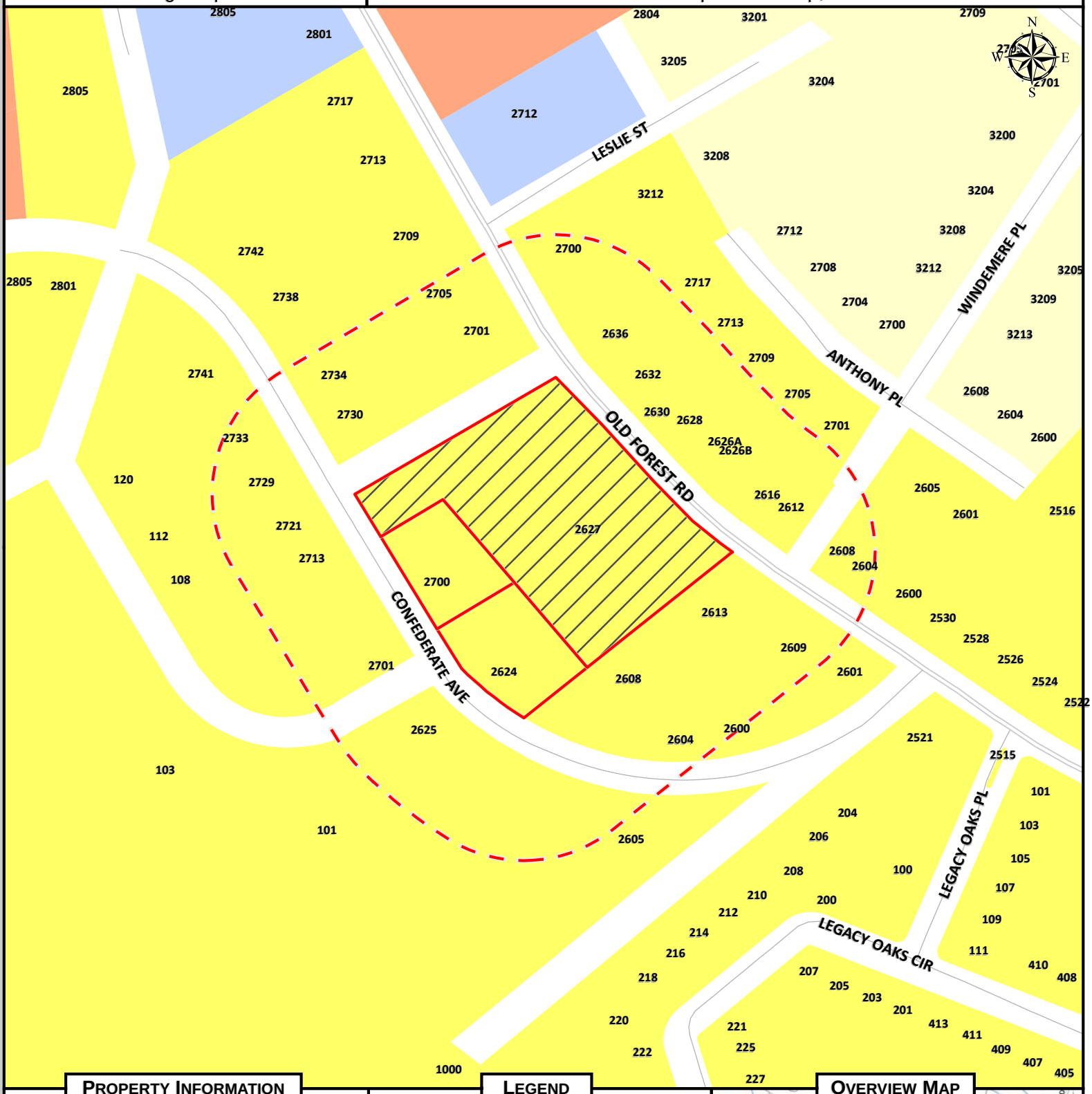
Parcel ID	Address	Owner
16610001	2627 OLD FOREST RD	CDDI DEVELOPMENT GROUP LLC
16612007	2625 CONFEDERATE AVE	CLAGAR PARTNERS
16612008	2605 CONFEDERATE AVE	CLAGAR PARTNERS
16612006	101 MANASSAS ST	CLAGAR PARTNERS
16611011	2701 CONFEDERATE AVE	CLAGAR PARTNERS
16611009	2713 CONFEDERATE AVE	CLAGAR PARTNERS
16611019	112 MANASSAS ST	CLAGAR PARTNERS
16605005	2701 OLD FOREST RD	CLAGAR PARTNERS
16605006	2730 CONFEDERATE AVE	CLAGAR PARTNERS
16605007	2734 CONFEDERATE AVE	CLAGAR PARTNERS
16609009	2612 OLD FOREST RD	CLARK, ERNESTINE
16609013	2628 OLD FOREST RD	DODGION, ROBERT W
16610003	2609 OLD FOREST RD	DRISKILL, D VANCE & WINIFRED T
16610008	2608 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16610010	2624 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16610002	2613 OLD FOREST RD	DRISKILL, D VANCE & WINIFRED T &
16610009	2700 CONFEDERATE AVE	DRISKILL, D VANCE & WINIFRED T &
16609006	2705 ANTHONY PL	EVANS, TIMOTHY P & TAMMY E
16609004	2713 ANTHONY PL	FERGUSON, DANNY E & JACQUELINE M
16614042	2604 OLD FOREST RD	FRANKLIN, RICK A
16609011	2626 B OLD FOREST RD	GALLIER, BRUCE E & CAROLE T
16609012	2626 A OLD FOREST RD	GALLIER, BRUCE E & CAROLE T
16609016	2636 OLD FOREST RD	GARLAND, HERMAN T
16605004	2705 OLD FOREST RD	GARNER, MARY S & GARNER, JACK S
16609014	2630 OLD FOREST RD	GIBSON, JERRY
16609015	2632 OLD FOREST RD	GIBSON, JERRY
16609002	3212 LESLIE ST	HARTZOG, MARJORIE S
16610005	2600 CONFEDERATE AVE	NEW DAY INVESTMENTS INC
16610006	2604 CONFEDERATE AVE	NEW DAY INVESTMENTS INC
16610004	2601 OLD FOREST RD	NEW DAY INVESTMENTS INC
16609005	2709 ANTHONY PL	PAIGE, MARY R
16611006	2729 CONFEDERATE AVE	PROFFITT, PATRICK C & TERRI L
16611004	2733 CONFEDERATE AVE	QUAINTANCE, ROBBIE G
16609008	2701 ANTHONY PL	ROLLO, JOSEPH M III
16609001	2700 OLD FOREST RD	SHEPHERD, JOSEPH C
16609010	2616 OLD FOREST RD	SHOPSHIRE, JAMES M SR &
16611018	108 MANASSAS ST	STEIN, KIM O
16611008	2721 CONFEDERATE AVE	STEIN, KIM O
16609018	2717 ANTHONY PL	WIMBUSH, ANTHONY & WANDA D
16614043	2608 OLD FOREST RD	WITT, LEWIS S JR

FLUM Map

Zoning Request

LOCUST THICKET

CDDI Development Group, LLC



Property Information

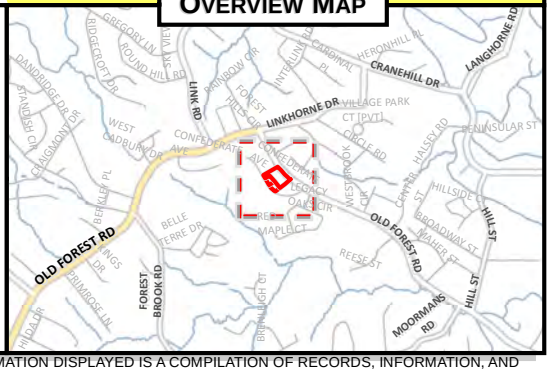
Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- Local Historic District
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Employment 1
- Employment 2
- Downtown
- Institution
- Public Use
- Public Parks
- Resource Conservation
- Mixed Use

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map



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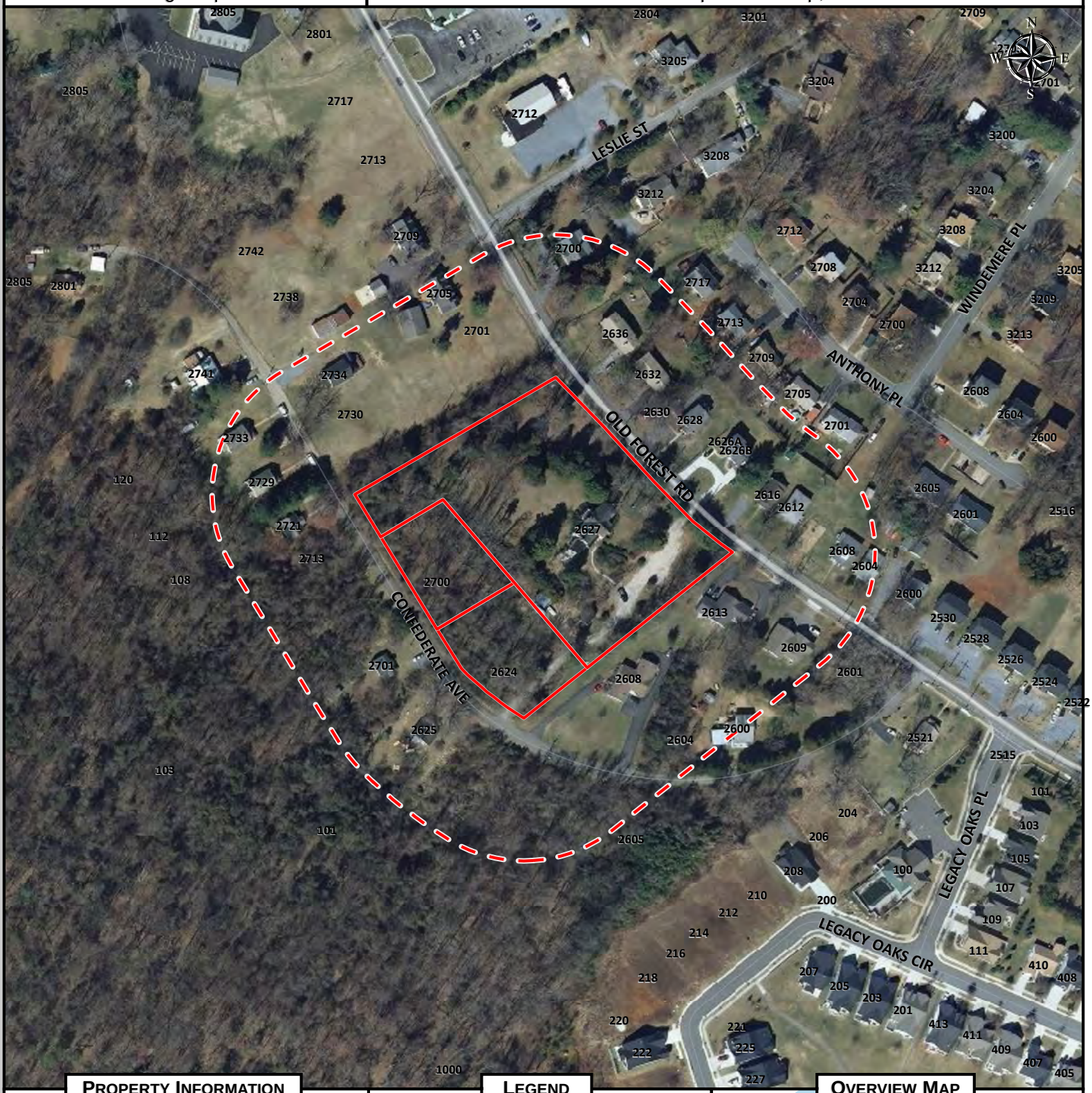
Watershed Map	LOCUST THICKET
Zoning Request	CDDI Development Group, LLC



Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

- **Subject Property**
- **Base Flood Elevation**
- **Floodway**
- **Floodzone**
- **River / Lake / Stream**

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map

Blackwater Creek

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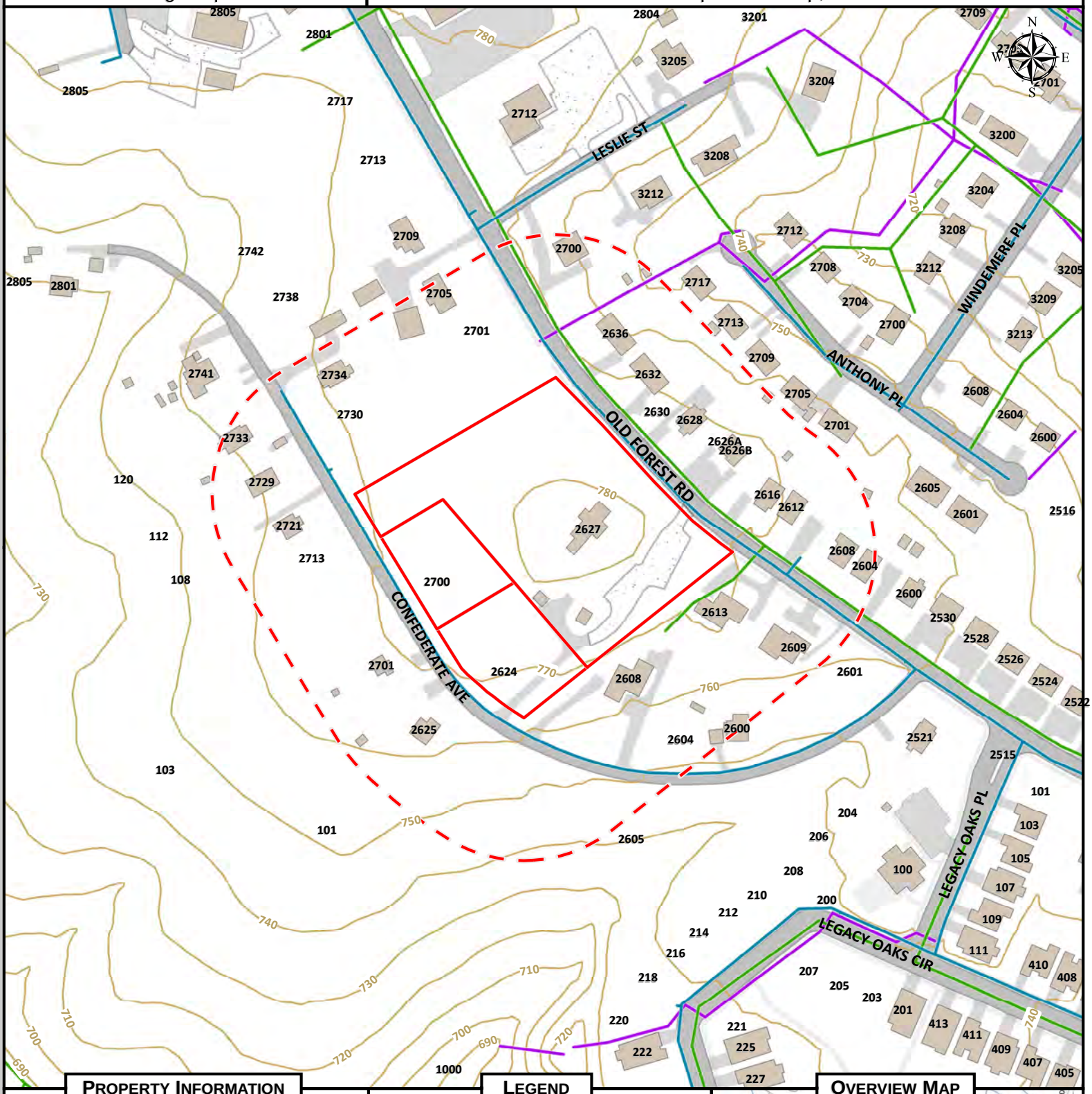
Planimetric and Topographic Map

LOCUST THICKET

Zoning Request

CDDI Development Group, LLC



Property Information

Parcel ID	Address
16610001	2627 OLD FOREST RD
16610010	2624 CONFEDERATE AVE
16610009	2700 CONFEDERATE AVE

Legend

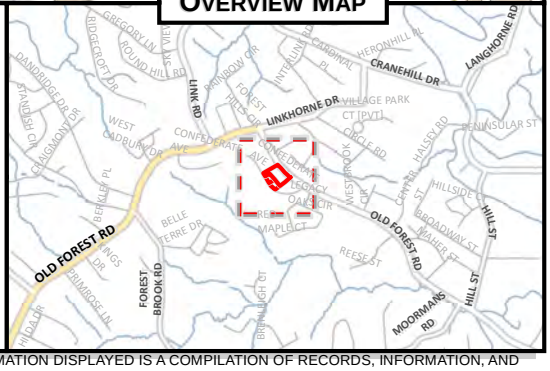
		Active	Proposed	Abandoned
Utilities	Water			
	Sanitary			
	Storm			

		Paved	Unpaved	Other
Planimetrics	Structure	-	-	
	Roadway			-
	Parking			-
	Sidewalk		-	-
	Driveway	-	-	

		10'	10' Obs
Topography	Contour		

Map Scale: 1 " to 200 ' **Date Printed:** 5/30/2014

Overview Map



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2624 & 2700 Confederate Avenue

Locust Thicket District

Property

Local Historic District

N
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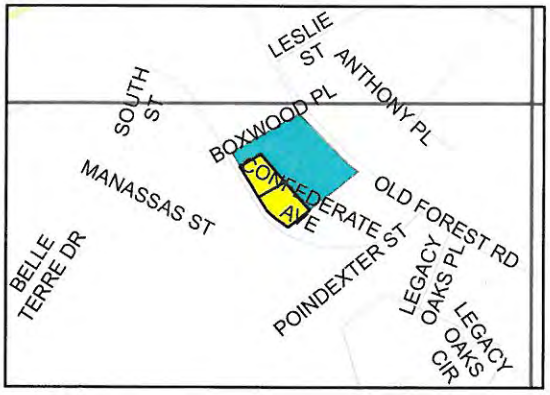


May 9th 2014

Mr Kevin Henry
Secretary of the HPC Commission
Department of Community Development
City Hall
900 Church Street
Lynchburg, VA 24504

Dear Kevin,

Re: Further information pertaining to our request to include 2624 & 2700 Confederate Avenue in the Locust Thicket Historic District.

Further to our letter of May 2nd 2014 we would utilize this correspondence to provide further information regarding our request to have the abovementioned properties included in the Locust Thicket Historic District.

The Locust Thicket tract was originally some 1755 acres, however, in 1939 the Locust Thicket property was subdivided within the "Barksdale Place" subdivision plan which left the original "Home Tract" of some 3.37 acres intact. This "Home Tract" was made up of the following parcels that exist today 16610001 (2627 Old Forest Road the currently listed Locust Thicket Historic District), 16610010 (2624 Confederate Avenue) and 16610009 (2700 Confederate Avenue). In approximately 2002 these two parcels were once again subdivided off of the "Home Tract".

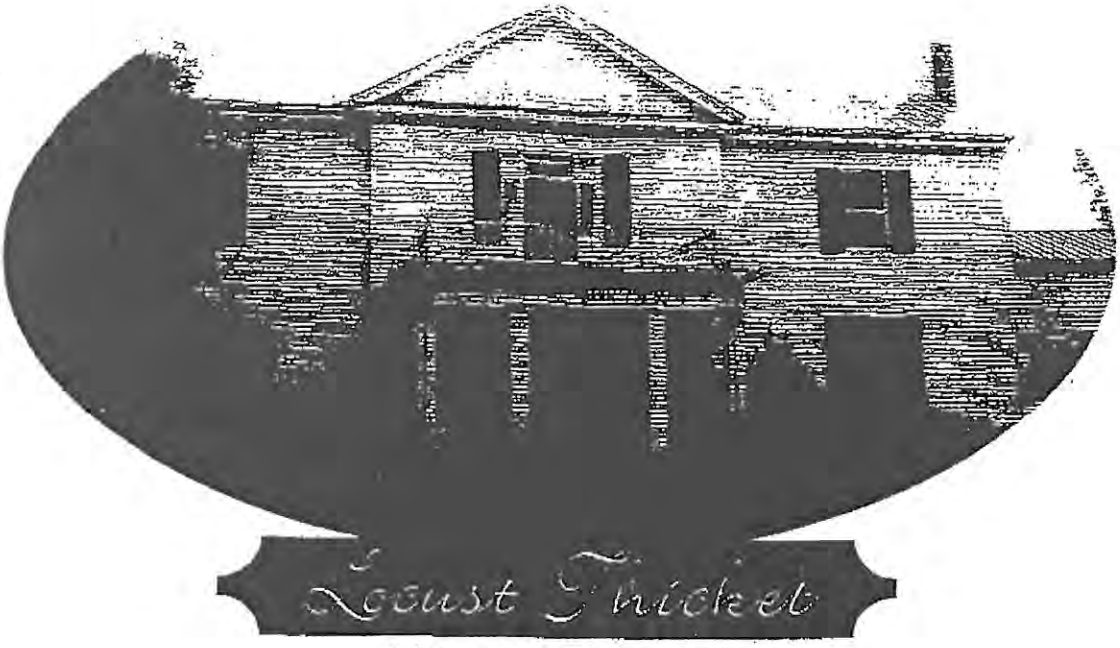
Obviously, it would be impossible to regain access to the original 1755 acres and have all of them listed as part of the Locust Thicket Historic District. However since we, as the petitioner, already own the 2627 Old Forest Road parcel and are in the process of acquiring the two Confederate Avenue parcels listed above it is at least within our control to return the Locust Thicket "Home Tract" property back to the original 3.37 acres and request that these two parcels be incorporated within the Locust Thicket Historic District.

Of additional import from a historical perspective is that these two additional half acre lots house the original ice well foundation as well as the history associated with the reminder of both the Home Tract and the Locust Thicket property.

In addition we have attached some other "historical" information which you and the Commission may find of interest and of assistance with their deliberations and decision.

Yours faithfully,

The CDDI Development Group LLC

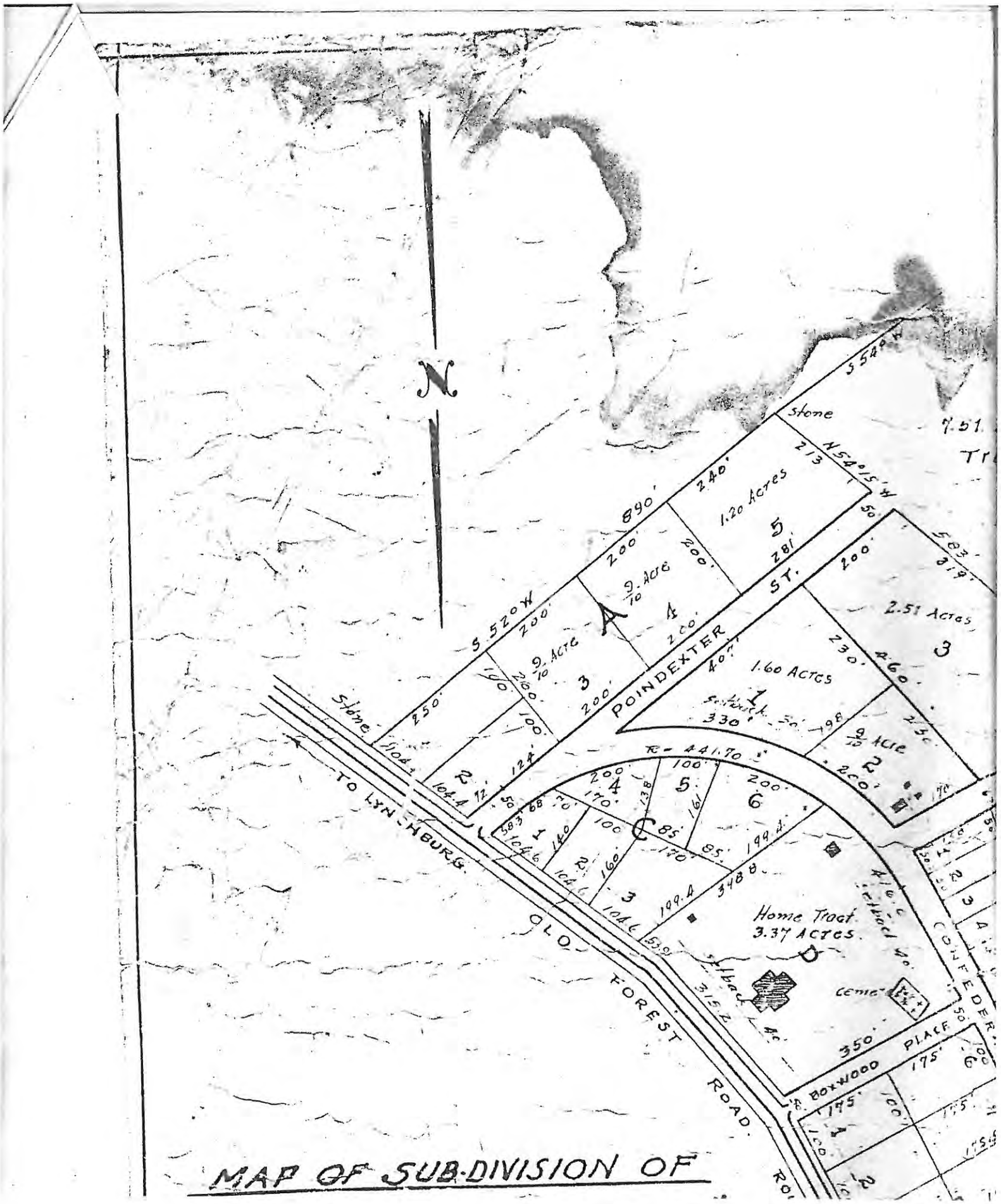


2627 Old Forest Road

Locust Thicket, located on a site generally considered to be outside Lynchburg's "historic districts," was, in fact, on a country road when it was completed around 1790. Old legal documents refer to the property as "Major Scott's plantation on Forest Road." Major Samuel Beverly Scott's "plantation," originally about 400 acres, at one point was more than 1,700 acres, extending almost to Mr. Jefferson's Poplar Forest holdings in Bedford County. The two men, in fact, went to court over a property line dispute and legend has it that Major Scott, who lost, held a grudge until his death in 1822. Although there are many war-related tales connected to the occupants of this house, maybe the most significant is that it was here that 4,000 Union cavalry drew their line of battle for the June 1864 attack on Lynchburg, and many Civil War artifacts have been found on the property. After moving through generations of the original owner's family, the property has been home to an Antique Shop as well as other 20th century occupants. The current owners are planning to open it as a restaurant this fall. As did many previous owners, the Trebilcoxes live on the upper floors.

Of particular interest:

- Only 3.37 acres of the original 1,755 remain connected to the house. They are, however, rich with gardens, boxwood, and magnolia trees. Full restoration of the gardens is in process.
- Some of the original wallpaper was found to have bullet holes from the Civil War era of the house's history. A large fragment of the original wallpaper will be on display along with items found on the grounds during restoration.
- Other pieces of the wallpaper have been replicated at Point of Honor and at the Cooper-Hewitt Design Museum in New York City.
- Note the marbleized front stairway.
- Brass chandeliers, and mortise and tendon (peg) construction are original. The grained doors are thought to have been added after Major Scott's time in the house.
- Major Scott, his wife Ann Roy, his son Beverly Roy (who fought in the War of 1812) and several other family members are buried in the walled cemetery at the corner of the property. Although time and weather have done damage to them, many of the marble markers are still legible.
- "Beverly" is written in bold script on one of the original front windowpanes of the house
- When the war veteran began building this house for his new bride, there were no other homes around, and the site overlooked Black Water Creek.



MAP OF SUB-DIVISION OF

Locust Thicket

circa 1790

March 28, 2014

«Title» «First_Name» «Last_Name»
«Company_Name»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

Dear «Title» «Last_Name»

RE: The Restoration and Preservation of Locust Thicket at 2627 Old Forest Road

Firstly, please let us introduce ourselves. We are a local Father, Daughter partnership that recently purchased the Lynchburg Historic District known as Locust Thicket which is located at 2627 Old Forest Road.

We have a great interest in the historic significance of the property and would like to offer a little background about the property. According to historical records Major Samuel Beverley Scott built the Plantation Manor House soon after he was discharged from George Washington's Revolutionary Army Circa 1780 – 1784. He then purchased 400 acres of land where the main Manor Home now sits with the home itself being built in 1790, according to Lynchburg City records. The property also houses the family cemetery where Major Scott, his Wife and several members of their family are all buried; including his Son who lost a leg in the Battle of New Orleans serving under General Andrew Jackson.

The Scott Family also played a further important role within Lynchburg history with Major Scott owning several thousand acres. He donated some to allow for the Lynchburg-Salem Turnpike as well as several properties in the downtown Lynchburg area. This included a Tavern and Stables at the intersection of what is now 9th and Main in 1788. He was also Sheriff of Campbell County and a Justice of the Peace.

Many of you may have seen some recent activity at the property. We wanted to utilize this letter to give you an explanation of what our current plans are. We also invite you to contact us if you have any questions or if you would simply like to arrange a personal tour of the property.

Over the past 200 plus years the house has seen many historical events including being on the front line of the Battle of Lynchburg during the Civil War. It has had many different owners, including several businesses (the most recent of which was Grace Restaurant for the past 10 years or so). It is our intent to, once again, reopen Locust Thicket to the Residents of Lynchburg by offering a variety of hospitality orientated offers within a "Living History" environment.

As part of the process of expanding our services we will soon be applying to the City for a "conditional rezoning" of the property to B3-C. We also understand we are at the mercy of being in the Historic District and have begun the process of ensuring we remain within the Historic boundaries. It is our intent to apply to the City to continue the current use of the property as a Restaurant and Special Events Center and restore the Manor House, Cabin, Well and Ice Well that are on the current grounds. The most significant construction will be a new events center building and expanded parking towards the Confederate Avenue end of the property. We have also begun the process of restoring the Family Burial Ground with the assistance of The Sons of the Union Veterans of the Civil War, DAR and SAR.

We are very excited about this project and we are extremely thankful for the continued support we have received to date from a range of "historically minded" Lynchburg Residents and Professionals who have assisted us greatly in developing our "vision" for the property. We are also keen to being "good neighbors". If you wish to receive further information regarding our plans or should you wish to arrange a tour of the property, you may contact us at 434-384-2630. We would be more than happy to answer any questions you may have or arrange a personal tour.

We truly look forward to sharing this remarkable piece of Lynchburg History with you and all Residents of Lynchburg and to your assisting us to preserve this important part of Lynchburg History for further generations to enjoy.

Regards,

Paul Hughes & Sarah Quinn

Property Information

Property Names

Name Explanation	Name
Historic	Barksdale Farm
Historic	Locust Thicket
Current	1786 House

Property Evaluation Status

DHR Board Det. Eligible

Property Addresses

Current - 2627 Old Forest Road

County/Independent City(s): Lynchburg (Ind. City)
Incorporated Town(s): *No Data*
Zip Code(s): *No Data*
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): LYNCHBURG

Additional Property Information

Architecture Setting: *No Data*
Acreage: *No Data*
Site Description:

No Data

Surveyor Assessment:

Locust Thicket is one of the best preserved residences in the Lynchburg area built before 1800. The interior woodwork is a distinguished example of the high style of the first quarter of the 19th-century and is notable for the continuity of design in all of the halls and the principle rooms. Some areas retain the original marbleizing and graining. During the Battle of Lynchburg, June 17-18, 1864, Locust Thicket was the anchor for one end of the battle line, the other end of which was Sandusky.

Surveyor Recommendation: *No Data*

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Domestic
Resource Type: Single Dwelling
Date of Construction: 1786Ca
Historic Time Period: Colony to Nation (1751 - 1789)
Historic Context(s): Architecture/Community Planning
Architectural Style: *No Data*
Form: *No Data*
Number of Stories: 2.0
Condition: Good
Interior Plan: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: Locust Thicket is a formal, two-story "T" house with a later ell. The wood framed structure is covered with plain clapboards and rests on a brick foundation. The sophisticated trim which has a different profile for the architrave in each of the rooms is well-preserved. Although the original acreage has been diminished by modern developments, the generous lawn is intact and provides an appropriate setting for Locust Thicket and the stone walled Scott family cemetery.

Interior Description: The main stair in the entrance hall is parallel to the south wall and rises from the west to the east. The cheek wall of the stair is fully paneled. The risers and base retain the original white and gray marbleized finish. The well opening at the second floor around the

main stair is ornamented with a Greek key motif. Each of the principal rooms in the house has a different character derived from the fact that each room has a different architrave.

Exterior Components

Component	Component Type	Material	Material Treatment
Windows	Sash, Double-Hung	Wood	6/6
Porch	1-story, 3-bay	Wood	Columns, Square
Roof	Other	Metal	Standing Seam
Chimneys	Exterior End	Brick	*No Data*
Foundation	Solid/Continuous	Brick	*No Data*
Structural System and Exterior Treatment	Frame	Wood	Weatherboard

Secondary Resource Information

Secondary Resource #1

Resource Category: Domestic
Resource Type: Well/Well House
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Number of Stories: *No Data*

Secondary Resource #2

Resource Category: Unknown
Resource Type: Foundation
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: Smokehouse foundation; kitchen foundation; rock foundation; and a old foundation with an old chimney which recently had a new log cabin built on it.

Secondary Resource #3

Resource Category: Archaeology Site
Resource Type: Archaeological Site
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: The farm building and dependent buildings documented in court and other records have been lost to the development and growth of the city of Lynchburg. Once a plantation, Locust Thicket is now surrounded by the City.

Secondary Resource #4

Resource Category: Domestic
Resource Type: Garage

Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: New garage.
Number of Stories: *No Data*

Secondary Resource #5

Resource Category: Other
Resource Type: Other
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: An ice pit; and a brick walkway leading wo walk of large flat stones which was located beneath 4" to 6" of dirt.

Secondary Resource #6

Resource Category: Domestic
Resource Type: Garage
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: New garage.
Number of Stories: *No Data*

Secondary Resource #7

Resource Category: Unknown
Resource Type: Foundation
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
Architecture Summary: Smokehouse foundation; kitchen foundation; rock foundation; and a old foundation with an old chimney which recently had a new log cabin built on it.

Secondary Resource #8

Resource Category: Archaeology Site
Resource Type: Archaeological Site
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: The farm building and dependent buildings documented in court and other records have been lost to the development and growth of the city of Lynchburg. Once a plantation, Locust Thicket is now surrounded by the City.

Secondary Resource #9

Resource Category: Domestic
Resource Type: Well/Well House
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

No Data

Number of Stories: *No Data*

Secondary Resource #10

Resource Category: Domestic
Resource Type: Well/Well House
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

No Data

Number of Stories: *No Data*

Secondary Resource #11

Resource Category: Other
Resource Type: Other
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: An ice pit; and a brick walkway leading wo walk of large flat stones which was located beneath 4" to 6" of dirt.

Secondary Resource #12

Resource Category: Archaeology Site
Resource Type: Archaeological Site
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: The farm building and dependent buildings documented in court and other records have been lost to the development and growth of the city of Lynchburg. Once a plantation, Locust Thicket is now surrounded by the City.

Secondary Resource #13

Resource Category: Unknown
Resource Type: Foundation

Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: Smokehouse foundation; kitchen foundation; rock foundation; and a old foundation with an old chimney which recently had a new log cabin built on it.

Secondary Resource #14

Resource Category: Domestic
Resource Type: Single Dwelling
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: 1786
Condition: Good
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: Locust Thicket is a formal, two-story "T" house with a later ell. The wood framed structure is covered with plain clapboards and rests on a brick foundation. The sophisticated trim which has a different profile for the architrave in each of the rooms is well-preserved. Although the original acreage has been diminished by modern developments, the generous lawn is intact and provides an appropriate setting for Locust Thicket and the stone walled Scott family cemetery.

Interior Description: The main stair in the entrance hall is parallel to the south wall and rises from the west to the east. The cheek wall of the stair is fully paneled. The risers and base retain the original white and gray marbleized finish. The well opening at the second floor around the main stair is ornamented with a Greek key motif. Each of the principal rooms in the house has a different character derived from the fact that each room has a different architrave.

Number of Stories: 2

Secondary Resource #15

Resource Category: Domestic
Resource Type: Single Dwelling
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: 1786
Condition: Good
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: Locust Thicket is a formal, two-story "T" house with a later ell. The wood framed structure is covered with plain clapboards and rests on a brick foundation. The sophisticated trim which has a different profile for the architrave in each of the rooms is well-preserved. Although the original acreage has been diminished by modern developments, the generous lawn is intact and provides an appropriate setting for Locust Thicket and the stone walled Scott family cemetery.

Interior Description: The main stair in the entrance hall is parallel to the south wall and rises from the west to the east. The cheek wall of the stair is fully paneled. The risers and base retain the original white and gray marbleized finish. The well opening at the second floor around the main stair is ornamented with a Greek key motif. Each of the principal rooms in the house has a different character derived from the fact that each room has a different architrave.

Number of Stories: 2

Secondary Resource #16

Resource Category: Funerary
Resource Type: Cemetery
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: 1830
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:

Architecture Summary: Scott family cemetery. When Beverly Roy Scott died in 1837, his will reserved land for a burying ground. The fine marble markers show the corrosion of time, yet most of the inscriptions are legible.

Current Use: *No Data*

Historic Religious Affilitation: *No Data*

Ethnic Affiliation: *No Data*

Has Marked Graves: *No Data*

Has Unmarked Graves: *No Data*

Enclosure Type: *No Data*

Number Of Gravestones: *No Data*

Earliest Marked Death Year: *No Data*

Latest Marked Death Year: *No Data*

Secondary Resource #17

Resource Category: Funerary

Resource Type: Cemetery

Architectural Style: *No Data*

Form: *No Data*

Date of Construction: 1830

Condition: *No Data*

Threats to Resource: *No Data*

Architectural Description:

Architecture Summary: Scott family cemetery. When Beverly Roy Scott died in 1837, his will reserved land for a burying ground. The fine marble markers show the corrosion of time, yet most of the inscriptions are legible.

Current Use: *No Data*

Historic Religious Affilitation: *No Data*

Ethnic Affiliation: *No Data*

Has Marked Graves: *No Data*

Has Unmarked Graves: *No Data*

Enclosure Type: *No Data*

Number Of Gravestones: *No Data*

Earliest Marked Death Year: *No Data*

Latest Marked Death Year: *No Data*

Secondary Resource #18

Resource Category: Funerary

Resource Type: Cemetery

Architectural Style: *No Data*

Form: *No Data*

Date of Construction: 1830

Condition: *No Data*

Threats to Resource: *No Data*

Architectural Description:

Architecture Summary: Scott family cemetery. When Beverly Roy Scott died in 1837, his will reserved land for a burying ground. The fine marble markers show the corrosion of time, yet most of the inscriptions are legible.

Current Use: *No Data*

Historic Religious Affilitation: *No Data*

Ethnic Affiliation: *No Data*

Has Marked Graves: *No Data*

Has Unmarked Graves: *No Data*

Enclosure Type: *No Data*

Number Of Gravestones: *No Data*
Earliest Marked Death Year: *No Data*
Latest Marked Death Year: *No Data*

Secondary Resource #19

Resource Category: Funerary
Resource Type: Cemetery
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data
Current Use: Family
Historic Religious Affilitation: *No Data*
Ethnic Affiliation: Unknown
Has Marked Graves: True
Has Unmarked Graves: False
Enclosure Type: Wall
Number Of Gravestones: *No Data*
Earliest Marked Death Year: *No Data*
Latest Marked Death Year: *No Data*
Significant Burials

Marked Type	First Name	Last Name	Birth Year	Death Year
Other	Beverly Roy	Scott	*No Data*	1837

Secondary Resource #20

Resource Category: Unknown
Resource Type: Foundation
Architectural Style: *No Data*
Form: *No Data*
Date of Construction: *No Data*
Condition: *No Data*
Threats to Resource: *No Data*
Architectural Description:
No Data

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: NRHP Nomination

DHR ID: 118-0178
Staff Name: Garbee, Robert H.

Event Date: 3/27/1986
Staff Comment
No Data

Event Type: DHR Board Det. Eligible

DHR ID: 118-0178
Staff Name: State Review Board
Event Date: 3/20/1984
Staff Comment
No Data

Event Type: DHR Staff: Eligible

DHR ID: 118-0178
Staff Name: DHR
Event Date: 3/12/1984
Staff Comment
No score listed.

Event Type: PIF

Project Review File Number: *No Data*
Investigator: Jackson, Margree H.
Organization/Company: Unknown (DSS)
Sponsoring Organization: *No Data*
Survey Date: 2/12/1984
Dhr Library Report Number: *No Data*
Project Staff/Notes:
No Data

Bibliographic Information

Bibliography:
No Data
Property Notes:
No Data
Project Bibliographic Information:
No Data

Historic Preservation Commission Public Hearing
Inclusion into the Locust Thicket Local Historic District
2624 and 2700 Confederate Avenue
May 19, 2014

PLEASE PRINT

NAME	ADDRESS	PHONE	IN FAVOR	IN OPPOSITION	NEUTRAL
[illegible]	3023 [illegible]	384 2630			
Sarah Quinn	3009 Cardinal Place	841-5262			

Planning Commission Public Hearing
Inclusion into the Locust Thicket Local Historic District
June 11, 2014

PLEASE PRINT

NAME	ADDRESS	PHONE	IN FAVOR	IN OPPOSITION	NEUTRAL
[illegible]	3023 [illegible]	[illegible]			

LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 11

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **Vacate right-of-way known as Boxwood Place located between 2627 and 2701 Old Forest Road and 2730 Confederate Avenue.**

RECOMMENDATION: Adopt the uncodified ordinance to vacate the right-of-way.

SUMMARY: CDDI Development Group LLC is petitioning to vacate an unopened right-of-way known as Boxwood Place. Boxwood Place is located between 2627 and 2701 Old Forest Road and 2730 Confederate Avenue. The right-of-way is a vegetated area consisting of four hundred two thousandths (0.402) of an acre and extending three hundred fifty (350) feet from Old Forest Road to Confederate Avenue. The right-of-way is fifty (50) feet in width. The adjoining property owner (Clagar Partners) at 2701 Old Forest Road and 2730 Confederate Avenue has consented to the vacation request.

The petitioner is requesting the vacation in conjunction with a rezoning petition for the property located at 2627 Old Forest Road. If approved, the vacated right-of-way would facilitate the construction of an entrance drive and parking to support a proposed banquet/event center. The right-of-way does not serve as access to any property and has no foreseeable public use.

PRIOR ACTION(S):

May 23, 2014: The Technical Review Committee (TRC) reviewed the petition. The TRC comments have been incorporated into the proposed ordinance.

June 10, 2014: The Physical Development Committee [PDC] reviewed the petition. The PDC forwarded the petition to City Council without a recommendation to allow the request to be considered within the context of the applicant's rezoning and historic district requests for Locust Thicket.

FISCAL IMPACT: None

CONTACT(S): Kevin Henry, Planner II – 455-3900
Tom Martin, City Planner - 455-3900
Kent White, Director of Community Development – 455-3900

ATTACHMENT(S):
- Ordinance
- Application
- Maps

REVIEWED BY: lkp

UNCODIFIED ORDINANCE:

AN ORDINANCE VACATING RIGHT OF WAY KNOWN AS BOXWOOD PLACE IN BETWEEN 2627 AND 2701 OLD FOREST ROAD AND 2730 CONFEDERATE AVENUE.

WHEREAS, CDDI Development Group LLC, is petitioning to vacate right of way known as Boxwood Place located between the properties of 2627 and 2701 Old Forest Road and 2730 Confederate Avenue, which extends three hundred fifty (350) feet; and

WHEREAS, City Council finds that no public inconvenience will result from vacating the right of way;

NOW, THEREFORE, BE IT ORDAINED by the Council of the City of Lynchburg, on its own motion, and in accordance with the provisions of Section 15.2-2006 of the Code of Virginia, 1950, as amended, and Sections 35-71 through 35-77 of the City Code, 1981, as amended, the following described right of way be, and the same hereby is, discontinued and vacated, namely:

The right-of-way known as Boxwood Place located between 2627 and 2701 Old Forest Road and 2730 Confederate Avenue, which extends three hundred fifty (350) feet.

Said vacation is contingent upon the following: that an easement to locate, relocate, repair, replace, maintain and perpetually operate all utilities currently located therein or needed by the City in the future is hereby reserved unto the City of Lynchburg, and the construction of any building or structure or the use of the vacated property in any manner that could interfere with the City's right to locate, relocate, repair, replace, maintain and perpetually operate utilities is prohibited without the prior written approval of the City Manager's Office, City Utilities Division and the City Engineering Division.

BE IT FURTHER ORDAINED that the Clerk of the Council is hereby authorized and directed to deliver a duly-certified copy of this ordinance to the Clerk of the Circuit Court for the City of Lynchburg so that said certified copy of this ordinance may be recorded as deeds are recorded and indexed in the name of the City of Lynchburg.

Adopted:

Certified: _____

Clerk of Council

090K

APPLICATION FOR THE VACATION OF A

Street
(Street/Alley)

LOCATED BETWEEN

2627& 2701 Old Forest Rd & 2730 Confederate Av

The undersigned applicant, The CDDI Development Group LLC, pursuant to the provisions of Section 15.2-2006 of the Code of Virginia, 1950, as amended, and Section 35-71 through Section 35-77 of the City Code, 1981, as amended, respectfully makes application to the Lynchburg City Council for the vacation of that certain street described as follows:

Boxwood Place as nominated on the Map of Subdivision of "Barksdale Place" Lynchburg, Virginia prepared by Thomas C Brooks Sr dated October 24, 2001, which is recorded in the Lynchburg Circuit Court .

The applicant further requests the Lynchburg City Council to hold a public hearing on this application at its meeting to be held in the Council Chambers, City Hall, 900 Church Street, Lynchburg, Virginia, on June 10, 2014, at 7:30 p.m., or as soon

thereafter as the matter may be heard, and at the conclusion of which hearing to consider whether or not to vacate the above described R/W.

Given under my hand this 28th day of April , 2014.

The CDDI Development Group LLC
Applicant

2627 Old Forest Road, Lynchburg, 24501
Address

434-384-2630
Telephone Number

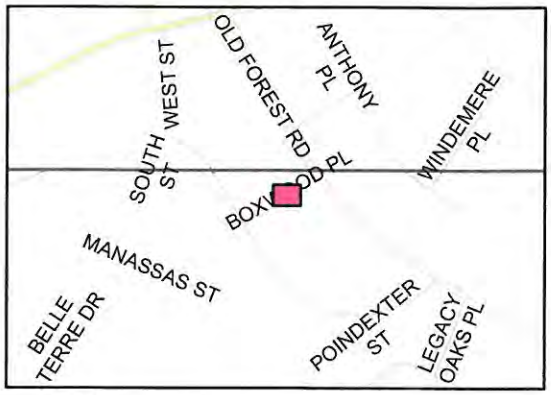
WE, THE ADJOINING PROPERTY OWNER(S), ARE IN AGREEMENT TO THE VACATION OF THE ABOVE DESCRIBED PROPERTY:

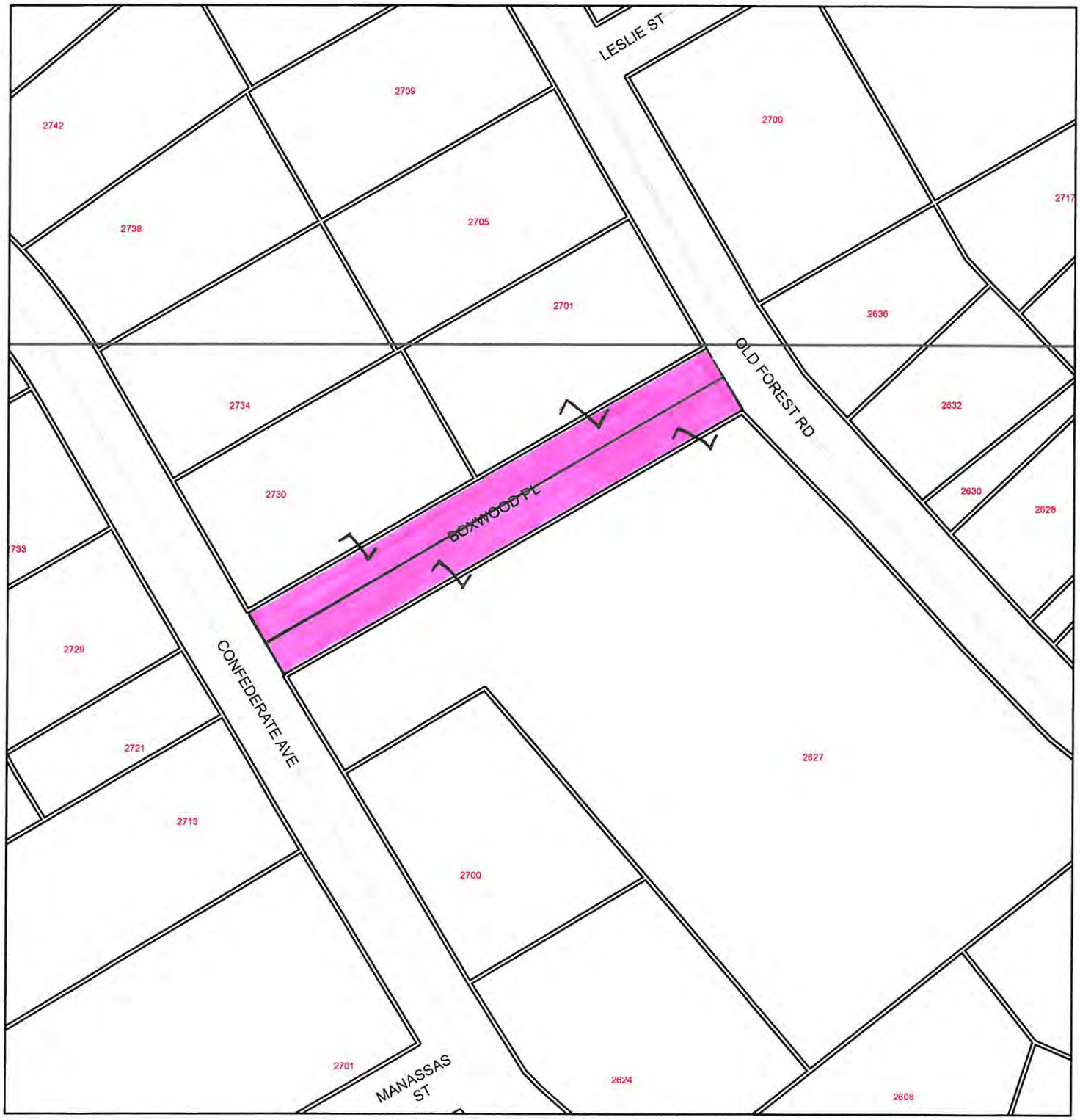
Adjoining Property Owner
2730 Langhalcetin Ave
and 2727 Old Forest Rd
Chagan Martinez
Tony Turner 4-28-2014

2627 and 2701 Old Forest Road & 2730 Confederate Avenue

Right-of-Way Vacation

Area to be vacated



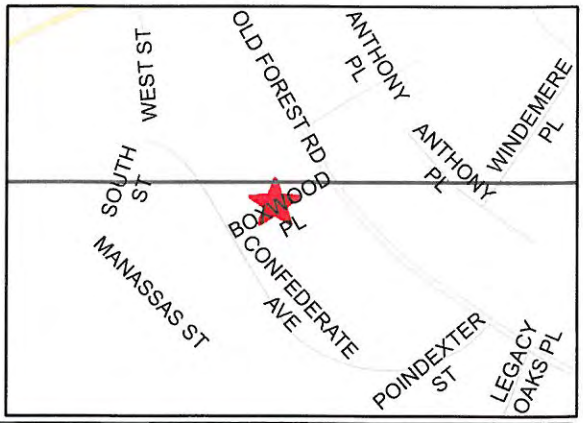


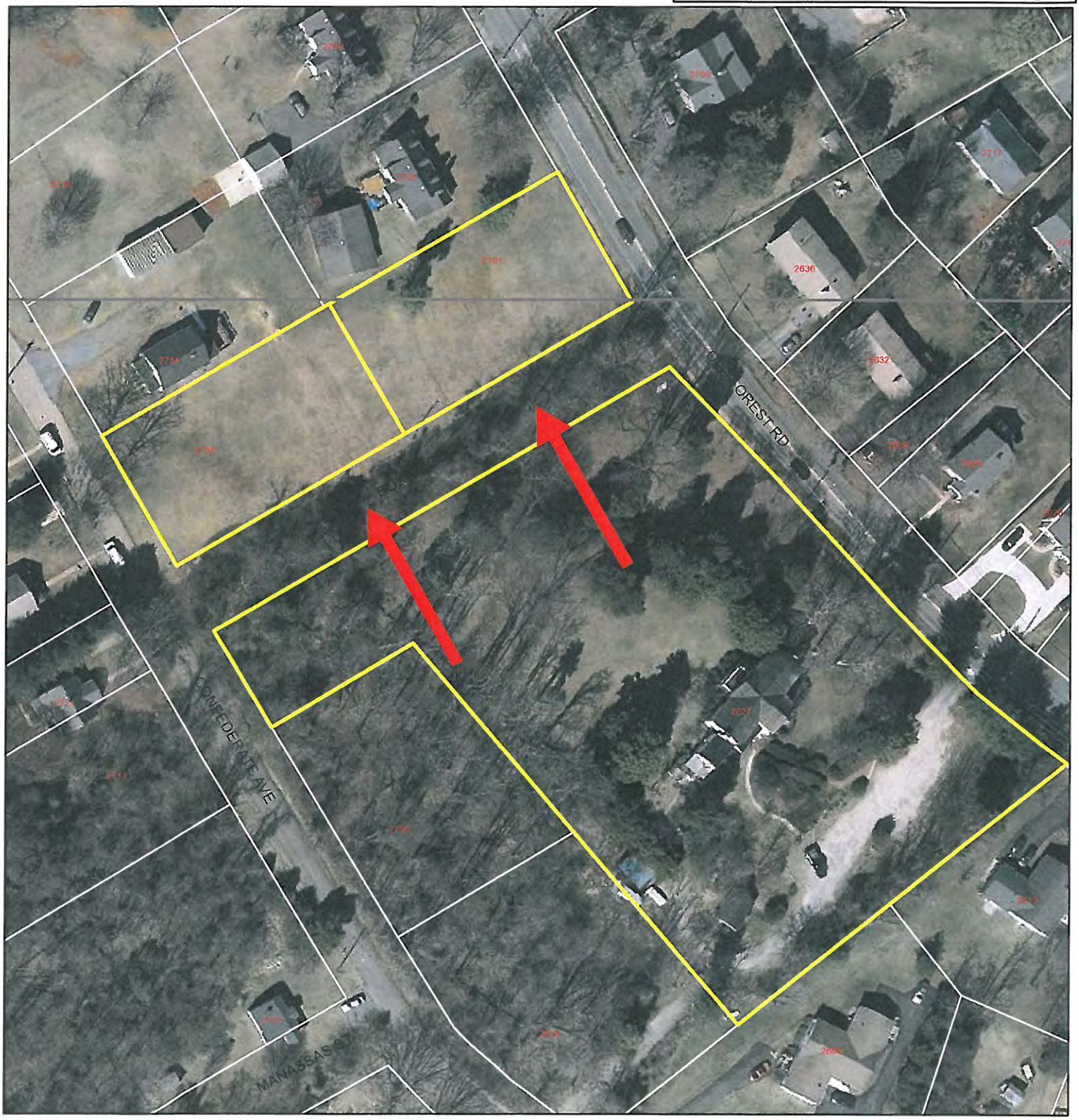
2627 and 2701 Old Forest Road & 2730 Confederate Avenue

Right-of-Way Vacation

★ Location

N
W E
S





LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 12

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **Rezoning: R-1, Low Density, Single-Family Residential District, R-4, Medium-High Density, Multi-Family Residential District and B-3C, Community Business District (Conditional) to R-4C, Medium-High Density, Multi-Family Residential District (Conditional) & B-3C, Community Business District (Conditional) – 7814, 7816, 7822, 7824, 7900, 7904, 7906, 7908, 7912 & 8022 Timberlake Road and 109 & 111 Buckingham Drive**

RECOMMENDATION: Approval of the rezoning petition.

SUMMARY: Belleau Wood Development, LLC is petitioning to rezone Village at Dreaming Creek, Phase I, located at 7814, 7816, 7822, 7824, 7900, 7904, 7906 & 7908 Timberlake Road from B-3C, Community Business District (Conditional) to B-3C, Community Business District (Conditional) to amend previously approved proffers to allow the construction of a private street in lieu of a public street; rezone 7912 Timberlake Road, from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional) to allow the construction of retail development and for inclusion in Phase I; and rezone 7824, 7906 & 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District to R-4, Medium-High Density, Multi-Family Residential District (Conditional) to allow the construction of a two hundred seventy (270)-unit apartment complex, clubhouse, pool and associated parking. The Planning Commission recommended approval of the two (2) petitions because:

- The *Future Land Use Map* (*FLUM*) recommends Low, Medium & High Density Residential uses for the area.
- Recommendations of the Traffic Impact Study (TIS) have been incorporated into the submitted concept plan.
- Voluntarily submitted proffers adequately address impacts associated with the proposed development.
- If the property were to be subdivided with new public streets, the road connection would be required by City Code. The proffered site plan provides additional landscaping and design features that would not be included in a standard city street design.
- Further study to determine the traffic impact to Buckingham Drive would be provided prior to Council's decision.

PRIOR ACTION(S):

June 11, 2014: The Planning Division recommended approval of the rezoning petitions.

The Planning Commission waived the twenty-one (21) day submittal requirement for proffers.

The Planning Commission recommended approval (5-0, with 1 member absent, Swienton) of the B-3C rezoning with proffers voluntarily submitted by the petitioner.

The Planning Commission recommended approval (3-2, with 1 member absent, Swienton) of the R-4C rezoning with proffers voluntarily submitted by the petitioner.

FISCAL IMPACT: N/A

CONTACT(S): Tom Martin, City Planner - 455-3900
Kent White, Director of Community Development – 455-3900

ATTACHMENT(S):

- Ordinance
- Planning Commission Report and Minutes – July 11, 2014
- Vicinity Zoning Pattern Map
- Vicinity Proposed Land Use Map
- Watershed Location Map
- Planimetric and Topographic Map
- Rezoning Plan
- Narrative
- Photos of proposed concrete wall
- Building renderings submitted with Planning Commission report
- Exhibits Submitted at Planning Commission meeting
- Traffic Impact Analysis **(separate attachment file due to size)**
- Signup Sheet

REVIEWED BY: lkp

UNCODIFIED ORDINANCE:

AN ORDINANCE CHANGING A CERTAIN AREA LOCATED AT 7814, 7816, 7822, 7900, 7904 & 7908 TIMBERLAKE ROAD FROM B-3C, COMMUNITY BUSINESS DISTRICT (CONDITIONAL) AND THE PROPERTY LOCATED AT 7912 TIMBERLAKE ROAD FROM R-1, LOW DENSITY, SINGLE-FAMILY RESIDENTIAL DISTRICT TO B-3C, COMMUNITY BUSINESS DISTRICT (CONDITIONAL).

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LYNCHBURG that in order to promote the public necessity, convenience, welfare and good zoning practice that Chapter 35.1 of the Code of the City of Lynchburg, 1981, as amended, be and the same is hereby further amended by adding thereto Section 35.1-76__, which section shall read as follows:

Section 35.1-76__. Change of a certain area located at 7814, 7816, 7822, 7900, 7904 & 7908 Timberlake Road from B-3C, Community Business District (Conditional) and the property located at 7912 Timberlake Road from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional).

The area embraced within the following boundaries:

BEGINNING AT A POINT ON THE SOUTHERN RIGHT-OF-WAY OF TIMBERLAKE ROAD, THENCE ALONG SAID RIGHT -OF-WAY THE FOLLOWING COURSES; NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 499.88 FEET TO A POINT, NORTH 51 DEGREES 51 MINUTES 41 SECONDS EAST 215.05 FEET TO A POINT, NORTH 55 DEGREES 28 MINUTES 28 SECONDS EAST 135.61 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY SOUTH 30 DEGREES 43 MINUTES 54 SECONDS EAST 301.91 FEET TO A POINT; THENCE SOUTH 52 DEGREES 50 MINUTES 20 SECONDS WEST 161.26 FEET TO POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 185.21 FEET TO A POINT; THENCE SOUTH 49 DEGREES 22 MINUTES 43 SECONDS WEST 314.88 FEET TO A POINT; THENCE NORTH 40 DEGREES 51 MINUTES 02 SECONDS WEST 87.83 FEET TO A POINT; THENCE SOUTH 49 DEGREES 08 MINUTES 58 SECONDS WEST 57.57 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 30 SECONDS WEST 117.47 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 22 SECONDS WEST 276.80 FEET TO A POINT; THENCE NORTH 30 DEGREES 27 MINUTES 08 SECONDS WEST 218.16 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 130.26 FEET TO A POINT; THENCE NORTH 40 DEGREES 37 MINUTES 15 SECONDS WEST 200.00 FEET TO THE POINT OF BEGINNING.

…is hereby changed from B-3C, Community Business District (Conditional) and R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional), subject to the conditions set out herein below which was voluntarily proffered in writing by the petitioner, Belleau Wood Development, LLC, to wit:

1. The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of a new roadway (Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store and the fast food out parcel on the new roadway, and sidewalks and curb & gutter along Timberlake Road and the new roadway. The layout and types of uses shown may change as the site develops. This new roadway shall be a private road.

2. The following uses, which are allowed in B-3, are not permitted within the area to be rezoned:
    - Adult entertainment businesses
    - Funeral homes and undertaking establishments
    - Internet café or on-line gambling businesses
    - Used tire stores
    - Pawn shops

3. Noise: Where music or exterior equipment on a commercial site is utilized it shall be restricted per the ordinance to no more than 52 dBa or it shall be disabled between the hours of 10:00pm and 7:00am.

4. Lighting: All exterior lighting shall be full cut off type. No lighting source shall be aimed above a parallel line to the horizon. Fixture that are not amiable types shall be flat lens type installed parallel to the horizon. Site lighting within 40' of a residential property line shall be Type I, II, III or IV distribution, full cutoff fixtures directed to the interior of the commercial or multi-family residential property. Type V distribution, full cutoff fixtures may only be used only 41' or more from any existing residential property line. Further, lighting shall be in accordance with the Lynchburg City Code - Sec. 35.1-43.26. Lighting. Internally illuminated or back lite canopies, shall not be allowed.

5. Architecture: The development shall use a master planned material pallet consisting of durable materials including masonry, stucco, architectural block or stone. The predominate material for all buildings shall be regionally selected brick in a color range from hard tan to colonial red. Once selected, the same brick shall be used for all subsequent outparcel buildings, screen walls, etc. The use of pre-finished metal shall be limited to flush panels or standing seam used appropriately in building canopies. Where appropriate, fiber cement lap siding installed with no more than a 4" exposed face shall be allowed for no more than 25% of any wall surface, and shall not be install closer than 30" to the adjacent grade. All building shall have a minimum of a 30" masonry wainscot/water table at the base of all walls, equipment screens, and site walls. All sides of each building shall be finished with the same durable materials. Roof lines shall be set appropriate to each building or building element, with preference given to colonial, pitched roofs for smaller masses and parapets with a defined cornice for larger footprints. Rooflines shall receive consistent treatment at all sides of each building. No open roof edges shall be allowed on flat roofs. Rooftop equipment shall be screened by parapets at all side of buildings with flat roofs. Where ground level equipment is used it shall be screened by landscaping or masonry walls.

6. Site Signage: Signage for the outparcels shown on the Rezoning Plan shall be governed by the Lynchburg City Code [Sec. 35.1-26. Signs], unless further restricted as follows. Commercial site signage shall be limited to monument style signage. Monuments signs shall not exceed 8' in height above the top of the adjacent curb line. Where gas service stations include price message boards, they shall be integrated into the monuments sign and the total sign height may be increased to a maximum of 12'. One free-standing pylon sign shall be used to identify the development.

And the Director of Community Development shall forthwith cause the "Official Zoning Map of Lynchburg, Virginia," referred to in Section 35.1-4 of this chapter to be amended in accordance therewith.

Adopted:

Certified: _____
Clerk of Council

092K

UNCODIFIED ORDINANCE:

AN ORDINANCE CHANGING A CERTAIN AREA LOCATED AT 7824, 7906 AND 8022 TIMBERLAKE ROAD AND 109 AND 111 BUCKINGHAM DRIVE FROM R-1, LOW DENSITY, SINGLE-FAMILY RESIDENTIAL DISTRICT AND R-4, MEDIUM-HIGH DENSITY, MULTI-FAMILY RESIDENTIAL DISTRICT TO R-4C, MEDIUM-HIGH DENSITY, MULTI-FAMILY RESIDENTIAL DISTRICT (CONDITIONAL).

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LYNCHBURG that in order to promote the public necessity, convenience, welfare and good zoning practice that Chapter 35.1 of the Code of the City of Lynchburg, 1981, as amended, be and the same is hereby further amended by adding thereto Section 35.1-76__, which section shall read as follows:

Section 35.1-76__. Change of a certain located at 7824, 7906 and 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District to R-4C, Medium-High Density, Multi-Family Residential District (Conditional).

The area embraced within the following boundaries:

BEGINNING AT A POINT ALONG THE EASTERN RIGHT-OF-WAY OF BUCKINGHAM DRIVE, THENCE ALONG SAID RIGHT-OF-WAY SOUTH 28 DEGREES 05 MINUTES 46 SECONDS EAST 171.37 FEET TO A POINT ON THE EXISTING R-C ZONING LINE; THENCE ALONG THIS LINE THE FOLLOWING COURSES; SOUTH 86 DEGREES 04 MINUTES 37 SECONDS WEST 62.13 FEET TO A POINT, SOUTH 63 DEGREES 56 MINUTES 39 SECONDS WEST 62.89 FEET, SOUTH 77 DEGREES 56 MINUTES 15 SECONDS WEST 139.07 FEET TO A POINT, SOUTH 60 DEGREES 23 MINUTES 56 SECONDS WEST 30.87 FEET TO A POINT, SOUTH 83 DEGREES 52 MINUTES 50 SECONDS WEST 62.73 FEET TO A POINT, SOUTH 67 DEGREES 16 MINUTES 41 SECONDS WEST 149.51 FEET TO A POINT, SOUTH 77 DEGREES 10 MINUTES 25 SECONDS WEST 57.43 FEET TO A POINT, SOUTH 58 DEGREES 21 MINUTES 12 SECONDS WEST 95.77 FEET TO A POINT, SOUTH 82 DEGREES 06 MINUTES 33 SECONDS WEST 130.20 FEET TO A POINT, SOUTH 62 DEGREES 14 MINUTES 40 SECONDS WEST 105.62 FEET TO A POINT, SOUTH 36 DEGREES 19 MINUTES 21 SECONDS WEST 77.18 FEET TO A POINT, SOUTH 10 DEGREES 52 MINUTES 01 SECONDS WEST 72.93 FEET TO A POINT, SOUTH 26 DEGREES 21 MINUTES 56 SECONDS WEST 96.33 FEET TO A POINT, SOUTH 00 DEGREES 25 MINUTES 47 SECONDS WEST 190.63 FEET TO A POINT; THENCE LEAVING THE EXISTING R-C ZONING LINE SOUTH 88 DEGREES 43 MINUTES 27 SECONDS WEST 182.71 FEET TO A POINT; THENCE NORTH 81 DEGREES 03 MINUTES 40 SECONDS WEST 249.40 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 49 SECONDS EAST 271.96 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 05 SECONDS EAST 171.31 FEET TO A POINT; THENCE NORTH 40 DEGREES 02 MINUTES 54 SECONDS WEST 302.65 FEET TO A POINT; THENCE NORTH 47 DEGREES 13 MINUTES 09 SECONDS EAST 43.38 FEET TO A POINT; THENCE NORTH 40 DEGREES 04 MINUTES 55 SECONDS WEST 218.48 FEET TO A POINT; THENCE NORTH 49 DEGREES 57 MINUTES 53 SECONDS EAST 53.19 FEET TO A POINT; THENCE NORTH 48 DEGREES 47 MINUTES 19 SECONDS EAST 197.96 FEET TO A POINT; THENCE NORTH 47 DEGREES 57 MINUTES 17 SECONDS EAST 394.29 FEET TO A POINT; THENCE NORTH 49 DEGREES 08 MINUTES 58 SECONDS EAST 57.57 FEET TO A POINT; THENCE SOUTH 40 DEGREES 51 MINUTES 02 SECONDS EAST 87.83 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 43 SECONDS EAST 314.88 FEET TO A POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 747.86 FEET TO A POINT; THENCE NORTH 61 DEGREES 54 MINUTES 14 SECONDS EAST 158.97 FEET TO THE POINT OF BEGINNING.

…is hereby changed from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District to R-4C, Medium-High Density, Multi-Family Residential District (Conditional)., subject to the conditions set out herein below which was voluntarily proffered in writing by the petitioner, Belleau Wood Development, LLC, to wit:

1. No structure other than “Single Family Resident” shall be allowed in the R-4 zoned Moody’s parcels (PID # 25410004 & PID # 25410005).

2. A six feet high decorative screen wall shall be built at the property line along the entire length of the private road abutting the adjacent R-1 zoned residents starting at northern most property line at 123 Brunswick Drive going southerly to 109 Buckingham Drive (As shown on the site plan). A sample of such wall is attached.

3. A fifteen feet wide multi-modal/neighborhood electric vehicle (NEV) lane and three feet wide grass strip shall be provided along the private road (As shown on the site plan)

4. Traffic calming devices such as chicanes shall be provided along a portion of the private road to better control vehicular speed. (As shown on the site plan)

5. Private road entrance at Timberlake Road with future connection to Buckingham Drive shall be opened and used by the general public.

6. The attached building elevation to be used for Building # 2 and Building # 3 to minimize the numbers of windows and patios facing east to the adjacent neighbors.

7. The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of the new roadway system (new Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store on the new roadway, and sidewalks and curb and gutter along Timberlake Road and the new roadway system. The layout and types of uses shown may change as the site develops. This roadway system shall be a private road and accessible for use by the general public.

8. Connectivity – Within eighteen months after the issuance of the first certificate of occupancy for the multi-family project or prior to the issuance of the certificate of occupancy for the Phase III “age-restricted senior cottage homes” the developer shall complete the connection of the private road to Buckingham Drive as shown in the site plan. The developer shall align the road as far south as possible north of Dreaming Creek subject to FEMA and other engineering constrain. The developer shall be bonded for such improvement prior to the issuance of the certificate of occupancy for the multi-family development. See site plan for alternatives to such connectivity.

9. Agrees to vacate connectivity from Brunswick Road and vacate the street to the two abutting property owners.

10. Creation/Dedication of the ‘Hahn’s Spring Greenway’ - The subtract here-in referred to as the Hahn’s Spring Greenway is show on the site plan as a central, approximately 3 acre, corridor within the site to be dedicated as a common area within which a multitude of environmental goals shall be met. These goals include:

- Environmentally-sensitive landscaping using native trees and shrubs to meet site goals of providing a multi-functional environmental buffer (e.g. water, air, sound, and light), passive recreation (e.g. bird watching and trail), and naturally vegetated areas for conservation of native flora and fauna
- community gardens,
- bio-retention storm water treatment, and
- the safeguarding of wetlands and streams within the corridor.

These, in their entirety, shall be designed to enhance the water quality of storm water runoff from the development prior those waters entering wetlands or streams that contribute to Dreaming Creek. Low Impact Development (LID) storm water practices such as vegetated swales; rain gardens and other bio-retention practices shall only be used in Hahn’s Spring Greenway/Corridor. The Hahn’s Spring Greenway starts at the historic ‘Hahn’s springhead’ located approximately 120’ northeast of the exiting old farm irrigation pond (above a tract of natural wetlands) and extends some 700 ‘ to the SE where it merges with the ‘RC’ zoning corridor along Dreaming Creek. The integrated & (biologically-enhanced) storm water management practices to be installed within this open space shall serve to minimize any detrimental impacts of the development to Dreaming Creek proper. It shall preserve the historical Hahn’s family spring, safeguard water resources, and

provide a central focal green and open space for inclusion of naturally vegetated areas, community gardens and areas for passive recreation. The exact manner in which existing open waters, wetlands, and streams are integrated into the final 'Hahn's Spring Greenway' is dependent on site conditions that will be uncovered once site remediation is under way and geotechnical data can be gathered (e.g. at the bottom of the existing farm pond, along existing impoundment structure).

11. The developer will engage a traffic consultant to modify the regional model to determine the traffic site trip distribution of the development's connection to Buckingham Drive.

And the Director of Community Development shall forthwith cause the "Official Zoning Map of Lynchburg, Virginia," referred to in Section 35.1-4 of this chapter to be amended in accordance therewith.

Adopted:

Certified: _____
Clerk of Council

092K-1

The Department of Community Development

City Hall, Lynchburg, VA 24504 **434-455-3900**

To: Planning Commission
From: Planning Division
Date: June 11, 2014
Re: **Rezoning: R-1, Low Density, Single-Family Residential District, R-4, Medium-High Density, Multi-Family Residential District and B-3C, Community Business District (Conditional) to R-4C, Medium-High Density, Multi-Family Residential District (Conditional) & B-3C, Community Business District (Conditional) – 7814, 7816, 7822, 7824, 7900, 7904, 7906, 7908, 7912 & 8022 Timberlake Road and 109 & 111 Buckingham Drive**

I. PETITIONER

Belleau Wood Development, LLC, 415 Pisgah Church Street #363, Greensboro, NC 27455
Representative: Mr. Scott Beasley, Hurt & Proffitt, Inc., 2524 Langhorne Road, Lynchburg, VA 24501

II. LOCATION

The subject property includes twelve (12) tracts totaling approximately twenty-eight (28) acres located at 7814, 7816, 7822, 7824, 7900, 7904, 7906, 7908, 7912 & 8022 Timberlake Road and 109 & 111 Buckingham Drive.

Property Owners:
Mr. Kenley F. & Lucille E. Hahn, 7816 Timberlake Road, Lynchburg, VA 24502
Mr. Thomas H. & Helen R. Hahn, 7822 Timberlake Road, Lynchburg, VA 24502
Ms. Virginia C. & Alfred R. Hahn, 116 Village Road, Lynchburg, VA 24502
Ms. Courtney R. Hahn, 3763 Troutland Avenue, SW, Roanoke, VA 24017
Mr. John P. Cowins, 470 Powtan Drive, Lynchburg, VA 24502
Ms. Susan P. Atkins, 347 Burr Oak Road, Lynchburg, VA 24502
Mr. Stanley J. & Evelyn M. Moody, 109 Buckingham Drive, Lynchburg, VA 24502
Knollwood Townhomes Property Owners Association, 112 Sunbury Place, Lynchburg, VA 24502

III. PURPOSE

The purpose of the petition is to rezone Village at Dreaming Creek, Phase I, located at 7814, 7816, 7822, 7824, 7900, 7904, 7906 & 7908 Timberlake Road from B-3C, Community Business District (Conditional) to B-3C, Community Business District (Conditional) to amend previously approved proffers to allow the construction of a private street in lieu of a public street; rezone 7912 Timberlake Road, from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional) to allow the construction of retail development and for inclusion in Phase I; and to rezone 7824, 7906 & 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District to R-4, Medium-High Density, Multi-Family Residential District (Conditional) to allow the construction of a two hundred seventy (270)-unit apartment complex, clubhouse, pool and associated parking.

IV. SUMMARY

- The *Future Land Use Map* (*FLUM*) recommends a Low Density Residential, Medium Density Residential and High Density Residential land use for the properties. Limited retail and

service uses may be established in High Density Residential areas as part of mixed use developments and within high density developments.

- A portion of the properties located at 7824 & 7906 Timberlake Road are currently zoned B-3, Community Business District. The B-3, Community Business District zoned portions would be part of the overall development.
- The preliminary site plan indicates the construction of new private streets which would connect to Timberlake Road at an existing signal across from Candlewood Court and to Buckingham Drive. Other ingress/egress to the development would be from a "right-in / right-out" to Timberlake Road.
- The petitioner has conducted a Traffic Impact Study (TIS). Recommendations of the TIS and the City's Transportation Engineer have been incorporated into the submitted site plan.
- The proposed development will be served by city water and sewer.
- Stormwater is proposed to be mitigated in a stormwater management area which will include a stream restoration project.
- Fill for the proposed development is proposed to be taken from the south side of Dreaming Creek.

<u>The Planning Division recommends approval of the rezoning petition.</u>

V. FINDINGS OF FACT

1. **Comprehensive Plan.** The *FLUM* of the *Comprehensive Plan 2002-2020* recommends a Low Density, Medium Density and High Density Residential Uses and Community Commercial use for the area. "High Density Residential areas are developed or planned to be developed into high density townhouse or multifamily housing. Densities can range up to 30 units per acre. They may include public, institutional, private recreation, and private open space uses. Limited retail and service uses may be established as part of mixed-use developments and within high density residential projects". (***pg.75***)

   "Community Commercial areas contain retail, personal service, entertainment, and restaurant uses that draw customers from at least several neighborhoods, the entire City or the region. Community Commercial areas contain clusters of businesses, often at major intersections, and shopping centers. Most community shopping centers range from 100,000 to 200,000 square feet and serve 40,000 to 70,000 people. Regional shopping centers would be at least as large as Community Commercial ones, 100,000 to 200,000 square feet, possibly larger, if parcels of sufficient size can be found or assembled. They are intended to serve 70,000 to 100,000 people. Office, research and development, and technology development uses may be permitted in Community Commercial areas as long as traffic and other impacts to the community are mitigated. In particular, conversion of existing vacant retail space to these uses may be appropriate in areas where there is sufficient retail to serve the community and space for employment uses is needed. Residential uses may be established on the upper floors of commercial structures or as transitional structures between residential and commercial buildings". (***pgs. 75-76***)

2. **Zoning.** The subject property was annexed into the City in 1976. The existing R-1, Low-Density Residential zoning was established in 1978 with the adoption of the current *Zoning Ordinance*. The existing R-4, Medium-High Density, Multi-Family Residential District was established in 1989 as part of the Timberlake Road Land Use Study and the existing B-3C, Community Business District (Conditional) District was established on April 8, 2014.

3. **Proffers.** The petitioner has voluntarily submitted the following proffers:

B-3C, Community Business District (Conditional) Area

1. The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of a new roadway (Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store and the fast food out parcel on the new roadway, and sidewalks and curb & gutter along Timberlake Road and the new roadway. The layout and types of uses shown may change as the site develops. This new roadway shall be a private road.
2. The following uses, which are allowed in B-3, are not permitted within the area to be rezoned:
   - Adult entertainment businesses
   - Funeral homes and undertaking establishments
   - Internet café or on-line gambling businesses
   - Used tire stores
   - Pawn shops
3. Noise: Where music or exterior equipment on a commercial site is utilized it shall be restricted per the ordinance to no more than 52 dBa or it shall be disabled between the hours of 10:00pm and 7:00am.
4. Lighting: All exterior lighting shall be full cut off type. No lighting source shall be aimed above a parallel line to the horizon. Fixture that are not amiable types shall be flat lens type installed parallel to the horizon. Site lighting within 40' of a residential property line shall be Type I, II, III or IV distribution, full cutoff fixtures directed to the interior of the commercial or multi-family residential property. Type V distribution, full cutoff fixtures may only be used only 41' or more from any existing residential property line. Further, lighting shall be in accordance with the Lynchburg City Code - Sec. 35.1-43.26. Lighting. Internally illuminated or back lite canopies, shall not be allowed.
5. Architecture: The development shall use a master planned material pallet consisting of durable materials including masonry, stucco, architectural block or stone. The predominant material for all buildings shall be regionally selected brick in a color range from hard tan to colonial red. Once selected, the same brick shall be used for all subsequent outparcel buildings, screen walls, etc. The use of pre-finished metal shall be limited to flush panels or standing seam used appropriately in building canopies. Where appropriate, fiber cement lap siding installed with no more than a 4" exposed face shall be allowed for no more than 25% of any wall surface, and shall not be install closer than 30" to the adjacent grade. All building shall have a minimum of a 30" masonry wainscot/water table at the base of all walls, equipment screens, and site walls. All sides of each building shall be finished with the same durable materials. Roof lines shall be set appropriate to each building or building element, with preference given to colonial, pitched roofs for smaller masses and parapets with a defined cornice for larger footprints. Rooflines shall receive consistent treatment at all sides of each building. No open roof edges shall be allowed on flat roofs. Rooftop equipment shall be screened by parapets at all side of buildings with flat roofs. Where ground level equipment is used it shall be screened by landscaping or masonry walls.

6. Site Signage: Signage for the outparcels shown on the Rezoning Plan shall be governed by the Lynchburg City Code [Sec. 35.1-26. Signs], unless further restricted as follows. Commercial site signage shall be limited to monument style signage. Monument signs shall not exceed 8' in height above the top of the adjacent curb line. Where gas service stations include price message boards, they shall be integrated into the monuments sign and the total sign height may be increased to a maximum of 12'. One free-standing pylon sign shall be used to identify the development.

R-4C, Medium-High Density, Multi-Family Residential (Conditional) Area

1. No structure other than "Single Family Resident" shall be allowed in the R-4 zoned Moody's parcels (PID # 25410004 & PID # 25410005).
2. A six feet high decorative screen wall shall be built at the property line along the entire length of the private road abutting the adjacent R-1 zoned residents starting at northern most property line at 123 Brunswick Drive going southerly to 109 Buckingham Drive (As shown on the site plan). A sample of such wall is attached.
3. A fifteen wide multi-modal/neighborhood electric vehicle (NEV) lane and three feet wide grass strip shall be provided along the private road (as shown on the site plan).
4. Traffic calming device such as chicanes shall be provided along a portion of the private road to better control vehicular speed (as shown on the site plan).
5. Private road entrance at Timberlake Road with future connection to Buckingham Drive shall be opened and used by the general public.
6. The attached building elevation to be used for Building # 2 and Building # 3 to minimize the numbers of windows and patios facing east to the adjacent neighbors.
7. The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of the new roadway system (new Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store on the new roadway, and sidewalks and curb and gutter along Timberlake Road and the new roadway system. The layout and types of uses shown may change as the site develops. This roadway system shall be a private road and accessible for use by the general public.
8. Connectivity – Within eighteen months after the issuance of the first certificate of occupancy for the multi-family project or prior to the issuance of the certificate of occupancy for the Phase III "age-restricted senior cottage homes" the developer shall complete the connection of the private road to Buckingham Drive as shown in the site plan. The developer shall align the road as far south as possible north of Dreaming Creek subject to FEMA and other engineering constrain. The developer shall be bonded for such improvement prior to the issuance of the certificate of occupancy for the multi-family development. See site plan for alternatives to such connectivity.
9. Agrees to vacate connectivity from Brunswick Road and vacate the street to the two abutting property owners.
10. Creation/Dedication of the 'Hahn's Spring Greenway' - The subtract here-in referred to as the Hahn's Spring Greenway is show on the site plan as a central, approximately 3 acre, corridor within the site to be dedicated as a common area within which a multitude of environmental goals shall be met. These goals include:

- Environmentally-sensitive landscaping using native trees and shrubs to meet site goals of providing a multi-functional environmental buffer (e.g. water, air, sound, and light), passive recreation (e.g. bird watching and trail), and naturally vegetated areas for conservation of native flora and fauna.
- community gardens,
- bio-retention storm water treatment, and
- the safeguarding of wetlands and streams within the corridor.

These, in their entirety, shall be designed to enhance the water quality of storm water runoff from the development prior those waters entering wetlands or streams that contribute to Dreaming Creek. Low Impact Development (LID) storm water practices such as vegetated swales; rain gardens and other bio-retention practices shall only be used in Hahn's Spring Greenway/Corridor. The Hahn's Spring Greenway starts at the historic 'Hahn's springhead' located approximately 120' northeast of the exiting old farm irrigation pond (above a tract of natural wetlands) and extends some 700 ' to the SE where it merges with the 'RC' zoning corridor along Dreaming Creek. The integrated & (biologically-enhanced) storm water management practices to be installed within this open space shall serve to minimize any detrimental impacts of the development to Dreaming Creek proper. It shall preserve the historical Hahn's family spring, safeguard water resources, and provide a central focal green and open space for inclusion of naturally vegetated areas, community gardens and areas for passive recreation. The exact manner in which existing open waters, wetlands, and streams are integrated into the final 'Hahn's Spring Greenway' is dependent on site conditions that will be uncovered once site remediation is under way and geotechnical data can be gathered (e.g. at the bottom of the existing farm pond, along existing impoundment structure).

4. **Board of Zoning Appeals (BZA).** The Zoning Official has determined that no variances would be needed for the development of the property as proposed.

5. **Surrounding Area.** There have been several items requiring City Council approval in the immediate area:

- On April 13, 1982, Council approved the conditional use permit (CUP) petition of Ronnie D. Vaughan to allow the construction of a recreation center at 8131 Timberlake Road.

- On November 9, 1982, Council approved the petition of Russell Nichols and Clyde Smith to rezone the property at 8105 Timberlake Road from B-3, Community Business District to B-5, General Business District (Conditional) to allow the operation of a commercial recreation center.

- On May 14, 1985, Council approved the CUP petition of CHA Construction Company to allow the construction of a recreation center and parking lot in the flood zone at 8022 Timberlake Road.

- On May 13, 1986, Council approved the CUP petition of First Southern Methodist Church to allow the construction of a pavilion, softball field and signs at 7808 Timberlake Road.

- On December 12, 1986, Council approved the CUP petition of Ted DeHass to allow the construction of a carwash at 8104 Timberlake Road.

- On April 12, 1988, Council approved the petition of Emmett & Hazel Simpson to rezone the property at 203 Timbrook Place from R-1, Low Density, Single-Family Residential District to R-4, Medium-High Density, Multi-Family Residential District (Conditional) to allow the construction of a townhome development.
- On February 14, 1989, Council adopted the Timberlake Road Land Use Study which amended the zoning for the area and established the Commercial Corridor Overlay District.
- On November 12, 1991, Council approved the CUP petition of National Business College to allow the use of an existing building for educational purposes at 104 Candlewood Court.
- On December 10, 1991, Council approved the petition of H&H, Inc. to rezone the property at 8105 Timberlake Road from B-5, General Business District (Conditional) to B-5, General Business District (Conditional) to amend previously approved proffers.
- On December 10, 1991, Council approved the CUP petition of H&H, Inc. to allow a "go-cart" track at 8105 Timberlake Road.
- On June 27, 2006, Council approved the CUP petition of JBO, LLC to allow the construction of a Traditional Neighborhood Development at 1207 and 1226 Greenview Drive.
- On February 12, 2008, Council approved the CUP petition of JBO, LLC to amend the TND Master Plan for Cornerstone at 401 Cornerstone Street and 100, 200 and 300 Capstone Drive.
- On April 13, 2010, Council approved the CUP petition of the Cornerstone Property Owners Association to allow the construction and operation of a community swimming pool at 1100 Greenview Drive.
- On July 13, 2010, Council approved the CUP petition of Brooke's Brothers, LLC to allow a consolidated sign plan at 7802 Timberlake Road.
- On November 9, 2010, Council approved the petition of Dr. Jeffrey Widmeyer to rezone 7626 Timberlake Road from R-1, Low Density, Single-Family Residential District to B-1, Limited Business District (Conditional) to allow a medical office.
- On April 12, 2011, Council approved the CUP petition of JBO, LLC to amend the TND Master Plan for Cornerstone in Bocks "A, B, C & D".
- On April 8, 2014, Council approved the petition of Belleau Wood Development LLC, to rezone 7814-7908 Timberlake Road from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional) to allow the construction of a retail development.

6. **Site Description.** The subject property includes twelve (12) tracts totaling approximately twenty-eight (28) acres located at 7814, 7816, 7822, 7824, 7900, 7904, 7906, 7908, 7912 & 8022 Timberlake Road and 109 & 111 Buckingham Drive. The property proposed for development slopes to the south towards dreaming creek. The slope is approximately ten percent (10%) or 10:1. The twelve (12) properties proposed for rezoning are either vacant land or contain single-family dwellings that would be demolished.

The property is bounded to the north (across Timberlake Road) by commercial uses, to the east by an institutional use (Faith Alliance Church) and single-family homes, to the west by a commercial uses and townhomes and to the south by vacant land.

7. **Proposed Use of Property.** If the rezoning petition is approved, the property would be developed for commercial/retail uses and a two hundred seventy (270)-unit apartment complex, clubhouse and pool. The area proposed for B-3C, Community Business District (Conditional) would remain unchanged from previous approvals with the exception of the addition of 7912 Timberlake Road and the clarification that all streets would be private.

8. **Traffic, Parking and Public Transit.** The proposed retail development warranted a Traffic Impact Study (TIS). The recommendations of the TIS and the City's Transportation Engineer have been incorporated into the preliminary site plan.

   The development is proposed to be accessed by the construction of a new private street connecting to Timberlake Road at the existing traffic signal. A new right turn lane has been incorporated into the new street from Timberlake Road. A left turn lane currently exists at the traffic signal. Other means of ingress/egress to the site would be from a right-in/right-out onto Timberlake Road and from a new private street south of the development which is proposed to connect to Buckingham Drive.

   The City's *Comprehensive Plan* adopted in January 2014, lists "connectivity" as a guiding principle for Transportation. Chapter 12, (***pg. 128***) states "The City supports improved connectivity between neighborhoods to facilitate mobility between the places where residents live, work and play". Transportation Policy T-1 (**pg. 30**) states "Provide safe, efficient, effective, and well-planned transportation systems and facilities that enhance economic development and redevelopment opportunities while preserving the integrity and character of the affected neighborhoods, historic districts, downtown and natural resources." Transportation Policy T-1.4 (**pg. 30**) states "Prioritize improvements to the transportation system based on safety considerations; existing deficiencies; multimodal and environmental consideration; opportunities to improve street connectivity; physical economic and policy constraints; contribution to neighborhood character; impact on historic and environmental resources; required right-of-way; target levels of service (see policy T-1.3); public safety access; regional connectivity and system continuity."

   The City's *Comprehensive Plan* supports the connectivity of streets to provide transportation options; however it also is clear in that protecting neighborhood character and livability is important. Streets in the adjacent neighborhoods are narrow (typically 20 feet) and lacks sidewalks.

   A neighborhood meeting was conducted by the petitioner on Tuesday, June 3, with approximately forty (40) neighborhood residents in attendance. Citizens expressed concern with the proposed connection to Buckingham Drive.

   The petitioner desires connectivity for future access to Phase III of the development on the south side of Dreaming Creek and connectivity is important to the continuity of the city's overall transportation system. Future connectivity should not be prohibited; however, further study should be undertaken to determine trip distribution through the neighborhood (in particular north/south to/from Leesville Road) and what, if any, improvements would be necessary to accommodate it.

   The submitted site plan indicates parking space numbers which exceed the requirements of the *Zoning Ordinance*.

The development would be served by Greater Lynchburg Transit Company (GLTC) Route 7.

9. **Stormwater Management.** The proposed project is required to treat stormwater runoff for quantity and quality. The submitted narrative indicates that stormwater quantity for Phase I (retail development) will be maintained at "pre-development" conditions by the use of underground detention and/or bio-retention ponds (rain gardens). Water quality for Phase I will be addressed by the use of bio-retention and/or mechanical devices. Stormwater quantity and quality for Phase II is proposed to be addressed by the establishment of a "central core area" within the apartment complex development. The existing pond would be drained and fringe areas would be converted to stormwater wetlands with sediment forebays and bioretention basins. These areas would drain to a restored stream which would drain to Dreaming Creek. Dreaming Creek has been determined as an adequate receiving channel for stormwater associated with the development.

10. **Emergency Services.** The City Fire Marshal provided comments regarding site design requirements of the City of Lynchburg and the Virginia Statewide Fire Prevention Code. The City's Police Department provided general comments related to site safety and security. These comments have or will be addressed by the petitioner prior to final site plan approval.

11. **Impact.** Timberlake Road is a major four (4) lane arterial roadway with approximately thirty-one thousand (31,000) vehicles per day. The area saw a major transition from a residential to a commercial corridor with the adoption of the Timberlake Land Use Study in 1989.

    The submitted rezoning petition would amend previously approved proffers by clarifying all new roads will be private. The B-3C area allows for the construction of a variety of retail development and associated parking. The preliminary site plan indicates a convenience store, bank and restaurant; however, any B-3, Community Business use would be permitted with the exception of those excluded by the voluntarily submitted proffers. The voluntarily submitted proffers adequately address potential impacts related to the development by the use of access management, stormwater management, noise mitigation, light trespass and architectural standards.

    The area proposed for the construction of apartments is currently zoned R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District. The entire property is recommended for High Density Residential land use on the *Future Land Use Map (FLUM*). These areas are planned for high density townhomes or apartments with densities of up to thirty (30 units per acre. R-4, Medium-High Density, Multi-Family Residential Districts permit up to twenty-one and seventy-eight hundredths (21.78) units per acre. The preliminary site plan indicates a proposed density for the apartment complex of thirteen and fifty-eight hundredths (13.58) units per acre. The submitted site plan also indicates the restoration of an existing stream channel and leaving an area approximately three (3) acres in size to be used for stormwater management and recreation.

    The petitioner is addressing impacts to adjacent single-family residences to the west, by proffering to construct a screening wall, limiting windows facing shared property lines, using low level lighting and installing traffic calming devices on the proposed private roadway.

12. **Technical Review Committee.** The Technical Review Committee (TRC) reviewed the preliminary rezoning plan on February May 20, 2014. Comments related to the proposed use have or will be addressed by the petitioner prior to final site plan approval.

VI. PLANNING DIVISION RECOMMENDATION

As provided in Section 35.1-43.1, Conditional Zone or Zone Approval, waive the twenty-one (21) day submittal requirement for voluntarily submitted proffers.

Based on the preceding Findings of Fact, the Planning Commission recommends to City Council approval of the petition of Belleau Wood Development LLC to:

Rezone approximately eight and fifty-nine hundredths (8.59) acres located at 7814, 7816, 7822, 7900, 7904 & 7908 Timberlake Road from B-3C, Community Business District (Conditional) and the property located at 7912 Timberlake Road from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional) subject to the following voluntarily submitted proffers:

1. **The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of a new roadway (Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store and the fast food out parcel on the new roadway, and sidewalks and curb & gutter along Timberlake Road and the new roadway. The layout and types of uses shown may change as the site develops. This new roadway shall be a private road.**
2. **The following uses, which are allowed in B-3, are not permitted within the area to be rezoned:**
   - **Adult entertainment businesses**
   - **Funeral homes and undertaking establishments**
   - **Internet café or on-line gambling businesses**
   - **Used tire stores**
   - **Pawn shops**
3. **Noise: Where music or exterior equipment on a commercial site is utilized it shall be restricted per the ordinance to no more than 52 dBa or it shall be disabled between the hours of 10:00pm and 7:00am.**
4. **Lighting: All exterior lighting shall be full cut off type. No lighting source shall be aimed above a parallel line to the horizon. Fixture that are not amiable types shall be flat lens type installed parallel to the horizon. Site lighting within 40' of a residential property line shall be Type I, II, III or IV distribution, full cutoff fixtures directed to the interior of the commercial or multi-family residential property. Type**

V distribution, full cutoff fixtures may only be used only 41' or more from any existing residential property line. Further, lighting shall be in accordance with the Lynchburg City Code - Sec. 35.1-43.26. Lighting. Internally illuminated or back lite canopies, shall not be allowed.

5. **Architecture: The development shall use a master planned material pallet consisting of durable materials including masonry, stucco, architectural block or stone. The predominate material for all buildings shall be regionally selected brick in a color range from hard tan to colonial red. Once selected, the same brick shall be used for all subsequent outparcel buildings, screen walls, etc. The use of pre-finished metal shall be limited to flush panels or standing seam used appropriately in building canopies. Where appropriate, fiber cement lap siding installed with no more than a 4" exposed face shall be allowed for no more than 25% of any wall surface, and shall not be install closer than 30" to the adjacent grade. All building shall have a minimum of a 30" masonry wainscot/water table at the base of all walls, equipment screens, and site walls. All sides of each building shall be finished with the same durable materials. Roof lines shall be set appropriate to each building or building element, with preference given to colonial, pitched roofs for smaller masses and parapets with a defined cornice for larger footprints. Rooflines shall receive consistent treatment at all sides of each building. No open roof edges shall be allowed on flat roofs. Rooftop equipment shall be screened by parapets at all side of buildings with flat roofs. Where ground level equipment is used it shall be screened by landscaping or masonry walls.**

6. **Site Signage: Signage for the outparcels shown on the Rezoning Plan shall be governed by the Lynchburg City Code [Sec. 35.1-26. Signs], unless further restricted as follows. Commercial site signage shall be limited to monument style signage. Monuments signs shall not exceed 8' in height above the top of the adjacent curb line. Where gas service stations include price message boards, they shall be integrated into the monuments sign and the total sign height may be increased to a maximum of 12'. One free-standing pylon sign shall be used to identify the development.**

Rezone approximately nineteen and eighty-eight hundredths (19.88) acres located at 7824, 7906 and 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential

District to R-4, Medium-High Density, Multi-Family Residential District (Conditional) subject to the following voluntarily submitted proffers:

1. **No structure other than "Single Family Resident" shall be allowed in the R-4 zoned Moody's parcels (PID # 25410004 & PID # 25410005).**
2. **A six feet high decorative screen wall shall be built at the property line along the entire length of the private road abutting the adjacent R-1 zoned residents starting at northern most property line at 123 Brunswick Drive going southerly to 109 Buckingham Drive (As shown on the site plan). A sample of such wall is attached.**
3. **A fifteen wide multi-modal/neighborhood electric vehicle (NEV) lane and three feet wide grass strip shall be provided along the private road (As shown on the site plan)**
4. **Traffic calming device such as chicanes shall be provided along a portion of the private road to better control vehicular speed. (As shown on the site plan)**
5. **Private road entrance at Timberlake Road with future connection to Buckingham Drive shall be opened and used by the general public.**
6. **The attached building elevation to be used for Building # 2 and Building # 3 to minimize the numbers of windows and patios facing east to the adjacent neighbors.**
7. **The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of the new roadway system (new Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store on the new roadway, and sidewalks and curb and gutter along Timberlake Road and the new roadway system. The layout and types of uses shown may change as the site develops. This roadway system shall be a private road and accessible for use by the general public.**
8. **Connectivity – Within eighteen months after the issuance of the first certificate of occupancy for the multi-family project or prior to the issuance of the certificate of occupancy for the Phase III "age-restricted senior cottage homes" the developer shall complete the connection of the private road to Buckingham Drive as shown in the site plan. The developer shall align the road as far south as possible north of Dreaming Creek subject to FEMA and other**

engineering constrain. The developer shall be bonded for such improvement prior to the issuance of the certificate of occupancy for the multi-family development. See site plan for alternatives to such connectivity.

9. **Agrees to vacate connectivity from Brunswick Road and vacate the street to the two abutting property owners.**

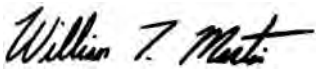
10. **Creation/Dedication of the 'Hahn's Spring Greenway' - The subtract here-in referred to as the Hahn's Spring Greenway is show on the site plan as a central, approximately 3 acre, corridor within the site to be dedicated as a common area within which a multitude of environmental goals shall be met. These goals include:**

    - **Environmentally-sensitive landscaping using native trees and shrubs to meet site goals of providing a multi-functional environmental buffer (e.g. water, air, sound, and light), passive recreation (e.g. bird watching and trail), and naturally vegetated areas for conservation of native flora and fauna**
    - **community gardens,**
    - **bio-retention storm water treatment, and**
    - **the safeguarding of wetlands and streams within the corridor.**

    These, in their entirety, shall be designed to enhance the water quality of storm water runoff from the development prior those waters entering wetlands or streams that contribute to Dreaming Creek. Low Impact Development (LID) storm water practices such as vegetated swales; rain gardens and other bio-retention practices shall only be used in Hahn's Spring Greenway/Corridor. The Hahn's Spring Greenway starts at the historic 'Hahn's springhead' located approximately 120' northeast of the exiting old farm irrigation pond (above a tract of natural wetlands) and extends some 700 ' to the SE where it merges with the 'RC' zoning corridor along Dreaming Creek. The integrated & (biologically-enhanced) storm water management practices to be installed within this open space shall serve to minimize any detrimental impacts of the development to Dreaming Creek proper. It shall preserve the historical Hahn's family spring, safeguard water resources, and provide a central focal green and open space for inclusion of naturally vegetated areas, community gardens and areas for passive recreation. The exact manner in which existing open waters, wetlands, and streams are integrated into the final 'Hahn's Spring Greenway' is dependent on site conditions that will

be uncovered once site remediation is under way and geotechnical data can be gathered (e.g. at the bottom of the existing farm pond, along existing impoundment structure).

This matter is respectfully offered for your consideration.



William T. Martin, AICP
City Planner

pc: Mr. L. Kimball Payne, III, City Manager
Ms. Bonnie M. Svrcek, Deputy City Manager
Mr. Walter C. Erwin, City Attorney
Mr. Kent L. White, Director of Community Development
Mr. J. Lee Newland, City Engineer
Ms. Cynthia Kozerow, Lynchburg Police Department
Battalion Chief Greg Wormser, Fire Marshal
Mr. Don DeBerry, Transportation Engineer
Mr. Doug Saunders, Building Commissioner
Mr. Robert Fowler, Zoning Administrator
Mr. Ed Tam, Belleau Wood Development, LLC
Mr. Scott Beasley, Hurt & Proffitt, Inc.

VII. ATTACHMENTS

1. **Vicinity Zoning Pattern Map**
2. **Vicinity Proposed Land Use Map**
3. **Watershed Location Map**
4. **Planimetric and Topographic Map**
5. **Rezoning Plan**
6. **Narrative**
7. **Building Elevations**

MINUTES OF THE JUNE 11, 2014 PLANNING COMMISSION MEETING (MINUTES HAVE NOT BEEN APPROVED):

Petition of Belleau Wood Development, LLC to rezone approximately 25 acres located at 7814, 7816, 7822, 7824, 7900, 7904, 7906, 7908, 7912 and 8022 Timberlake Road and 109 & 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District, R-4, Medium-High Density, Multi-Family Residential District and B-3C, Community Business District (Conditional) to R-4C, Medium-High Density, Multi-Family Residential District and B-3C, Community Business District (Conditional). The purpose of the rezoning is to amend previously approved proffers to allow the construction of a private street in lieu of a public street and to allow the construction of a 284 unit apartment complex, with associated office, clubhouse, pool and parking. The plan indicates vehicular and pedestrian connections to Timberlake Road and Buckingham Drive.

Ms. Nygaard explained that there are three actions involved in this petition. The first is to amend the proffers of the rezoning that was approved by City Council in April of this year to change the public street proffered at that time to a private street. The second is to include 7912 Timberlake Road into the commercial phase of this development by rezoning it to B-3C. The developer did not have ownership of that piece of property during the first phase of the rezoning process. The third action is to rezone 7906, 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1 and R-4 to R-4C in order to construct 270 apartments, amenities and a connection to Buckingham Drive.

The *FLUM* recommends mostly High Density and Medium Density uses for these properties. High Density is recommended at a density of up to 30 units per acre and Medium Density is at a density of up to 12 units per acre. The overall density of this development is 13.58 units per acre, which is much closer to the Medium Density land use designation.

The traffic impact study for Phase I of this development also included this phase of the development and was actually done at a higher density than what is being shown on the concept plan. All traffic capacity issues called for in that study are being shown on the concept plan.

Access to the development will be from two right in/right out entrances off Timberlake Road and a new private road which includes traffic calming measures which would connect at Timberlake Road and Buckingham Drive. Ms. Nygaard pointed out that the *Comprehensive Plan* recently adopted by City Council emphasizes the importance of connectivity throughout the City. Connectivity in this proposal should not be prohibited but further study should be done to determine the number and impact of anticipated trips that will go through the Windsor Hills neighborhood.

Stormwater will be handled through a three-acre preserved central area in the development. It will include a stream restoration project of Dreaming Creek which is where the stormwater from this development will drain. Planning Division does recommend approval of the rezoning petitions.

Mr. Ted Craddock was present as the legal representative for Belleau Wood Development and its principal, Mr. Ed Tam. He believes Mr. Tam has shown through extensive proffers submitted that he has made every effort to create a development of which he and the City can be proud. He has met with City staff and the neighbors numerous times and has developed the proffers to try and address everyone's concerns. Mr. Craddock pointed out that by right Mr. Tam could develop 281 units on the properties as currently zoned. In that scenario, the majority of the units could be placed on the R-4 property and the R-1 property that dead ends at Brunswick Drive could be developed by right as single-family homes with a connection through Brunswick Drive. Mr. Craddock pointed out that because of these properties' prime locations, they will ultimately be developed and if developed by right, the majority would be multi-family. No one likes change next to them; however, this property is going to be developed. Mr. Craddock

believes Mr. Tam's proffers show that he has spent a long time working on this and that he has tried very hard to develop a good project.

Mr. Craddock commented that the planned operator will be Blue Ridge Companies, one of the largest apartment developers on the east coast. Legacy at Linden Park is one of their developments and is an example of the type of development planned for these sites.

Mr. Scott Beasley of Hurt and Proffitt came forward to speak. He wished to point out several changes that have been made to the concept plan since it was first reviewed by the Technical Review Committee. These changes were made as a result of Mr. Tam listening to comments from neighbors at various meetings he held with them. One of the changes is a proposed decorative concrete wall to be placed along the majority of the western side of the development that is meant to buffer noise from the development. Great care was also taken to lower the grade of the apartments to place them below where the single-family residences are currently located.

Another concern raised was lighting and a proffer has been added to include lower level lighting and lowering the grade of the apartments along Brunswick Drive also helps with the lighting issue. Privacy was also a concern, so the layout of the units facing Brunswick Drive has been changed so that there will be no porches on those units, only very high windows.

Trash trucks going through the development was a concern, so a centrally located trash compactor was added to the design. There would be only one trash site for the whole development a couple of times a week and it would be located near Timberlake Road.

Traffic was also a concern expressed by the neighbors so it has been proffered to delay the connection to Buckingham Drive for 18 months. A central drive has also been added to the development which should help to disperse the traffic centrally through the development and keep most of it from the perimeter road.

Mr. Gary Case came forward to speak in favor of the petition. He thinks this is a quality development and reiterated the fact that 21.9 units per acre could be built on the piece of property currently zoned R-4 without any proffers. Mr. Case thinks that the voluntarily submitted proffers add value to the property and additional protection to the adjoining neighborhood.

Mr. Stan Elmer of 107 Buckingham Drive came forward. He will be one of the neighbors likely to be most affected by this development. However, the reality is that something is going to go on this property and he has enough experience with construction to know that there are a lot of botched projects out there, ill managed and poorly run. Mr. Tam has bent over backwards to listen to the concerns of the neighborhood and address them to the best of his ability. Another developer could come in and not even talk to the neighbors and build whatever they want. By lowering the grade, most of the aesthetics of the wooded area behind his property will be preserved. The biggest concern was the connectivity to Buckingham Drive. Mr. Tam has made some concessions on that connection that they are looking into; he is not sure if anything has been finalized. The point is that Mr. Tam has done what he can to help out and do the best he can for the neighborhood. Mr. Elmer has seen too many projects go bad and he is afraid of what another developer might do.

Vice-Chair Johnston asked for anyone else who wished to speak in favor of the petition. No one came forward. She asked for anyone who wished to speak in opposition to the petition.

Mr. Albert Billingsly of 1115 Moreview Drive spoke on behalf of the Windsor Hills Neighborhood Association. He mentioned that there are several things they like about the development such as the fact that it will be similar to the development at Legacy at Linden Park. They like the placing of the trash

compactor close to Timberlake Drive, limiting the trash trucks and trash pickups, no connection to Cornerstone, a wall to cut down on noise, the greenery between the apartments and the homes, trails that will be open to the public and the apartment alignment so that balconies face away from the homes.

There are several items that are of real concern to them. First and foremost, is the connection to Buckingham Drive. It is not necessary but has been requested by staff. Connectivity when used with logic and common sense can be a good thing. However, in this instance, it would effectively destroy the integrity of an existing neighborhood. Traffic is already a concern on Buckingham Drive and there is a dip in the road where it intersects with Dreaming Creek. Traffic will naturally increase at this drop and the new private street will connect at a place close to the bottom of that drop in the street. This is a formula for traffic accidents. Buckingham Drive is also used by pedestrians. Added traffic will make pedestrian travel more difficult as there are no sidewalks in the neighborhood. Mr. Billingsly pointed out that there have been several apartment complexes built nearby that have not connected to neighborhoods and only have one means of ingress and egress. There is also the example of the Preserve at Oakwood across town that was built without connecting to an existing neighborhood.

Mr. Billingsly pointed out that there are three and four story apartments going in around them. This is a visual and noise problem that a six-foot wall cannot overcome. They would add to that the fact that their property values are likely to go down with this added large apartment complex next to them.

The neighbors also feel that the setback from the homes to the apartments is too close. The neighbors would first like the connection to Buckingham Drive to be removed from the plan. They would also like the height of the apartment buildings to be reduced to two and three stories, at least directly behind Buckingham Drive. They would also like the setback increased to a more reasonable distance. The neighbors would also request that the City install speed humps on the downward slope of Buckingham Drive on both sides of Dreaming Creek.

The Windsor Hills Neighborhood Association would also like the City Transportation Engineer to work with the Campbell County Traffic Engineer on the timing of the two traffic signals just beyond the City boundary at Lowe's and KFC. They feel changing the timing of those lights will help with the flow of traffic on Timberlake Road.

Because of the above concerns, the Windsor Hills Neighborhood Association is requesting that Planning Commission deny the application for rezoning. They do not think a neighborhood's integrity should be degraded just for the sake of connectivity.

Ms. Martha Hicks of 108 Yorkshire Circle came forward to speak. She spent 30 minutes yesterday going to apartment complexes in the immediate vicinity of Windsor Hills. She found that there are 2,257 units housing units (condos, apartments, townhomes and single-family homes) right around Windsor Hills. She listed the number of units at Cornerstone, Vistas at Dreaming Creek, Timber Ridge I and II, Legacy at Linden Park, Kendall Square, Stonegate Villas and the planned apartment complex on Timbrook Place. She pointed out that all of these developments have means of ingress/egress to main roads such as Greenview Drive, Timberlake Road, Graves Mill Road and Candlewood Court. None of them have access through a developed neighborhood. The Windsor Hills neighborhood does not want any ingress/egress to Buckingham Drive.

Ms. Delores Hagendorf of 106 Buckingham Drive came forward to speak. She moved here 15 years ago and has been fixing up her house all that time. She has it where she wants it and now this comes along. All this development is going to do is devalue the neighborhood. It is certainly not going to increase property values. Apartments do not add value and she would suggest that they add homes for families. We do not need any more apartments regardless of what people say. She mentioned that there have been drug raids at the apartments off Timberlake Road. She also does not feel that apartments are a

good place to raise children. She does not want to see this property wasted on apartments but would rather see single-family homes or townhomes.

Mr. William Hedrick of 108 Buckingham Drive came forward to speak. He moved to Windsor Hills because it would be a good place to raise a family. He is concerned about increased traffic and whether or not it will be safe for his child to play in the yard. Originally, the proposed connection was going to be right across from his house. It has been changed since then and is now skewed toward the creek; however, he is still concerned with how he will get in and out of his driveway. He understands that he has chosen to live in the City and does so because of its great services. However, he hopes they will not be forced to move outside of the City because the City is trying to generate more revenue by building apartments. He would like to see houses built that would entice young people to stay in the City after they are done attending college here.

Ms. Betty Hillman of 105 Buckingham Drive came forward to speak. She has lived there for 45 years. She stayed through the many changes including the annexation. One of the things she likes best about her house is the view outside her window. Originally, she had heard a rumor that the land had been sold and was going to be developed as single-family homes for seniors. She is now disappointed to find that they are proposing to build four-story apartment buildings behind her house. She thinks that is too many apartments and too many cars crammed into a small amount of green space. She does not think the development will be compatible with single-family homes. Ms. Hillman is also concerned about the environmental impacts of this development on the stream, pond and springs located on the property. She reiterated the traffic concerns regarding additional traffic on Timberlake Road and Buckingham Drive.

Mr. Tom Jones of 230 Chesterfield Place came forward to speak. He feels that Buckingham Drive is dangerous and called it (along with other streets in the area) the "Leesville Road/Timberlake Road" expressway. He knows of many "near" accidents on this road and thinks that if you add additional traffic on this section of Buckingham Drive where people tend to speed, it will be throwing safety out the window. They do not feel access on Buckingham Drive is needed and they do not want it. Mr. Jones also feels that the home owners have a right to privacy and they will lose almost all privacy with four-story apartment buildings within 90 feet of them. He would like to see the developers decrease the buildings to two or three stories and move them further from the property line.

Ms. Jill Torrence of 102 Buckingham Drive came forward to speak. Her biggest concern is traffic because they do not feel that the street can absorb 600 additional cars multiple times a day. They had hoped for a compromise that only the senior living homes would be connected to Buckingham Drive. She is afraid she will lose her neighbors across the street and that is the type of emotional toll that these apartments are going to take on the neighborhood.

Mr. Joseph Shalev of 123 Brunswick Drive came forward to speak. He remarked that he loves change but loves change that benefits everyone, particularly the local residents and especially positive change. He is asking them not to approve this rezoning because it will change the neighborhood in a negative way. He will now be looking at a concrete six-foot wall. He bought his house because it was next to R-1 property and he thought it would be developed as single-family homes. If they built the 281 units that can be built by right on the R-4 property, it would leave a bigger buffer between his neighborhood and the multi-family property. He also expressed concern about the additional traffic and the speeding that is already going on in the neighborhood. This development will only make that problem worse.

Ms. Dreama Fritz of 113 Kenbridge Place asked the Planning Commission to deny this proposal because of the proposed access through Buckingham Drive. She feels that the stubs on Brunswick and Buckingham Drives left there 40 years ago were meant for single-family homes because the area was zoned R-1. These roads were never meant to carry the traffic that will be generated by the apartments and the retail space proposed for this development. She would also like to see the four-story apartments located on the western side of the development near the Knollwood townhomes. She feels that other

developments in the area that are adjacent to single-family neighborhoods have single-family homes or one-story buildings nearest to the single-family neighborhoods in most cases. She would like them to take a little time and get this right.

Ms. Sharon Teufel of 111 Hunterdale Drive came forward to speak. She noted that Mr. Tam has been very positive and had a lot wonderful things to contribute to this neighborhood and to Lynchburg. He expressed that he wants to be a good neighbor. They never got that when Cornerstone was built. She pointed out that the notice sent to them is for property owners within 200 feet. If they think that people within 200 feet will be affected, then obviously 50 to 75 feet is not enough of a buffer. She would like to see them lower the level of the apartments by one floor so that at least she can have her view of the mountains and the beautiful sunsets that Lynchburg offers. Ms. Teufel also pointed out that there is a stub road that is not shown on this plan because it is part of Phase III of this development. That access road should be enough additional access for this development and the access to Buckingham Drive is not necessary. It is a neighborhood and not a thoroughfare and reminded them that there are no sidewalks in Windsor Hills so the safety of pedestrians is of great concern.

Ms. Ruth Boswell of 210 Buckingham Drive came forward to speak. She is concerned about safety and mentioned that her son was almost hit by a car and their pet was struck and killed. Buckingham Drive is already dangerous and does not need any additional traffic. She is not opposed to the development but is opposed to the connection to Buckingham Drive.

Mr. Tam came up to give a rebuttal and address the concerns expressed by the neighbors. He mentioned that he met with many of the people present tonight as well as Chair Swienton early on in the planning phase. He is very aware that connectivity is a sensitive subject. He noted that if the property is developed by right, the connections would go in to Buckingham Drive and Brunswick Drive and provided a conceptual drawing of where those connections would go in if the properties were developed by right. Listening to the concerns of the neighbors, they moved the connection down the hill on Buckingham Drive rather than coming out on Brunswick Drive.

Addressing the setback issue, he pointed out that by right, the single-family homes would only have to have a fifty foot setback from the adjoining single-family homes. His proposed buffer is 90 feet. By right, the single-family homes could be as tall as 40 feet. His buildings will be 40 feet tall and there will be three of them, as opposed to possibly eight single-family homes.

Mr. Tam pointed out that they have tried to funnel the traffic to the roundabout by installing a center drive through the complex. This was put in after listening to the neighbor's concerns to encourage as much of the traffic as possible to use the roundabout and four-lane road that exits to Timberlake Road rather than using Buckingham Drive. The connectivity to Buckingham Drive was put in to satisfy the City's policy regarding connectivity outlined in the *Comprehensive Plan*. Mr. Tam also pointed out that traffic and speeding on Buckingham and Brunswick Drives is a condition that exists already. The idea of speed humps might be a good idea as he does not want the residents of his development getting hurt either. Mr. Tam feels that he is offering them a good project. It might not be an ideal project but something is going to get built here and he believes he is offering the City a good project.

Mr. Billingsly reiterated that the connectivity to Buckingham Drive is their main opposition. He said Mr. Tam has been very frank and stated that the connection is something being pushed on him by the City because it is a City policy. He appreciates Mr. Tam meeting with all of them and feels that he is doing all he can as a developer. However, they believe that the connection to Buckingham Drive will neither devalue nor increase the value of this development but will devalue the Windsor Hills neighborhood. People have already discovered it as a cut through to Leesville Road and if people can use Mr. Tam's development as a cut through, they will use it and it will increase traffic on Buckingham Drive further.

Mr. Shalev came back for a rebuttal. He pointed out that the character of the developer is not at question. Mr. Tam has proven himself to be of good character. Mr. Shalev liked Mr. Tam's drawing of the single-family homes next to his property with a connection to Brunswick Drive. He would have no problem with that scenario but the petitioner is asking for a rezoning. Mr. Shalev pointed out that the connectivity piece in the *Comprehensive Plan* talks about doing so while taking safety into consideration as well as preserving the integrity and character of existing neighborhoods. If this connection is put in, it will ruin their safety, which is already in jeopardy, and destroy the character of the neighborhood. Mr. Shalev does not think that someone sitting in an office in downtown Lynchburg should be making policy decisions about something that happens in their neighborhood.

At this point, Mr. Henry noted that it is not typical to have individual citizens come back for rebuttal. Normally, just a neighborhood representative comes back for a rebuttal. Commissioner Light thought this was an important decision and he does not have any problem hearing from the citizens again. Vice-Chair Johnston asked Mr. Henry if there is anything preventing them from listening to the citizens further. He said there is not. It is normally in the interest of not hearing repetitive comments that the policy is in place. Vice-Chair asked the citizens to try not to repeat comments already voiced and then asked if there was anyone else who wished to give rebuttal comments.

Ms. Teufel came back and implored them not to make the connection to Buckingham Drive. She would like to know who on the City staff said that the connection is a requirement.

Ms. Hagendorf remarked that she moved from New York to get away from apartment buildings. She did not like the crime she saw taking place in the apartments there and she came to Virginia and moved to Windsor Hills because it was a nice neighborhood. She likes the wildlife that she sees come into her yard and does not want to see this land abused by putting up apartments.

Mr. Hedrick asked if there could be an additional proffer offered by the petitioner that these apartments could never become government subsidized housing. He is not sure of the legality of that type of proffer. He knows that Mr. Tam hopes to attract tenants from the major employers in Lynchburg and would like to offer some type of incentive for them; however, Mr. Hedrick is concerned with what might happen to the neighborhood in the future if these apartments became government subsidized housing.

There were no other citizens who wished to speak with rebuttal comments and Vice-Chair Johnston closed the public hearing portion of the petition.

Commissioner Light noted that he wished to make full disclosure that he visited the site at Mr. Bruce Johnson and Mr. Ed Tam's invitation. He asked them not to try and persuade him in his decision but rather to be available to answer any of Commissioner Light's questions. Commissioner Light also noted that he appreciates the way the public has voiced their concerns today. They have done so in a very respectful and thoughtful manner and Commissioner Light recognizes that this is a very emotional issue.

Commissioner Light has questions for the City staff about connectivity. He noted that connectivity is talked about in the *Comprehensive Plan*; however, he believes it is a work in progress and a very sensitive issue to be considered. Commissioner Light asked Mr. DeBerry for some real numbers from the traffic study because many numbers have been thrown out tonight. Mr. DeBerry noted that there are real numbers for the number of trips that this development will create; however, there has not been an analysis done for the number of trips that might use Buckingham Drive as a cut through. Mr. DeBerry believes that the petitioner has indicated that he is willing to study that scenario.

Mr. DeBerry stated that the number of vehicles that currently use the intersection of Timberlake Road and Dreaming Creek Drive at the peak hour is roughly 200 vehicles. It is estimated that if all the traffic from this development uses that intersection at peak hour times, the traffic on Buckingham Drive would

roughly double at peak hours. Commissioner Light asked if there is any way to segment out the demographics of what that traffic pattern might be using the connector. Mr. DeBerry said the developer is willing to run that model but it has not been done yet. Obviously, not all the traffic will use that intersection at peak hour traffic, probably not even half, but that analysis has not been run through a computer at this point.

Commissioner Coleman is also impressed with the citizen turnout tonight and how they have expressed themselves. Commissioner Coleman asked City staff to address the paragraph in the report dealing with the Fire and Police having no comments of concern with this development. Ms. Nygaard noted that each of these departments has a representative on the Technical Review Committee. They did not have any significant comments dealing with the rezoning and the typical issues they raise will be handled through the site plan review process. Commissioner Coleman believes that City staff does a tremendous job. He does not think that either of those departments would put these citizens' wellbeing at risk. With regard to connectivity, Commissioner Coleman may not be able to fully articulate why that is necessary; however, he does not think that anyone on City staff just does something to make people's lives difficult. He would like to see them be able to reach some kind of solution tonight where everyone can leave happy.

Commissioner Marion is concerned with several items on the site plan. She does not like how people on the right side of the development have to drive through several parking lots to get out. She would like to see some streets rather than having them drive through parking lots. Mr. Tam said there was no other way to design it because of Dreaming Creek and the floodplain area. Commissioner Marion also did not see much pedestrian access in this area either and it seems that they will have to walk through the parking lot to get to the pool. Mr. Beasley said it is not possible to show everything on this concept plan because of the scale but there are many pedestrian walkways planned throughout the development.

Commissioner Marion asked for clarification as to what the large blue area is on the colored concept plan. Mr. Beasley said it the central area for collecting stormwater. There are rain gardens and bioretention facilities and a wetland area all located in this area. Commissioner Marion asked if this is a common area for people to use. Mr. Tam said it is mainly a stormwater feature, a natural grassy area. People are certainly welcome to use it for recreational purposes but will probably not want to do so just after a rain.

Commissioner Marion does not like that there is not any transition from the mature neighborhood of Windsor Hills to the four-story apartment buildings adjacent to the single-family homes. She would like to see them buffer their road with a row of houses. Commissioner Marion understands that it has been on the *FLUM* as High Density Residential since at least 2002. She can't fight the high density on those grounds; however, she wishes there was more of a transition between the single-family homes and the apartments. Mr. Tam pointed out that if there were single-family homes next to them, there could be several windows and patios facing the existing single-family homes. His rendering shows only very small windows up high so the development can be as unobtrusive as possible in terms of people being able to see into other people's homes. Their proposed buffer is ninety feet and the setback for single-family homes would be fifty feet.

With regard to the connection to Buckingham Drive, he thinks that is a policy decision for City Council. He believes he has put forth a good development. At least he is offering many proffers rather than offering them a lot of unknowns that might come with another proposed development. As everyone has said tonight, we all know that this property is going to be developed at some point.

Commissioner Marion asked for clarification on the three to four story buildings. Mr. Tam said that is due to the slope of topography. Where the topography slopes down, the elevation will be four stories. At the higher elevation, it will be three stories.

Mr. Tam felt he could assure them that this development will never be Section 8 housing. This company does not spend this kind of money and then try to get twenty cents on the dollar. They are a very, very successful company.

Commissioner Coleman said he can appreciate what has been said about the Section 8 piece. He understands the concerns and needs of the neighbors here tonight but would like to point out that we need to support the needs of all people who live here in Lynchburg. Commissioner Coleman asked Mr. Tam if he is amenable to addressing Commissioner Marion's concerns about there not being a good transition from the single-family homes to the apartments. Mr. Tam said it is not feasible for them to do that.

Commissioner Coleman made a motion to waive the 21-day submittal requirement for proffers. Commissioner Light seconded the motion and it passed by the following vote:

AYES:	Coleman, Johnson, Light, Marion and Perault	5
NOES:		0
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Vice-Chair Johnston thinks it is important to work with Mr. Tam to amend his concept to protect the citizens from a more impactful development. She feels that Mr. Tam has been very clear that a by-right development could be denser and could have a by-right connection through Brunswick Drive. She feels connectivity is important because it takes some of the pressure off our major arteries and it is good for the health of our City. However, the spirit of the guiding principle is to enhance pedestrian connection between services and attractions. There is a quote in the *Comprehensive Plan* saying that "Efforts to improve access to bike trails and sidewalks should be considered with every new development plan creating safe connections between neighborhoods and facilities." Vice-Chair Johnston does not see an effort to create pedestrian connectivity. There is an effort to ease the vehicular traffic flow; however, the citizens here tonight will reap no benefit from the vehicular connection. There are no sidewalks or bike lanes to give them access to the commercial piece fronting Timberlake Road. She would like Mr. Tam to talk about that a little bit and guide them through that issue.

Mr. Tam pointed out that there is an 18-foot multi-modal path on the Buckingham Drive side of the development. This can be accessed by all types of vehicles. They were even thinking about electric vehicles that may be used by the seniors living in Phase III of this project but it can be used by the Windsor Hills residents to access the commercial aspect of this development as well. Mr. Tam also pointed out that there will be a seating wall between the path and the vegetative buffer where people can sit down and rest and talk. There will also be sidewalks in the commercial portion of the development. Mr. Tam pointed out other sidewalks in the development and noted that they can be difficult to see on this scale of a drawing. There can also potentially be some walking areas in the central stormwater area to connect the western half with the eastern half of the project. Mr. Tam noted that City staff is very diligent about requesting pedestrian connectivity with any new development.

Commissioner Light asked for clarification that the pedestrian access will be a part of the development whether or not the vehicular connection is made to Buckingham Drive. He also asked for clarification that Mr. Tam can live with the project either way. Mr. Tam said both of those statements are correct. Vice-Chair Johnston asked for clarification from Ms. Nygaard about connectivity by right to Brunswick Drive. Ms. Nygaard said that he could develop it with single-family homes and if the road to serve that development were greater than 600 feet, he would be required to make the connection to Brunswick Drive.

Mr. Tam commented that he does not want to get a bad reputation because he would like to do more than one development in Lynchburg. He will be coming back before them for Phase III of this project for over age 55 restricted housing and there are other properties that he is interested in developing in Lynchburg. He does not want to be a "one and done" developer.

Commissioner Coleman noted that he is hearing that this developer wants to build a relationship with our City. Commissioner Coleman lives close to this area and it concerns him that someone else might not have the same principles as Mr. Tam. Commissioner Coleman thinks Mr. Tam is doing everything he can do to work with the City as well as the neighbors.

Vice-Chair Johnston asked if there was some way that there could be a barrier placed so that only the residents in the back portion of the development would be able to use Buckingham Drive. The barrier would prevent people from using it as a cut through to the commercial piece in the front of the development. Mr. Tam said he is certainly open to any options that make sense. For instance, Mr. Tam said he is willing to post a sign that the road is for private use only; however, there would be no real way to enforce it. It may deter some of the traffic and he is willing to explore that option as well. Another suggestion was to put up a "fake" guard house so that people think you need a pass to get through the development. He is willing to listen to and entertain any suggestions. Commissioner Marion wondered if they could take off one of the internal access roads to Buckingham Drive so that only the residents in the back of the development would be likely to use it. Mr. Beasley said it is designed that way to meet the fire code requirement for emergency access.

Commissioner Light asked City staff if they could give them some more insight as to the request to have connectivity to Buckingham Drive. He noted that he certainly respects staff's insight and how much time they have spent with the developer helping him iron out this concept plan. Ms. Nygaard noted that as developments occur along Timberlake Road and their only access point is Timberlake Road, it gets more and more congested over time. One small step toward good planning is to have a connection here so that at least a portion of the development starts using another route. It is a City policy for all new developments when there is a stub road available. When a connection can be made, we do ask that the connection is made.

Commissioner Coleman asked for clarification that there is nowhere else where connectivity could occur that would be more pleasing to the neighbors but that would also maintain fire code access and other regulations. Ms. Nygaard said connection would have to be made at either Brunswick Drive or Buckingham Drive. Crossing the creek would be not feasible because of environmental regulations. She does not think the neighborhood would want a connection to Cornerstone at the back and there is already development on the other side. Mr. Tam pointed out that their connection was a different point originally but they listened to the neighbor's concerns and put it at a point that would hopefully be the least impactful to the residents of Windsor Hills. Commissioner Marion asked why there is a stub at the far back right parking lot of the development. Mr. Beasley said that is just for fire truck turnaround purposes.

Commissioner Perault asked for clarification from Ms. Nygaard about all the different motions they need to make tonight. She explained that the proffers are being amended to change the public street originally proffered to a private street and then to include 7912 Timberlake Road because that was not owned by the petitioner at the last rezoning. Then they would be rezoning the other parcels to R-4C. Commissioner Perault asked what would happen to the R-C zoning. Ms. Nygaard said that would remain R-C. Commissioner Perault pointed out that some of the property is designated as Low and Medium Density Residential on the *FLUM.* Ms. Nygaard and Vice-Chair Johnston noted that those properties are not a part of this rezoning petition. They may or may not be a part of Phase III of this development.

Commissioner Coleman made the following motion, which was seconded by Commissioner Marion. It passed by the following vote:

"That the Planning Commission recommends to City Council to rezone approximately three and eight and fifty-nine hundredths (8.59) acres located at 7814, 7816, 7822, 7900, 7904 & 7908 Timberlake Road from B-3C, Community Business District (Conditional) and the property located at 7912 Timberlake Road from R-1, Low Density, Single-Family Residential District to B-3C, Community Business District (Conditional) subject to the following voluntarily submitted proffers:

1. **The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of a new roadway (Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store and the fast food out parcel on the new roadway, and sidewalks and curb & gutter along Timberlake Road and the new roadway. The layout and types of uses shown may change as the site develops. This new roadway shall be a private road.**

2. **The following uses, which are allowed in B-3, are not permitted within the area to be rezoned:**
   - **Adult entertainment businesses**
   - **Funeral homes and undertaking establishments**
   - **Internet café or on-line gambling businesses**
   - **Used tire stores**
   - **Pawn shops**

3. **Noise: Where music or exterior equipment on a commercial site is utilized it shall be restricted per the ordinance to no more than 52 dBa or it shall be disabled between the hours of 10:00pm and 7:00am.**

4. **Lighting: All exterior lighting shall be full cut off type. No lighting source shall be aimed above a parallel line to the horizon. Fixtures that are not amiable types shall be flat lens type installed parallel to the horizon. Site lighting within 40' of a residential property line shall be Type I, II, III or IV distribution, full cutoff fixtures directed to the interior of the commercial or multi-family residential property. Type V distribution, full cutoff fixtures may only be used only 41' or more from any existing residential property line. Further, lighting shall be in accordance with the Lynchburg City Code - Sec. 35.1-43.26. Lighting. Internally illuminated or back lite canopies, shall not be allowed.**

5. **Architecture: The development shall use a master planned material pallet consisting of durable materials including masonry, stucco, architectural block or stone. The predominant material for all buildings shall be regionally selected brick in a color range from hard tan to colonial red. Once selected, the same brick shall be used for all subsequent outparcel buildings, screen walls, etc. The use of pre-finished metal shall be limited to flush panels or standing seam used appropriately in building canopies. Where appropriate, fiber cement lap siding installed with no more than a 4" exposed face shall be allowed for no more than 25% of any wall surface, and shall not be install closer than 30" to the adjacent grade. All building shall have a minimum of a 30" masonry wainscot/water table at the base of all walls, equipment screens, and site walls. All sides of each building shall be finished with the same durable materials. Roof lines shall be set appropriate to each building or building element, with preference given to colonial, pitched roofs for smaller masses and**

parapets with a defined cornice for larger footprints. Rooflines shall receive consistent treatment at all sides of each building. No open roof edges shall be allowed on flat roofs. Rooftop equipment shall be screened by parapets at all side of buildings with flat roofs. Where ground level equipment is used it shall be screened by landscaping or masonry walls.

6. **Site Signage: Signage for the outparcels shown on the Rezoning Plan shall be governed by the Lynchburg City Code [Sec. 35.1-26. Signs], unless further restricted as follows. Commercial site signage shall be limited to monument style signage. Monuments signs shall not exceed 8' in height above the top of the adjacent curb line. Where gas service stations include price message boards, they shall be integrated into the monuments sign and the total sign height may be increased to a maximum of 12'. One free-standing pylon sign shall be used to identify the development.**

AYES:	Coleman, Johnston, Light, Marion and Perault	5
NOES:		0
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Vice-Chair Johnston asked if anyone would like to make a motion to rezone the third part of this petition. Commissioner Light remarked that he would make a friendly motion at the appropriate time to remove the connectivity to Buckingham Drive whenever the motion is made. He does not think the traffic through the connection will be as bad as residents are predicting and understands the need to reduce traffic on Timberlake Road. However, he does not think it is fair to the residents of Windsor Hills to pay the price for it. Ms. Nygaard noted that it was a recommendation of staff to do further study to see how many people would likely use that connection as a route. Vice-Chair Johnston asked if the commission can entertain postponing its vote until its next meeting pending this traffic study. Ms. Nygaard said they could do that or Mr. Tam could amend his proffers and agree to do that study before the City Council meeting. Commissioner Coleman asked Mr. Tam if there was any time sensitivity to this request. Mr. Tam indicated that it would affect him if the vote was delayed until the next meeting because there is a "building season" for doing site work. Mr. Tam said they can do that traffic analysis before the July City Council meeting. Ms. Nygaard clarified that the connectivity is a City policy/recommendation rather than a City code that can be enforced. It would be a requirement under the City Code if it were developed as a single-family home development. Mr. Tam clarified that he is willing to do the additional traffic study analysis and looking at the feasibility of doing any further improvements that the study reveals.

Commissioner Light noted that no matter what the traffic study shows, it cannot be tightened down to show how many trips will be generated at peak hour. Mr. DeBerry noted that no matter what the traffic impact study shows, you will not be able to say that it is a harmful number because Buckingham Drive is nowhere near capacity at this point. Unfortunately, we cannot quantify safety with respect to the number of vehicles on the road. Mr. DeBerry said there have been five reported crashes since 2008. He is not getting the sense that there have been intersection issues. The capacity of a rural road is around 1,000 trips in the peak hour, so you are not approaching the capacity from an engineering perspective.

Commissioner Perault commented that the loss of the R-1 zoning is going to create a major shift in the neighborhood both visually and in every other aspect. Ms. Nygaard noted that if proffer number eight is removed, that the Planning Division would recommend denial of the rezoning petition because it would not be consistent with the *Comprehensive Plan* meant to be the City's guiding principle.

Commissioner Light made a motion to approve the rezoning with the removal of proffer of number eight. There was no second and the motion died.

Commissioner Coleman pointed out that they spent a lot of time on the *Comprehensive Plan* and he has been told that it is to be their guiding document. Here is an opportunity for them to follow it, so he would like to make a motion for the third part of the rezoning. Vice-Chair Johnston asked for additional comments. Commissioner Marion asked if the additional traffic study is part of the original proffers. Ms. Nygaard said it is not. We can ask for the submission of a proffer but we cannot require it. Mr. Tam asked for clarification that the proffer is to do further traffic analysis to determine the number of trips that would use Buckingham Drive to connect to Leesville Road. Commissioner Light asked what that is going show. Ms. Nygaard said it would show the actual effect to the neighborhood because right now there is just speculation about the number of vehicles that would use Buckingham Drive. Mr. Tam indicated that he would like City Council to have the information before making their decision. There was a recess while Mr. Tam wrote the following additional proffer: "The petitioner will engage a traffic consultant to modify the regional model to determine the traffic site distribution of the development's connection to Buckingham Drive."

Commissioner Light understands staff's reasons for wanting the connection and also appreciates the citizens' concerns. He will be interested to see the results of the traffic study but is not sure it will change anyone's position at the end of the day.

Vice-Chair Johnston commented that she appreciates all the neighbors showing up and expressing their concerns. She appreciates their desire to protect their neighborhood and the spirit of their community. It is one of the things that makes Lynchburg a great place. She will be voting for the petition because another developer could develop this property by right and not take as much care with it as Mr. Tam. It could have even more of an impact on this neighborhood than this development. She thinks they have reached the best compromise possible and she appreciates the additional proffer offered by Mr. Tam.

Commissioner Coleman feels that Mr. Tam has been very candid and will do what he has said. He appreciates everyone coming out to the meeting and feels they have labored hard to address their concerns.

Commissioner Coleman made the following motion, which was seconded by Commissioner Marion. It passed by the following vote:

"That the Planning Commission recommends to City Council to rezone approximately nineteen and eighty-eight hundredths (19.88) acres located at 7824, 7906 and 8022 Timberlake Road and 109 and 111 Buckingham Drive from R-1, Low Density, Single-Family Residential District and R-4, Medium-High Density, Multi-Family Residential District to R-4, Medium-High Density, Multi-Family Residential District (Conditional) subject to the following voluntarily submitted proffers:

1. **No structure other than "Single Family Resident" shall be allowed in the R-4 zoned Moody's parcels (PID # 25410004 & PID # 25410005).**

2. **A six feet high decorative screen wall shall be built at the property line along the entire length of the private road abutting the adjacent R-1 zoned residents starting at northern most property line at 123 Brunswick Drive going southerly to 109 Buckingham Drive (As shown on the site plan). A sample of such wall is attached.**

3. **A fifteen feet wide multi-modal/neighborhood electric vehicle (NEV) lane and three feet wide grass strip shall be provided along the private road (As shown on the site plan).**

4. **Traffic calming devices such as chicanes shall be provided along a portion of the private road to better control vehicular speed. (As shown on the site plan).**

5. **Private road entrance at Timberlake Road with future connection to Buckingham Drive shall be opened and used by the general public.**

6. **The attached building elevation to be used for Building # 2 and Building # 3 to minimize the numbers of windows and patios facing east to the adjacent neighbors.**

7. **The project shall be constructed in substantial compliance with the submitted Rezoning Plan with regard to the construction of the new roadway system (new Hahn Road), the two right-in/right-out entrance on Timberlake Road, the roundabout, the entrance to the fuel/convenience store on the new roadway, and sidewalks and curb and gutter along Timberlake Road and the new roadway system. The layout and types of uses shown may change as the site develops. This roadway system shall be a private road and accessible for use by the general public.**

8. **Connectivity – Within eighteen months after the issuance of the first certificate of occupancy for the multi-family project or prior to the issuance of the certificate of occupancy for the Phase III "age-restricted senior cottage homes" the developer shall complete the connection of the private road to Buckingham Drive as shown in the site plan. The developer shall align the road as far south as possible north of Dreaming Creek subject to FEMA and other engineering constrain. The developer shall be bonded for such improvement prior to the issuance of the certificate of occupancy for the multi-family development. See site plan for alternatives to such connectivity.**

9. **Agrees to vacate connectivity from Brunswick Road and vacate the street to the two abutting property owners.**

10. **Creation/Dedication of the 'Hahn's Spring Greenway' - The subtract here-in referred to as the Hahn's Spring Greenway is show on the site plan as a central, approximately 3 acre, corridor within the site to be dedicated as a common area within which a multitude of environmental goals shall be met. These goals include:**

    - **Environmentally-sensitive landscaping using native trees and shrubs to meet site goals of providing a multi-functional environmental buffer (e.g. water, air, sound, and light), passive recreation (e.g. bird watching and trail), and naturally vegetated areas for conservation of native flora and fauna**
    - **community gardens,**
    - **bio-retention storm water treatment, and**
    - **the safeguarding of wetlands and streams within the corridor.**

    These, in their entirety, shall be designed to enhance the water quality of storm water runoff from the development prior those waters entering wetlands or streams that contribute to Dreaming Creek. Low Impact Development (LID) storm water practices such as vegetated swales; rain gardens and other bio-retention practices shall only be used in Hahn's Spring Greenway/Corridor. The Hahn's Spring Greenway starts at the historic 'Hahn's springhead' located approximately 120' northeast of the exiting old farm irrigation pond (above a tract of natural wetlands) and extends some 700 ' to the SE where it merges with the 'RC' zoning corridor along Dreaming Creek. The integrated & (biologically-enhanced) storm water management practices to be installed within this open space shall serve to minimize any detrimental impacts of

the development to Dreaming Creek proper. It shall preserve the historical Hahn's family spring, safeguard water resources, and provide a central focal green and open space for inclusion of naturally vegetated areas, community gardens and areas for passive recreation. The exact manner in which existing open waters, wetlands, and streams are integrated into the final 'Hahn's Spring Greenway' is dependent on site conditions that will be uncovered once site remediation is under way and geotechnical data can be gathered (e.g. at the bottom of the existing farm pond, along existing impoundment structure)."

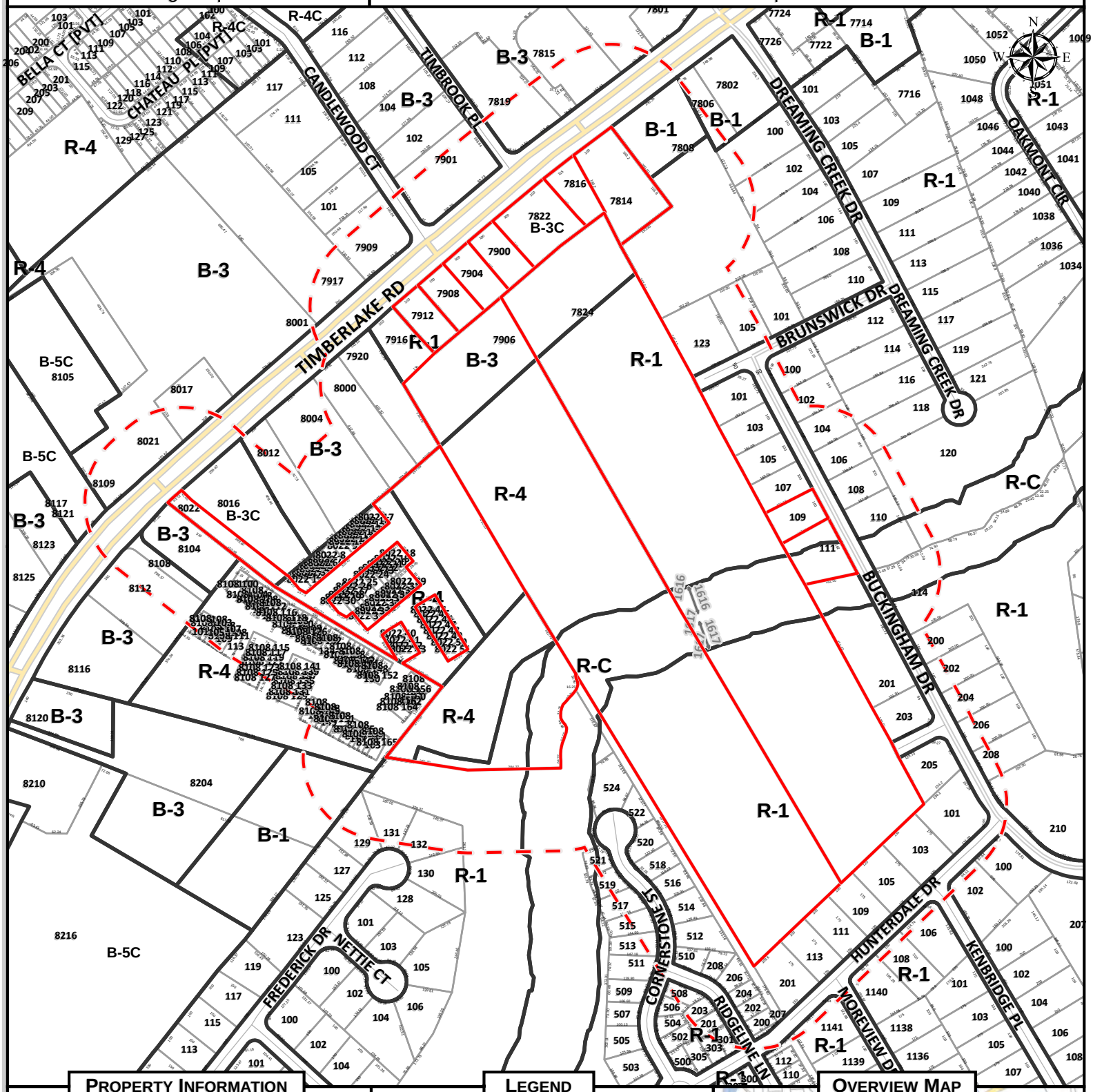
AYES:	Coleman, Johnston and Marion	3
NOES:	Light and Perault	2
ABSTENTIONS:		0
ABSENT:	Swienton	1
VACANCIES:		1

Zoning Map

VILLAGE AT DREAMING CREEK PHASE II

Zoning Request

Belleau Wood Development LLC



Property Information

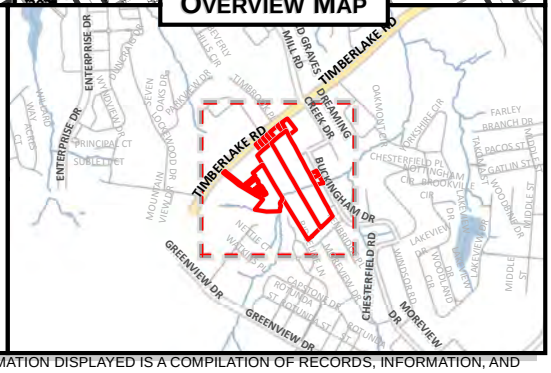
Parcel ID	Address
25413020	7908 TIMBERLAKE RD
25413019	7904 TIMBERLAKE RD
25413018	7900 TIMBERLAKE RD
25413017	7822 TIMBERLAKE RD
25413016	7816 TIMBERLAKE RD
25413015	7814 TIMBERLAKE RD
25413031	7824 TIMBERLAKE RD
25413021	7912 TIMBERLAKE RD
25413023	7906 TIMBERLAKE RD
25418052	8022 TIMBERLAKE RD
25410005	109 BUCKINGHAM DR

Legend

- Subject Property
- 250' Buffer
- Zoning Boundary

Map Scale: 1 " to 400 ' **Date Printed:** 5/30/2014

Overview Map



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Parcel ID	Address	Owner
25414001	7920 TIMBERLAKE RD	ADAMS, ELIZABETH A &
25417006	8108 TIMBERLAKE RD 110	AHMAD, NAEEM & SAIMA N
25418036	8022 TIMBERLAKE RD 36	ALFORD ENTERPRISES LLC
25418037	8022 TIMBERLAKE RD 37	ALFORD ENTERPRISES LLC
25418038	8022 TIMBERLAKE RD 38	ALFORD ENTERPRISES LLC
25417045	8108 TIMBERLAKE RD 143	AMAR, MOHAMMAD
25417001	8108 TIMBERLAKE RD 100	ANDERSON, JEFFREY A
25414004	8012 TIMBERLAKE RD	ARRELLANO, ROBERT & AGUIRRE, JESUS &
25408010	104 BUCKINGHAM DR	ASBURY, LEE B
25413021	7912 TIMBERLAKE RD	ATKINS, SUSAN P
25413006	100 DREAMING CREEK DR	AXIOTIS, ALEXANDER LIFE ESTATE
26315518	511 CORNERSTONE ST	AYERS, WILLIAM L
25408004	202 BUCKINGHAM DR	BAER, CHARLES E & SARA M
25418030	8022 TIMBERLAKE RD 30	BARTELL, LOIS A
25418040	8022 TIMBERLAKE RD 40	BARTELL, LOIS A
25418029	8022 TIMBERLAKE RD 29	BARTELL, LOIS A
25418028	8022 TIMBERLAKE RD 28	BARTELL, LOIS A
25418027	8022 TIMBERLAKE RD 27	BARTELL, LOIS A
25418026	8022 TIMBERLAKE RD 26	BARTELL, LOIS A
25418025	8022 TIMBERLAKE RD 25	BARTELL, LOIS A
25418009	8022 TIMBERLAKE RD 9	BARTELL, LOIS A
25418014	8022 TIMBERLAKE RD 14	BARTELL, LOIS A
25418015	8022 TIMBERLAKE RD 15	BARTELL, LOIS A
25418011	8022 TIMBERLAKE RD 11	BARTELL, THOMAS J
25409022	120 DREAMING CREEK DR	BEASLEY, EVELYN J
25417044	8108 TIMBERLAKE RD 145	BEGUM, AKBARI
26315531	508 CORNERSTONE ST	BELL, STEPHEN J & BRIANNE L
26301008	210 BUCKINGHAM DR	BOSWELL, RUTH B
25416011	7901 TIMBERLAKE RD	BRANCH BANKING & TRUST CO OF VA
25417010	8108 TIMBERLAKE RD 118	BRAXTON, SHANTA T
26306002	113 HUNTERDALE DR	CAGLE, LARRY J & JOYCE A
25408006	114 BUCKINGHAM DR	CARTER BANK & TRUST
25418017	8022 TIMBERLAKE RD 17	CASHWELL, LARHONDA D
25417011	8108 TIMBERLAKE RD 120	CHEN, WU MING & CHEUNG, CHOI WAN
25417005	8108 TIMBERLAKE RD 108	CHILDRESS, WILTON B
26306008	101 HUNTERDALE DR	CLARK, DAREL R & WENDI H
25414009	8104 TIMBERLAKE RD	CLASS ENTERPRISES LLC
25417066	8108 TIMBERLAKE RD 101	CLEMENTS, WAYNE M & JOAN M
25417046	8108 TIMBERLAKE RD 141	COLEMAN, NORMAN D
25418046	8022 TIMBERLAKE RD 46	CONNOR, GLORIA J
26315547	207 HUNTERDALE DR	CORNERSTONE PROPERTY OWNERS ASSO
26315016	109 CUPOLA ST	CORNERSTONE PROPERTY OWNERS ASSO
26315444	101 CAPSTONE DR	CORNERSTONE PROPERTY OWNERS ASSO
25418045	8022 TIMBERLAKE RD 45	COTUNA, ANDREEA V
25418049	8022 TIMBERLAKE RD 49	COTUNA, ANDREEA V

25413020	7908 TIMBERLAKE RD	COWINS, JOHN P SR &
25409023	118 DREAMING CREEK DR	CREWS, GLADYS R
25414010	8112 TIMBERLAKE RD	CRIST, FRANK C JR
25417049	8108 TIMBERLAKE RD 135	DALTON, MARK A
25418041	8022 TIMBERLAKE RD 41	DAVENPORT, ETHAN D
25408001	208 BUCKINGHAM DR	DAVIS, JEFFREY M & RACHEL T
25417022	8108 TIMBERLAKE RD 142	DAVISAR LLC
26304002	108 HUNTERDALE DR	DESAEGHER, MARY J TRS
26304003	106 HUNTERDALE DR	DESAEGHER, PAUL G & MARY J CO-TRS
25417013	8108 TIMBERLAKE RD 124	DIGIOVANNI, REBECCA L
25418035	8022 TIMBERLAKE RD 35	DITTMEIER, RALPH J & ANGELIA J
25417028	8108 TIMBERLAKE RD 154	DUNN, SCOTT
25418018	8022 TIMBERLAKE RD 18	ECP LLC
25418039	8022 TIMBERLAKE RD 39	EDMONDSON, BLAKE A
25417024	8108 TIMBERLAKE RD 146	EFFORD, BRENDA G
25418021	8022 TIMBERLAKE RD 21	EGEL, KENNETH L & PEGGY L
25418020	8022 TIMBERLAKE RD 20	EGEL, KENNETH L & PEGGY L
25410006	107 BUCKINGHAM DR	ELMER, STANLEY W & CHRISTINE E
25408003	204 BUCKINGHAM DR	ETZ, ROBERT A & PATRICIA J
25413009	7808 TIMBERLAKE RD	FAITH ALLIANCE CHURCH
25413010	105 BRUNSWICK DR	FAITH ALLIANCE CHURCH
25418043	8022 TIMBERLAKE RD 43	FALWELL, TYLER
26306006	103 HUNTERDALE DR	FISHEL, JAMES A & BRENDA D
25417040	8108 TIMBERLAKE RD 153	FORMULA PROPERTIES LLC
25417025	8108 TIMBERLAKE RD 148	FORMULA PROPERTIES LLC
25417055	8108 TIMBERLAKE RD 119	FORMULA PROPERTIES LLC
25417063	8108 TIMBERLAKE RD 107	FORMULA PROPERTIES LLC
26313006	8204 TIMBERLAKE RD	FOUR AMIGOS INC
25417009	8108 TIMBERLAKE RD 116	FRANCIS, JAMES
25417041	8108 TIMBERLAKE RD 151	FRANKLIN, EDGAR M III
25417035	8108 TIMBERLAKE RD 163	G & J PROPERTIES INC
25417038	8108 TIMBERLAKE RD 157	G & J PROPERTIES INC
25417042	8108 TIMBERLAKE RD 149	G & J PROPERTIES INC
25417030	8108 TIMBERLAKE RD 158	G & J PROPERTIES INC
25417051	8108 TIMBERLAKE RD 131	G & J PROPERTIES INC
25417050	8108 TIMBERLAKE RD 133	G & J PROPERTIES INC
25417047	8108 TIMBERLAKE RD 139	G & J PROPERTIES INC
25417057	8108 TIMBERLAKE RD 123	G & J PROPERTIES INC
25417026	8108 TIMBERLAKE RD 150	G & J PROPERTIES INC
25417054	8108 TIMBERLAKE RD 117	G & J PROPERTIES INC
25417020	8108 TIMBERLAKE RD 138	G & J PROPERTIES INC
25417016	8108 TIMBERLAKE RD 130	G & J PROPERTIES INC
25417019	8108 TIMBERLAKE RD 136	GIGGETTS, KRISTI F
25418034	8022 TIMBERLAKE RD 34	GILBERT, JEREMY P
25413005	102 DREAMING CREEK DR	GILLISPIE, ROBERT E
25418047	8022 TIMBERLAKE RD 47	GLENN, CHARLES S III & KELLY M

25418002	8022 TIMBERLAKE RD 2	GLENN, CHARLES S III & KELLY M
25412007	7819 TIMBERLAKE RD	GOBO PROPERTIES LLC
25417067	8108 TIMBERLAKE RD	GOLDEN POND HOMEOWNERS ASSOCIATION
25417027	8108 TIMBERLAKE RD 152	GRAVES, SCOTT M
26315423	132 FREDERICK DR	GREENVIEW ESTATES DEVELOPMENT LLC
26315421	129 FREDERICK DR	GREENVIEW ESTATES DEVELOPMENT LLC
26315422	131 FREDERICK DR	GREENVIEW ESTATES DEVELOPMENT LLC
25417065	8108 TIMBERLAKE RD 103	HACKWORTH, ARON B & BRADFORD C
25408009	106 BUCKINGHAM DR	HAGENDORF, DELORES H & DAVIS, GLORIA
25413019	7904 TIMBERLAKE RD	HAHN, COURTNEY R
25413023	7906 TIMBERLAKE RD	HAHN, COURTNEY R
25413016	7816 TIMBERLAKE RD	HAHN, KENLEY F
25413015	7814 TIMBERLAKE RD	HAHN, KENLEY F & LUCILLE E
25413017	7822 TIMBERLAKE RD	HAHN, THOMAS H & HELEN R
25413031	7824 TIMBERLAKE RD	HAHN, THOMAS H & HELEN R
25413018	7900 TIMBERLAKE RD	HAHN, VIRGINIA C & HAHN, ALFRED R
25417021	8108 TIMBERLAKE RD 140	HARTLESS, LARRY K
25408008	108 BUCKINGHAM DR	HEDRICK, WILLIAM & WATSON, CHRISTINE
25410007	105 BUCKINGHAM DR	HILLMAN, ELIZABETH P
25417003	8108 TIMBERLAKE RD 104	HO, TUE BA & NGUYEN, HUONG XUAN THI
26315424	130 FREDERICK DR	HOGAN, TERRY W & ALLISON W
25414002	8000 TIMBERLAKE RD	HOOPER, DAVID L & HOOPER, TONY L
25410001	203 BUCKINGHAM DR	HUDSON, SIMONA G
25413004	104 DREAMING CREEK DR	IRBY, BRUCE E
25418001	8022 TIMBERLAKE RD 1	JACKS, GEORGE M & JACKS, NORMA A &
26315530	506 CORNERSTONE ST	JBO LLC
26315540	512 CORNERSTONE ST	JBO LLC
26315522	519 CORNERSTONE ST	JBO LLC
26315542	516 CORNERSTONE ST	JBO LLC
26315523	521 CORNERSTONE ST	JBO LLC
26315543	518 CORNERSTONE ST	JBO LLC
26315544	520 CORNERSTONE ST	JBO LLC
26315545	522 CORNERSTONE ST	JBO LLC
25418024	8022 TIMBERLAKE RD 24	JOHNSTON, DINA M
25417018	8108 TIMBERLAKE RD 134	JONES, JOHN E
25408012	100 BUCKINGHAM DR	JONES, SHEILA D
25417058	8108 TIMBERLAKE RD 125	JRF RENTALS LLC
25418031	8022 TIMBERLAKE RD 31	KLOUS, KEVIN J
25418052	8022 TIMBERLAKE RD	KNOLLWOOD TOWNHOMES PROPERTY
25408002	206 BUCKINGHAM DR	KRANTZ, RUSSELL A SR & JEAN P
25412003	7805 TIMBERLAKE RD	KROGER LIMITED PARTNERSHIP I
26305025	1141 MOREVIEW DR	LARIVIERE, DENNIS C & JUDI M
25417031	8108 TIMBERLAKE RD 160	LAVILLA DA TOTO INC
25417032	8108 TIMBERLAKE RD 162	LEIGHTON, ROBIN L
26315539	510 CORNERSTONE ST	LEWIS, MATTHEW R
25418048	8022 TIMBERLAKE RD 48	LIEB, NATHAN A

25418019	8022 TIMBERLAKE RD 19	LIU, YAO
26315520	515 CORNERSTONE ST	LONG, SCOTT N
25417029	8108 TIMBERLAKE RD 156	MACK, PHILLIP J JR
26315525	303 HUNTERDALE DR	MADDOX & SON CONSTRUCTION INC
26315524	301 HUNTERDALE DR	MADDOX & SON CONSTRUCTION INC
26315533	201 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315534	200 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315535	202 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315532	203 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315536	204 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315537	206 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315538	208 RIDGELINE LN	MADDOX & SON CONSTRUCTION INC
26315541	514 CORNERSTONE ST	MANN, BRADLEY L JR & KELLY D
25417064	8108 TIMBERLAKE RD 105	MATERNICK, GARY C & CARLA R
25417004	8108 TIMBERLAKE RD 106	MAYER, SAMUEL W & MAYER, AIMEE A
26306009	205 BUCKINGHAM DR	MAYNARD, HERBERT D & CAROLE T CO-TRS
25417061	8108 TIMBERLAKE RD 111	MCKINNEY, JONATHAN S
25418023	8022 TIMBERLAKE RD 23	MCLEAN, MATTHEW D
25417014	8108 TIMBERLAKE RD 126	MEADOWS, WANDA L
25410002	201 BUCKINGHAM DR	MILES, MICHAEL S & PAMELA O
25408007	110 BUCKINGHAM DR	MILLER, WILLIAM C & CAROL S
25417043	8108 TIMBERLAKE RD 147	MILLNER, CHRISTOPHER G & MELISSA S
25417023	8108 TIMBERLAKE RD 144	MITCHELL, EVELYN F
25410004	111 BUCKINGHAM DR	MOODY, STANLEY J & EVELYN M
25410005	109 BUCKINGHAM DR	MOODY, STANLEY J & EVELYN M
25413022	7916 TIMBERLAKE RD	MOREY-HINES, ALEX D
26304019	102 HUNTERDALE DR	MORRIS, RAYMOND J & VIRGINIA H &
25417060	8108 TIMBERLAKE RD 113	MURPHY, DANIEL G & SUSAN M
25418051	8022 TIMBERLAKE RD 51	NAREA, EDWARD P & HANAKO
25417048	8108 TIMBERLAKE RD 137	NEW DAY INVESTMENTS INC
26306004	109 HUNTERDALE DR	NILLES, MICHAEL J & ANNE C
26304001	1140 MOREVIEW DR	PARIKH, PURVI N & MCBRIDE, WALTER A
25418012	8022 TIMBERLAKE RD 12	PATTERSON, KENNETH D JR
25418032	8022 TIMBERLAKE RD 32	PIEDMONT SELECT PROPERTIES LLC
25418033	8022 TIMBERLAKE RD 33	PIEDMONT SELECT PROPERTIES LLC
25418003	8022 TIMBERLAKE RD 3	PIEDMONT SELECT PROPERTIES LLC
25418004	8022 TIMBERLAKE RD 4	PIEDMONT SELECT PROPERTIES LLC
25418005	8022 TIMBERLAKE RD 5	PIEDMONT SELECT PROPERTIES LLC
25418006	8022 TIMBERLAKE RD 6	PIEDMONT SELECT PROPERTIES LLC
25418007	8022 TIMBERLAKE RD 7	PIEDMONT SELECT PROPERTIES LLC
25418008	8022 TIMBERLAKE RD 8	PIEDMONT SELECT PROPERTIES LLC
25417053	8108 TIMBERLAKE RD 115	PLANICZKA, JOSEPH F & REBECCA M
25418044	8022 TIMBERLAKE RD 44	POULIOT, JOSEPH P & SARAH C
26315519	513 CORNERSTONE ST	PRITCHARD, DANIEL S & TRACEY B
26306001	201 HUNTERDALE DR	PULTZ, JEFFREY S & TERRI L
25418042	8022 TIMBERLAKE RD 42	RADKA, PAUL & RADKA, ERIK

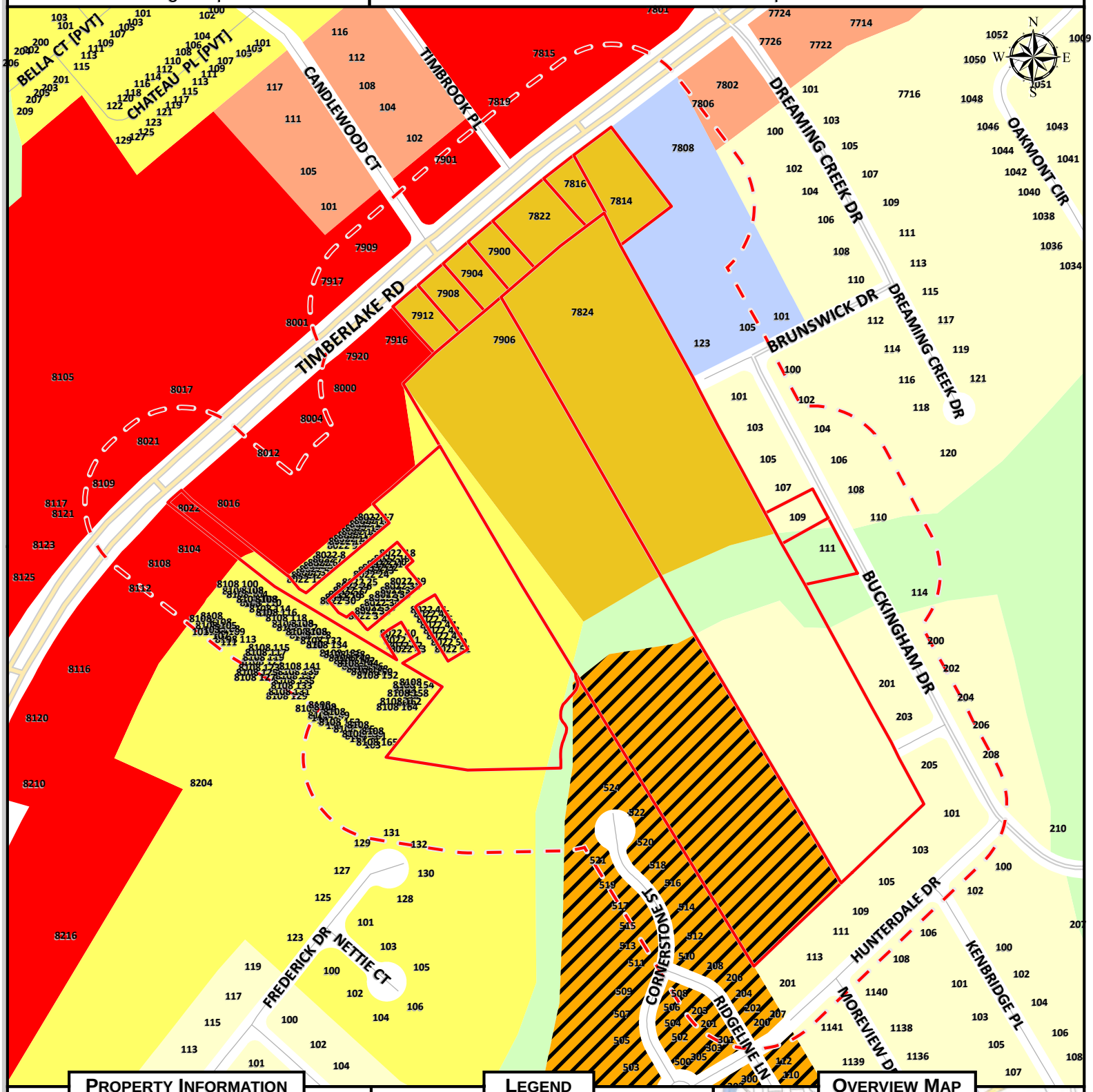
25416001	7909 TIMBERLAKE RD	RAYMOND A JAEGER LTD PC
25417037	8108 TIMBERLAKE RD 159	REVIS, KENNITH M & MARION R
25408005	200 BUCKINGHAM DR	RHYNE, CHRISTINE M
25410008	103 BUCKINGHAM DR	RIGGLEMAN, NEWTON F II & GWEN A
26315546	524 CORNERSTONE ST	SCHNARR, DONN H & SHERRY L
26315521	517 CORNERSTONE ST	SCHOMAKER, MARK & HEINBOCKEL, LAURA&
25413024	123 BRUNSWICK DR	SHALEV, JOSEF N & CHRISTY L
26306005	105 HUNTERDALE DR	SHANK, TIMOTHY L & VIRGINIA M
25415005	8021 TIMBERLAKE RD	SMITH, CLYDE A & JOYCE R TRS &
25417034	8108 TIMBERLAKE RD 165	SORIANO, JORGE & YOUNG, KIMBERLY A
25302002	8117 TIMBERLAKE RD	SOVRAN ACQUISITION LIMITED PARTNERSH
25418013	8022 TIMBERLAKE RD 13	SPENCE, CHARLES P
26304020	100 HUNTERDALE DR	SPRUILL, ELIZABETH M
25417012	8108 TIMBERLAKE RD 122	STEVEN & JENNIFER CLAY LLC
25418010	8022 TIMBERLAKE RD 10	STRAM, MATTHEW F
25417039	8108 TIMBERLAKE RD 155	T & B REAL ESTATE LLC
25417056	8108 TIMBERLAKE RD 121	T & B REAL ESTATE LLC
25417015	8108 TIMBERLAKE RD 128	T & B REAL ESTATE LLC
25417002	8108 TIMBERLAKE RD 102	T & B REAL ESTATE LLC
25418022	8022 TIMBERLAKE RD 22	TAYLOR, MONIQUE L
26306003	111 HUNTERDALE DR	TEUFEL, SHARON R
25417017	8108 TIMBERLAKE RD 132	THORNSBURY, SANDRA S
25408011	102 BUCKINGHAM DR	TORRENCE, RICHARD B & JILL R
25415004	7917 TIMBERLAKE RD	TRADEMARK INVESTMENTS CORP
25417062	8108 TIMBERLAKE RD 109	TURNER, DONALD C
25409024	116 DREAMING CREEK DR	TWIN OAKS ASSET MANAGEMENT CORP INC
25412002	7815 TIMBERLAKE RD	UNITED RESTAURANT GROUP LP
25413008	7806 TIMBERLAKE RD	V C 7806 TIMBERLAKE ROAD LLC
25417007	8108 TIMBERLAKE RD 112	VASSAR, TIFFANY M
25418016	8022 TIMBERLAKE RD 16	VERDON, WILLIAM C II &
25418050	8022 TIMBERLAKE RD 50	WALLACE, STEPHEN I
25414003	8004 TIMBERLAKE RD	WESTWOOD CORPORATION
25417036	8108 TIMBERLAKE RD 161	WHEATON, DAVID P
25415010	8017 TIMBERLAKE RD	WILCOHESS LLC
25410009	101 BUCKINGHAM DR	WILMER, LYNN S & GAIL H
25417008	8108 TIMBERLAKE RD 114	WILSON, CATHERINE L
25417033	8108 TIMBERLAKE RD 164	WOOD, TERRELL D & RITA P
25414005	8016 TIMBERLAKE RD	WOODEN CHAIR INC

FLUM Map

Zoning Request

VILLAGE AT DREAMING CREEK PHASE II

Belleau Wood Development LLC



Property Information

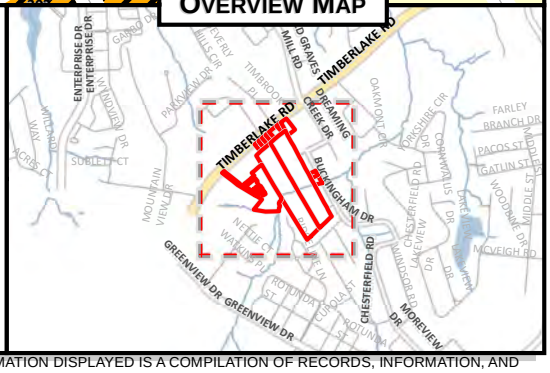
Parcel ID	Address
25413020	7908 TIMBERLAKE RD
25413019	7904 TIMBERLAKE RD
25413018	7900 TIMBERLAKE RD
25413017	7822 TIMBERLAKE RD
25413016	7816 TIMBERLAKE RD
25413015	7814 TIMBERLAKE RD
25413031	7824 TIMBERLAKE RD
25413021	7912 TIMBERLAKE RD
25413023	7906 TIMBERLAKE RD
25418052	8022 TIMBERLAKE RD
25410005	109 BUCKINGHAM DR

Legend

- Local Historic District
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Employment 1
- Employment 2
- Downtown
- Institution
- Public Use
- Public Parks
- Resource Conservation
- Mixed Use

Map Scale: 1 " to 400 ' **Date Printed:** 5/30/2014

Overview Map



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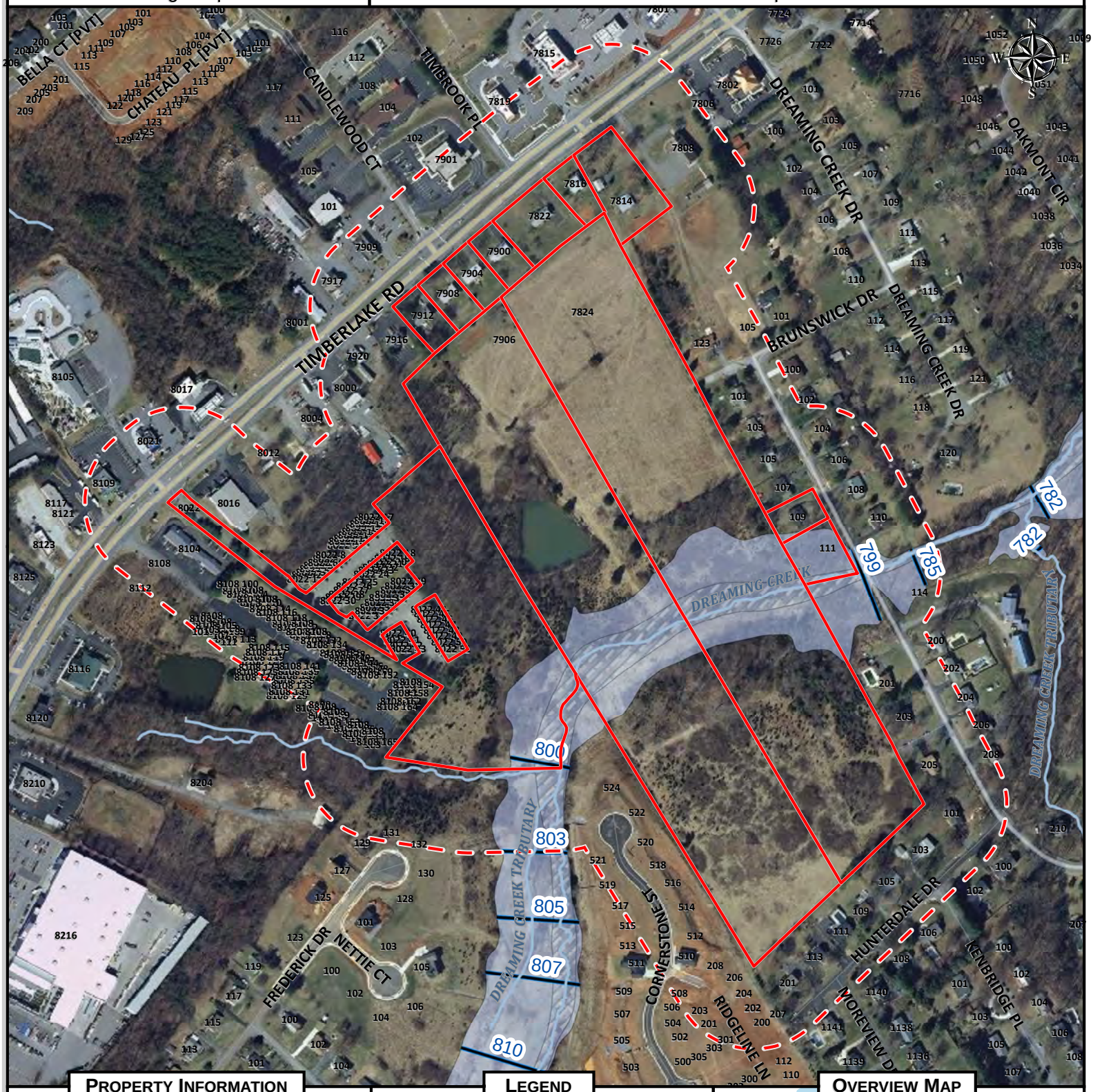
Watershed Map	VILLAGE AT DREAMING CREEK PHASE II
Zoning Request	Belleau Wood Development LLC



Property Information

Parcel ID	Address
25413020	7908 TIMBERLAKE RD
25413019	7904 TIMBERLAKE RD
25413018	7900 TIMBERLAKE RD
25413017	7822 TIMBERLAKE RD
25413016	7816 TIMBERLAKE RD
25413015	7814 TIMBERLAKE RD
25413031	7824 TIMBERLAKE RD
25413021	7912 TIMBERLAKE RD
25413023	7906 TIMBERLAKE RD
25418052	8022 TIMBERLAKE RD
25410005	109 BUCKINGHAM DR

Legend

- Subject Property
- Base Flood Elevation
- Floodway
- Floodzone
- River / Lake / Stream

Map Scale: 1 " to 400 ' **Date Printed:** 5/30/2014

Overview Map

Blackwater Creek

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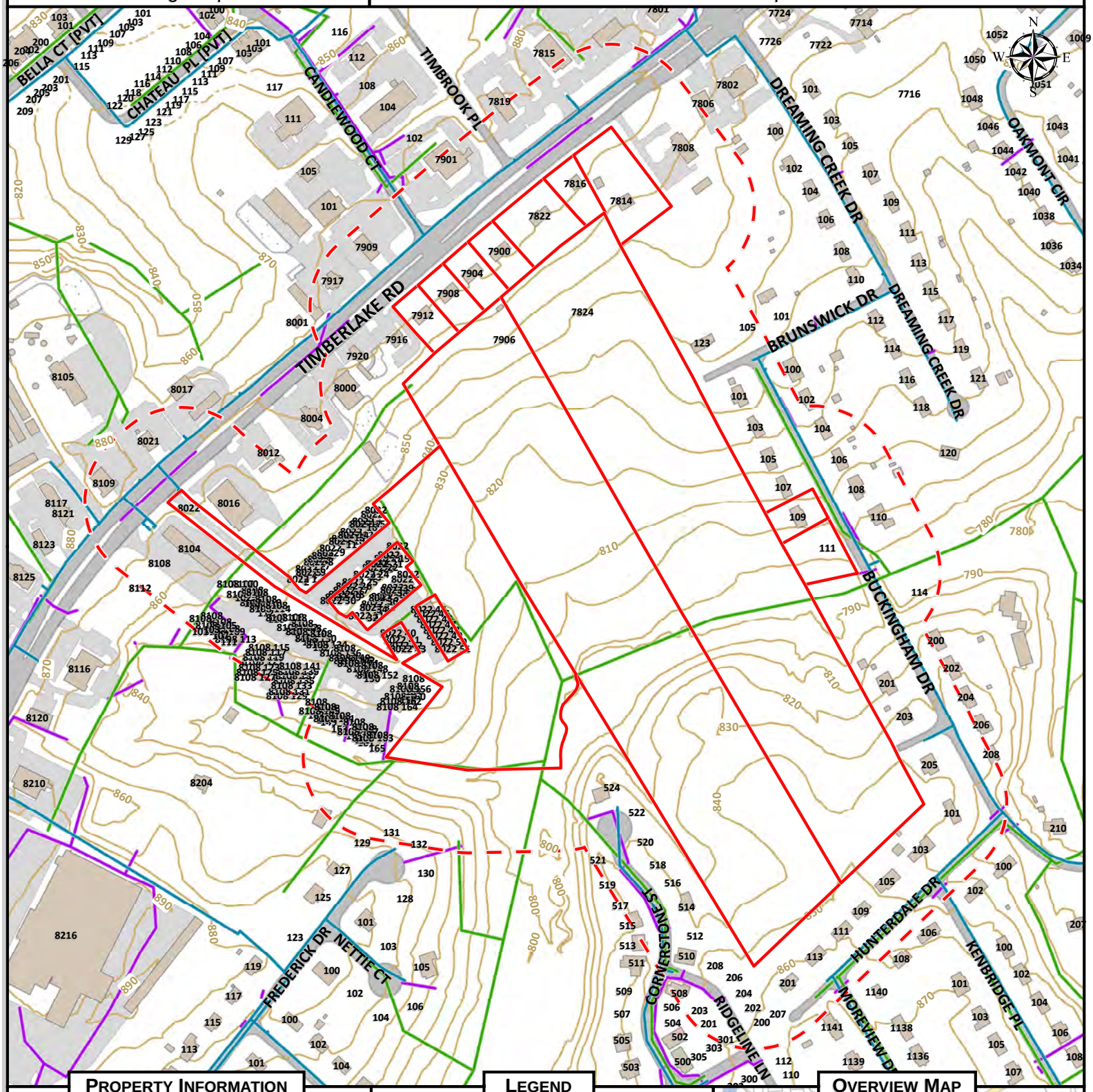
Planimetric and Topographic Map

VILLAGE AT DREAMING CREEK PHASE II

Zoning Request

Belleau Wood Development LLC



Property Information

Parcel ID	Address
25413020	7908 TIMBERLAKE RD
25413019	7904 TIMBERLAKE RD
25413018	7900 TIMBERLAKE RD
25413017	7822 TIMBERLAKE RD
25413016	7816 TIMBERLAKE RD
25413015	7814 TIMBERLAKE RD
25413031	7824 TIMBERLAKE RD
25413021	7912 TIMBERLAKE RD
25413023	7906 TIMBERLAKE RD
25418052	8022 TIMBERLAKE RD
25410005	109 BUCKINGHAM DR

Legend

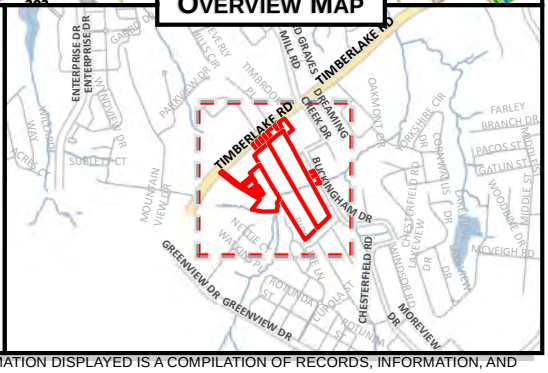
		Active	Proposed	Abandoned
Utilities	Water			
	Sanitary			
	Storm			

		Paved	Unpaved	Other
Planimetrics	Structure	-	-	
	Roadway			-
	Parking			-
	Sidewalk	-	-	
	Driveway	-	-	

		10'	10' Obs
Topography	Contour		

Map Scale: 1 " to 400 ' **Date Printed:** 5/30/2014

Overview Map



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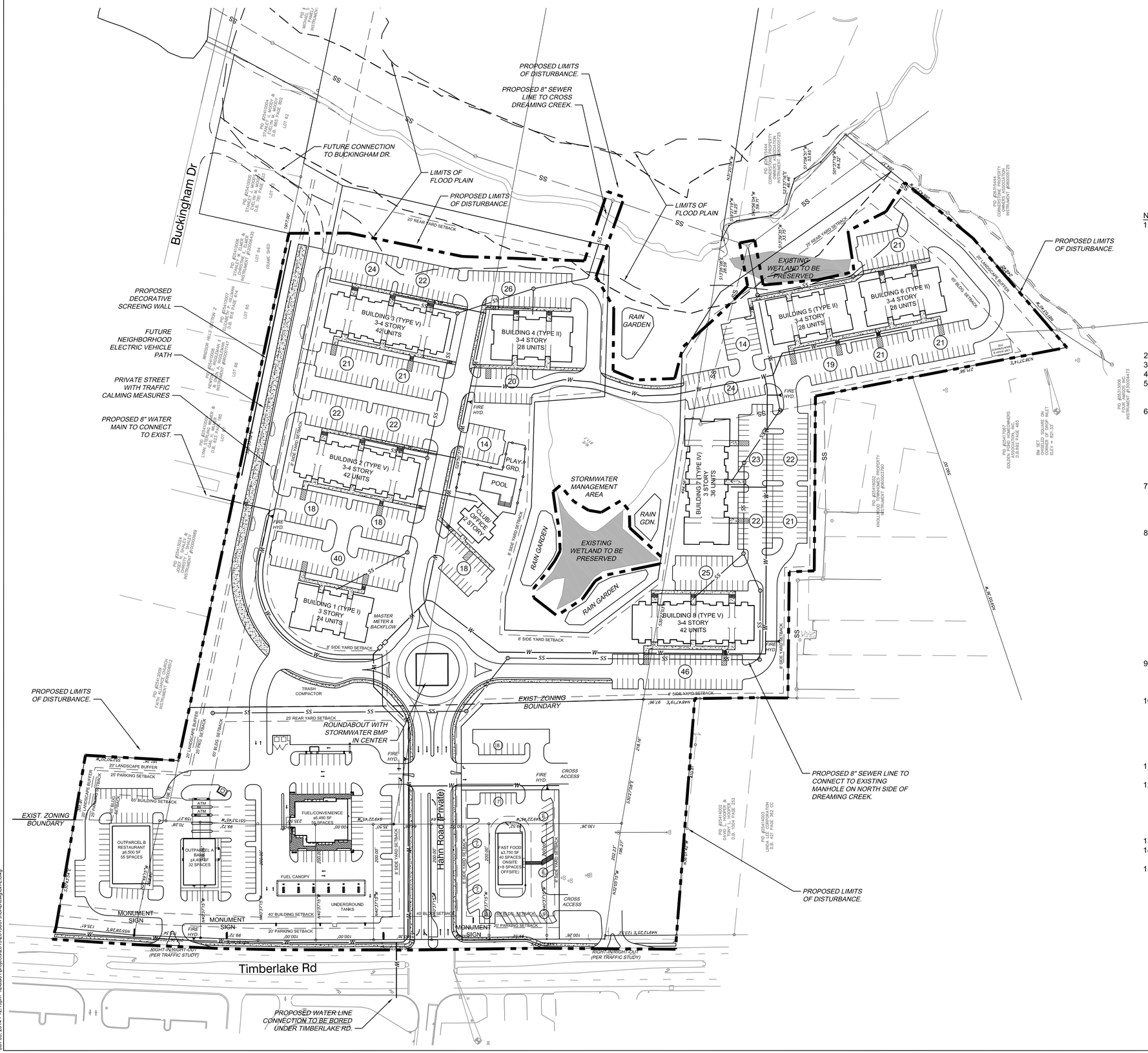

NOTES:

1. SITE PID#:
   PHASE I - RETAIL:
   25413015 - 25413020
   SITE OWNERS: 15-L&K HAHN, 16-K HAHN, 17-H HAHN, 18-V&A HAHN, 19-C HAHN, 20-J COWINS & E HUPER
   PHASE II - MULTIFAMILY APARTMENT COMMUNITY
   25410004-5, 25413021, 25413031, 25418052
   SITE OWNERS: 4&5-E MOODY, 21-S ATKINS, 31-H HAHN, 52-J BARRICK (KNOLLWOOD TOWNHOMES)
   DEVELOPERS:
   BELLEAU WOOD DEVELOPMENT, LLC (RETAIL)
   ADDRESS: 415 PISGAH CHURCH STREET #363, GREENSBORO, NC 27455
   BLUE RIDGE COMPANIES (MULTIFAMILY APARTMENTS)
   ADDRESS: 5826 SAMET DRIVE SUITE 105, HIGH POINT, NC 27265
2. PROPOSED USES: COMMERCIAL/RETAIL & APARTMENTS
3. EXISTING ZONING: R-1, R-4, B-3C
4. PROPOSED ZONING: R-4C, B-3C
5. AREA TO BE REZONED:
   AREA TO BE REZONED B-3C = 8.59 ACRES
   AREA TO BE REZONED R-4C = 19.88 ACRES
6. PROPOSED LOT SIZES:
   PHASE I - EAST (BANK, RESTAURANT & FUEL/CONVENIENCE OUTPARCELS) = 4.88 ACRES
   PHASE I - FAST FOOD = 1.00 ACRE
   PHASE I - WEST (WEST OF FAST FOOD TO HOOPER PROPERTY) = 2.63 ACRES
   PHASE II - ROAD = 3.20 ACRES
   PHASE II - APARTMENT COMMUNITY = 16.49 ACRES
   RESIDUE (STORMWATER/GREEN CORRIDOR AND PHASE III) = 19.74 ACRES
7. DENSITY:
   MAXIMUM NET DENSITY: 21.78 D.U./ACRE
   MAXIMUM ALLOWABLE UNITS = 21.78 D.U. /ACRE X 19.88 ACRES = 432 D.U.
   NUMBER OF PROPOSED UNITS = 270
   ACTUAL DENSITY: 270 D.U./19.88 ACRES = 13.58 D.U./ACRE
8. REQUIRED PARKING
   RESTAURANT: 50 SPACES
   BANK: 13 SPACES
   FUEL/CONVENIENCE: 17 SPACES
   FAST FOOD RESTAURANT: 23 SPACES
   APARTMENTS: 270 SPACES
   TOTAL: 373 SPACES REQUIRED
   PROPOSED PARKING
   RESTAURANT: 54 SPACES (INCL. 3 HCP SPACES)
   BANK: 31 SPACES (INCL. 2 HCP SPACES)
   FUEL/CONVENIENCE: 55 SPACES (INCL. 4 HCP SPACES)
   RESTAURANT: 48 SPACES (INCL. 2 HCP SPACES)
   APARTMENTS: 547 SPACES (INCL. 28 HCP SPACES)
   TOTAL: 735 SPACES
9. FOUNDATION PLANTINGS REQUIRED: 1 ORNAMENTAL TREE PER 50' AND 1 LARGE SHRUB PER 10':
   420'/50' = 9 ORNAMENTAL TREES
   420'/10' = 42 LARGE SHRUBS
10. PARKING LOT LANDSCAPING REQUIRED: 1 SHADE TREE PER 8 SPACES AND 1 MEDIUM SHRUB PER SPACE:
    RESTAURANT: 54/8 = 7 SHADE TREES; 54 MEDIUM SHRUBS
    BANK: 32/8 = 4 SHADE TREES; 32 MEDIUM SHRUBS
    FUEL/CONVENIENCE: 55/8 = 7 SHADE TREES; 55 MEDIUM SHRUBS
    FAST FOOD: 48/8 = 6 SHADE TREES; 48 MEDIUM SHRUBS
    APARTMENTS: 547/8 = 69 SHADE TREES; 547 MEDIUM SHRUBS
11. EXTERIOR LIGHTING SHALL BE CONTROLLED SO THAT NO DIRECT ILLUMINATION WILL OCCUR BEYOND ANY PROPERTY LINE SHARED WITH A RESIDENTIAL DISTRICT.
12. A PORTION OF THE AREA SHOWN HEREON IS LOCATED WITHIN FLOOD HAZARD ZONE 'AE' FOR A 100 YEAR FLOOD AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, COMMUNITY-PANEL MAP #5100930101D DATED JUNE 3, 2008 AND A CORRECTIVE EFFECTIVE HYDRAULIC STUDY DATED MAY 30, 2014. THE APPROXIMATE LIMITS OF THE FLOOD HAZARD ZONE 'AE' ARE SHOWN FROM THE CORRECTED EFFECTIVE STUDY.
13. WATER SYSTEM BACKFLOW AND SEWER F.O.G. REQUIREMENTS WILL BE MET.
14. CURB & GUTTER AND SIDEWALKS ARE PROPOSED ALONG TIMBERLAKE RD AND HAHN ROAD (PRIVATE).
15. THE FOUR CONNECTIONS TO THE DEVELOPMENT DISCUSSED IN THE TRAFFIC STUDY ARE HAHN RD, TWO RIGHT-IN/RIGHT-OUT CONNECTIONS ON TIMBERLAKE RD, AND DREAMING CREEK DR (NOT SHOWN ON THIS PLAN).

*ENGINEERING >> SURVEYING >> PLANNING
HURT & PROFFITT
INCORPORATED
2524 LANGHORNE ROAD
LYNCHBURG VA 24501
800.242.4906 TOLL FREE
434.847.7796 MAIN
434.847.0047 FAX

REZONING PLAN
FOR
VILLAGE AT DREAMING CREEK, PHASE II
LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
G.L. NO.	
FILE NO.	
DATE:	6/17/14
DRAWN BY:	PSB
CHECKED BY:	

COMMONWEALTH OF VIRGINIA
P. SCOTT BRADSLEY
LIC. NO. 041801
PROFESSIONAL ENGINEER
PRELIMINARY

HURT & PROFFITT

SHEET NO.
1 OF 2

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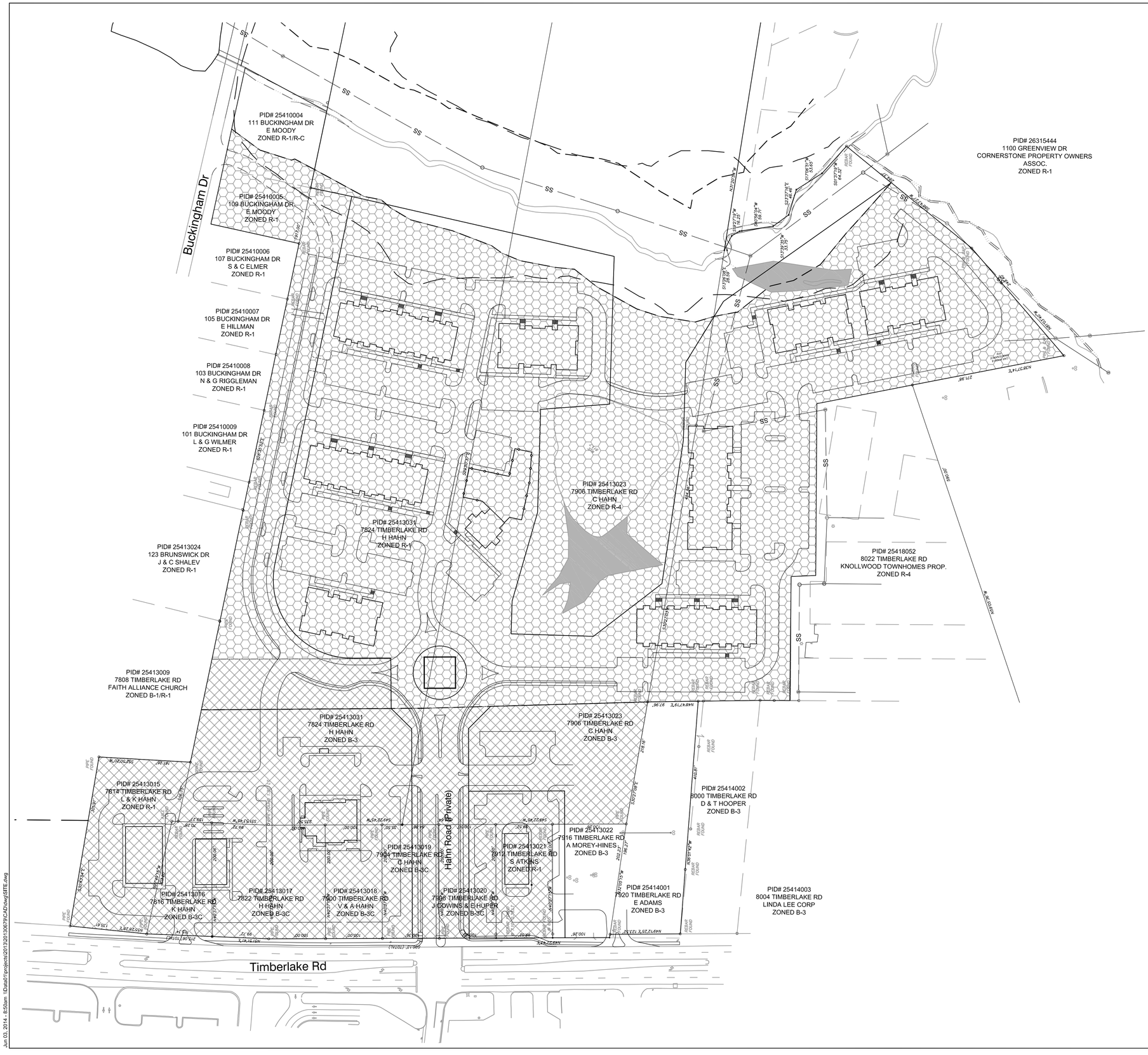

LEGAL DESCRIPTION FOR REZONING

AREA TO BE REZONED: B-3C

BEGINNING AT A POINT ON THE SOUTHERN RIGHT-OF-WAY OF TIMBERLAKE ROAD, THENCE ALONG SAID RIGHT-OF-WAY THE FOLLOWING COURSES; NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 499.88 FEET TO A POINT, NORTH 51 DEGREES 51 MINUTES 41 SECONDS EAST 215.05 FEET TO A POINT, NORTH 55 DEGREES 28 MINUTES 28 SECONDS EAST 135.61 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY SOUTH 30 DEGREES 43 MINUTES 54 SECONDS EAST 301.91 FEET TO A POINT; THENCE SOUTH 52 DEGREES 50 MINUTES 20 SECONDS WEST 161.26 FEET TO POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 185.21 FEET TO A POINT; THENCE SOUTH 49 DEGREES 22 MINUTES 43 SECONDS WEST 314.88 FEET TO A POINT; THENCE NORTH 40 DEGREES 51 MINUTES 02 SECONDS WEST 87.83 FEET TO A POINT; THENCE SOUTH 49 DEGREES 08 MINUTES 58 SECONDS WEST 57.57 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 30 SECONDS WEST 117.47 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 22 SECONDS WEST 276.80 FEET TO A POINT; THENCE NORTH 30 DEGREES 27 MINUTES 08 SECONDS WEST 218.16 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 130.26 FEET TO A POINT; THENCE NORTH 40 DEGREES 37 MINUTES 15 SECONDS WEST 200.00 FEET TO THE POINT OF BEGINNING.

AREA TO BE REZONED: R-4C

BEGINNING AT A POINT ALONG THE EASTERN RIGHT-OF-WAY OF BUCKINGHAM DRIVE, THENCE ALONG SAID RIGHT-OF-WAY SOUTH 28 DEGREES 05 MINUTES 46 SECONDS EAST 171.37 FEET TO A POINT ON THE EXISTING R-C ZONING LINE; THENCE ALONG THIS LINE THE FOLLOWING COURSES; SOUTH 86 DEGREES 04 MINUTES 37 SECONDS WEST 62.13 FEET TO A POINT, SOUTH 63 DEGREES 56 MINUTES 39 SECONDS WEST 62.89 FEET, SOUTH 77 DEGREES 56 MINUTES 15 SECONDS WEST 139.07 FEET TO A POINT, SOUTH 60 DEGREES 23 MINUTES 56 SECONDS WEST 30.87 FEET TO A POINT, SOUTH 83 DEGREES 52 MINUTES 50 SECONDS WEST 62.73 FEET TO A POINT, SOUTH 67 DEGREES 16 MINUTES 41 SECONDS WEST 149.51 FEET TO A POINT, SOUTH 77 DEGREES 10 MINUTES 25 SECONDS WEST 57.43 FEET TO A POINT, SOUTH 58 DEGREES 21 MINUTES 12 SECONDS WEST 95.77 FEET TO A POINT, SOUTH 82 DEGREES 06 MINUTES 33 SECONDS WEST 130.20 FEET TO A POINT, SOUTH 62 DEGREES 14 MINUTES 40 SECONDS WEST 105.62 FEET TO A POINT, SOUTH 36 DEGREES 19 MINUTES 21 SECONDS WEST 77.18 FEET TO A POINT, SOUTH 10 DEGREES 52 MINUTES 01 SECONDS WEST 72.93 FEET TO A POINT, SOUTH 26 DEGREES 21 MINUTES 56 SECONDS WEST 96.33 FEET TO A POINT, SOUTH 00 DEGREES 25 MINUTES 47 SECONDS WEST 190.63 FEET TO A POINT; THENCE LEAVING THE EXISTING R-C ZONING LINE SOUTH 88 DEGREES 43 MINUTES 27 SECONDS WEST 182.71 FEET TO A POINT; THENCE NORTH 81 DEGREES 03 MINUTES 40 SECONDS WEST 249.40 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 49 SECONDS EAST 271.96 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 05 SECONDS EAST 171.31 FEET TO A POINT; THENCE NORTH 40 DEGREES 02 MINUTES 54 SECONDS WEST 302.65 FEET TO A POINT; THENCE NORTH 47 DEGREES 13 MINUTES 09 SECONDS EAST 43.38 FEET TO A POINT; THENCE NORTH 40 DEGREES 04 MINUTES 55 SECONDS WEST 218.48 FEET TO A POINT; THENCE NORTH 49 DEGREES 57 MINUTES 53 SECONDS EAST 53.19 FEET TO A POINT; THENCE NORTH 48 DEGREES 47 MINUTES 19 SECONDS EAST 197.96 FEET TO A POINT; THENCE NORTH 47 DEGREES 57 MINUTES 17 SECONDS EAST 394.29 FEET TO A POINT; THENCE NORTH 49 DEGREES 08 MINUTES 58 SECONDS EAST 57.57 FEET TO A POINT; THENCE SOUTH 40 DEGREES 51 MINUTES 02 SECONDS EAST 87.83 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 43 SECONDS EAST 314.88 FEET TO A POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 747.86 FEET TO A POINT; THENCE NORTH 61 DEGREES 54 MINUTES 14 SECONDS EAST 158.97 FEET TO THE POINT OF BEGINNING.

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REZONING PLAN
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SHEET NO.
2 OF 2

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Hurt & Proffitt, Inc.
Engineering • Surveying • Environmental
Materials Testing • Geotechnical
Site Planning
2524 Langhorne Road • Lynchburg, VA 24501
(434) 847-7796 • FAX (434)847-0047

REZONING NARRATIVE

May 6, 2014
Revised June 3, 2014

Village at Dreaming Creek – Phase II (multi-family)
[Parcels associated with this rezoning petition: 7912 Timberlake Road, 7824 Timberlake Road (portion thereof), 8022 Timberlake Road (portion thereof), 109 Buckingham Drive, 111 Buckingham Drive (portion thereof)]
Lynchburg, Virginia
Hurt & Proffitt Project #20130679

PROJECT DESCRIPTION

The project consists of the rezoning of eleven parcels (PID # 25410004, 25410005, 25413015, 25413016, 25413017, 25413018, 25413019, 25413020, 25413021, 25413031, and 25418052) from R-1, R-4 and B-3C to B-3C & R-4C. The retail area along Timberlake Road will be zoned B-3C. This includes a fast food restaurant along with the areas identified as Phase I in the previous rezoning petition. The multi-family area to the south of Phase I, known as Phase II, will be rezoned to R-4C down to the R-C zoning line along Dreaming Creek. Phase II of the project consists of the construction of 270 high-end apartment units. This project also includes private roadways (access will be provided to the general public), parking, landscaping, utilities, and stormwater management facilities.

Under the current zoning, there are approximately 12.31 acres of land (portions of PID #25413023 and PID #25418052) north of Dreaming Creek that could be developed with multi-family apartment units. With a density of 21.78 units/acre, a total of 268 multi-family apartment units could be developed on these parcels alone without having to go through the rezoning process. Another 27 single-family lots (9.35 x 2.9 dwellings/acre) could be developed on the R-1 land north of Dreaming Creek (portions of PID PID #25413031 and PID #25418052) north of Dreaming Creek, bringing the total number of dwelling units to 295. These multi- and single-family developments would be connected to Brunswick Drive to provide the required connectivity. To get the density, the pond would be filled in and the wetlands removed. If developed in this manner, however, there would be greater impact on the land, the environment, and the neighboring properties.

Using the developer's approach, the central core of the property is preserved (wetlands maintained and stream restored) and the fringe areas would be converted into stormwater

wetlands and bioretention areas to treat stormwater runoff from the proposed development. In addition, the total number of units would be reduced over what is allowed by-right. The proposed development will also contain walking trails along Dreaming Creek as an amenity.

ARCHITECTURAL DESIGN

The architectural design details for the Village at Dreaming Creek multi-family units (Phase II) will be provided at a later date.

LIGHTING

Lighting shall be in accordance with the Lynchburg Code of Ordinances - Sec. 35.1-43.26. Lighting.

SITE SIGNAGE

Signage shall be governed by the Lynchburg Code of Ordinances Sec. 35.1-26. Signs. One free-standing pylon sign shall be used to identify the development.

STORMWATER MANAGEMENT

Runoff from the development flows to the south where it drains into Dreaming Creek. Currently, a generous portion of the stormwater flows through unnamed tributaries to the pond, which then drains to Dreaming Creek. Stormwater management will be addressed on Phase I by each individual outparcel using underground storage systems (pipe or chamber systems) to be located under the parking areas or with bioretention systems (rain gardens) in open areas. Water quality treatment will be accomplished using BMP measures such as rain gardens and tree-in-a-box filters. Runoff from the proposed private roadway (Hahn Road) will be collected by pipes and conveyed to a stormwater BMP device in the center of the roundabout for management/treatment. Runoff collected by these stormwater quantity and quality measures will be collected in pipes on each parcel, conveyed to the stormwater collection system in the proposed roadway and discharged to an adequate channel.

Phase II stormwater management will be accomplished in the central core area. The stream will be restored and the fringe areas at the edge of the former pond will be converted to stormwater wetlands with sediment forebays and bioretention basins. These features will drain to the restored stream in the center, which will drain to Dreaming Creek.

Water Quantity

For Phase I, the type of stormwater management facility used to reduce post-development runoff rates below the pre-development rate largely depends on the ultimate size of each development parcel and the amount of area available to use for such measures. The preference would be to utilize rain gardens (bioretention filter) if space is available, because such devices provide management of both stormwater quantity and quality. If open space on a particular site is limited, then underground storage systems (pipe or chamber) will be used to manage water quantity. Low Impact Development (LID)

strategies such as porous concrete pavement or concrete paver systems may be considered to reduce the composite runoff factor. Regardless of the measures used, State and City requirements to reduce or maintain the runoff rate will be met.

For Phase II, the stormwater wetlands and bioretention basins will be used to manage stormwater quantity. If needed, these devices can be supplemented with pipe storage in the parking areas.

Water Quality

For Phase I, small rain gardens (bioretention areas) and mechanical devices such as hydrodynamic separators and above ground tree-in-a-box filter systems will serve as the primary water quality devices. Runoff from the roadway will be treated in the center of the roundabout using a sand filter or similar device.

On Phase II, the stormwater wetlands and bioretention areas described above will also serve to treat the stormwater runoff.

ADEQUATE CHANNEL

Stormwater from this development area flows into Dreaming Creek. Runoff from the site and roadway will be managed and treated using the methods described in the previous sections, collected in pipes and discharged into the restored stream at the center of the existing pond area. The restored stream flows to Dreaming Creek. Collectively, the stormwater management strategies employed in the Phase I and Phase II developments will reduce the post-developed runoff rate to below the pre-development rate. The restored stream will be designed as an adequate channel. The ultimate receiving channel, Dreaming Creek, is considered an adequate channel.

PARKING

The project must meet the current City of Lynchburg parking requirements. For restaurants, the City requires one (1) parking space per every each four (4) persons of the rated capacity plus one (1) space for each three (3) employees on duty at any time; for the residential uses, the City requires one (1) space dwelling unit. Proposed parking spaces for the project are shown on the Rezoning Plan. It should be noted that the proposed number and location of parking spaces may be adjusted during the design process due to site restraints or changes in the site plan. The final parking count, however, will meet the requirements set by the City of Lynchburg's parking ordinance.

Parking Calculations (based on current Rezoning Plan)

Restaurant: 50 spaces required; 54 spaces provided
Bank: 13 spaces required; 31 spaces provided
Fuel/Convenience: 17 spaces required; 55 spaces provided
Fast Food Restaurant: 23 spaces required; 48 spaces provided
Multi-Family: 1 space x 270 units = 270 spaces required; 547 spaces provided

LANDSCAPING/OTHER

The proposed clearing and grading limits run approximately along the 100-year flood plain limits on the north side of Dreaming Creek. Grading will be limited to what is needed to construct the buildings, parking and circulation drives, and any required stormwater management features.

In order to achieve the grades shown, fill material will be required. The source of fill will be the land on the south side of Dreaming Creek on parcel numbers 25413023 and 25413031. A permit will have to be obtained from the Army Corps of Engineers and VDEQ to allow the temporary stream crossing. Alternatively, the stream may be crossed using an engineered structural plate arch or other bottomless design that would not impact the stream and would not require permitting.

Preliminary grading indicates that as little as 10,000 cubic yards may be needed from the land on the south side of the creek.

Landscape plantings will be as provided per the landscape ordinance. Shade trees will be located in interior medians within parking areas and at the ends of all parking rows. No more than fifteen (15) consecutive parking spaces will be located between islands. Street trees will be provided as required along Timberlake Road, Hahn Road (private) and the private drives. Street and shade tree types will be provided at the site plan stage. Foundation plantings will be provided as required. Landscape buffers will be provided between the development and the existing R-1 zones to the east and west.

Trash will be placed in on-site dumpsters and removed by a commercial trash service.

Exterior lighting shall be controlled so that no direct illumination will occur beyond any property line. A note is provided on the attached plan.

URBAN
ARCHITECTURAL GROUP
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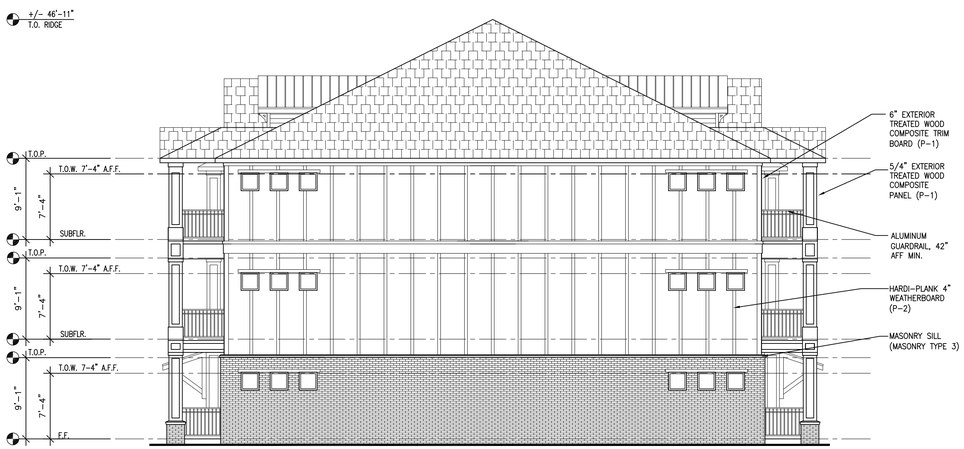
1242 Mann Drive Suite 200
Matthews, North Carolina 28105
www.UrbanAIA.com

Seals:



02 **RIGHT & LEFT ELEVATION:** Building Type I
1/8" = 1'-0" (1/16" = 1'-0" when 11x17)

01 **FRONT AND REAR ELEVATIONS:** Building Type I
1/8" = 1'-0" (1/16" = 1'-0" when 11x17)

DREAMING CREEK APARTMENTS

Timberlake Road
City of Lynchburg, Virginia

Date:	May 15, 2014
Project Number:	2014-39
Issued For:	
Construction Only:	

CONCEPTUAL EXTERIOR ELEVATIONS

A3.1

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Seals:

02 **RIGHT & LEFT ELEVATION:** Building Type II
1/8" = 1'-0" (1/16" = 1'-0" when 11x17)

01 **FRONT AND REAR ELEVATIONS:** Building Type II
1/8" = 1'-0" (1/16" = 1'-0" when 11x17)

DREAMING CREEK APARTMENTS

Timberlake Road
City of Lynchburg, Virginia

Date:	May 15, 2014
Project Number:	2014-39
Issued For:	
Construction Only:	

CONCEPTUAL EXTERIOR ELEVATIONS

A3.2

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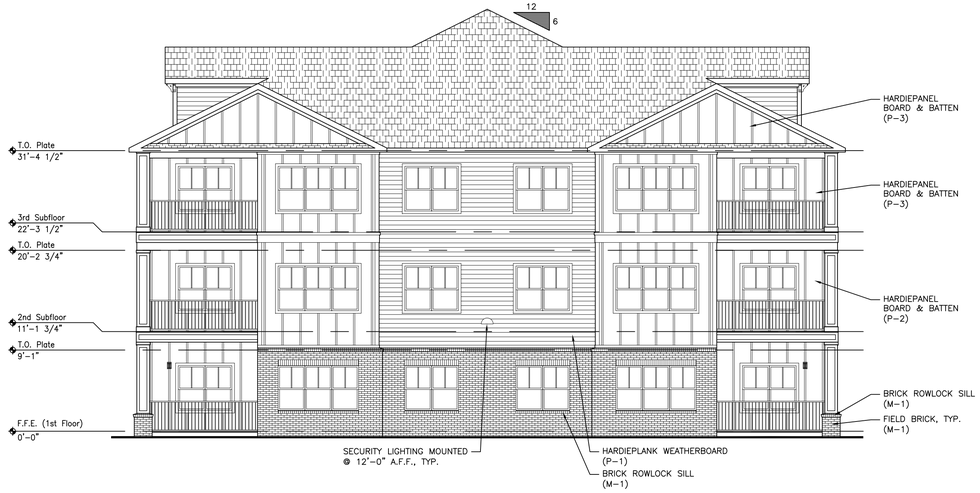

02 **ELEVATION:** Building Type III Right & Left

1/8" = 1'-0"

01 **ELEVATION:** Building Type III Front & Rear

1/8" = 1'-0" (1/16" = 1'-0" when 11x17)

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Matthews, North Carolina 28105

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Seals:

DREAMING CREEK APARTMENTS

Timberlake Road
City of Lynchburg, Virginia

Date:	May 15 2014
Project Number:	2014-39
Issued For:	
Construction Only:	

CONCEPTUAL EXTERIOR ELEVATIONS

A3.3

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Seals:

02 BUILDING TYPE II ELEVATION- Masonry Comparison @ Widely-Spaced Batten
1/8" = 1'-0"
(1/8" = 1'-0" when 11x17)

01 BUILDING TYPE II ELEVATION- Masonry Comparison
1/8" = 1'-0"
(1/8" = 1'-0" when 11x17)

Date:	May 14, 2013
Project Number:	2013-13
Issued For:	

BUILDING TYPE II ELEVATIONS

ELEVATION

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EXHIBIT 1

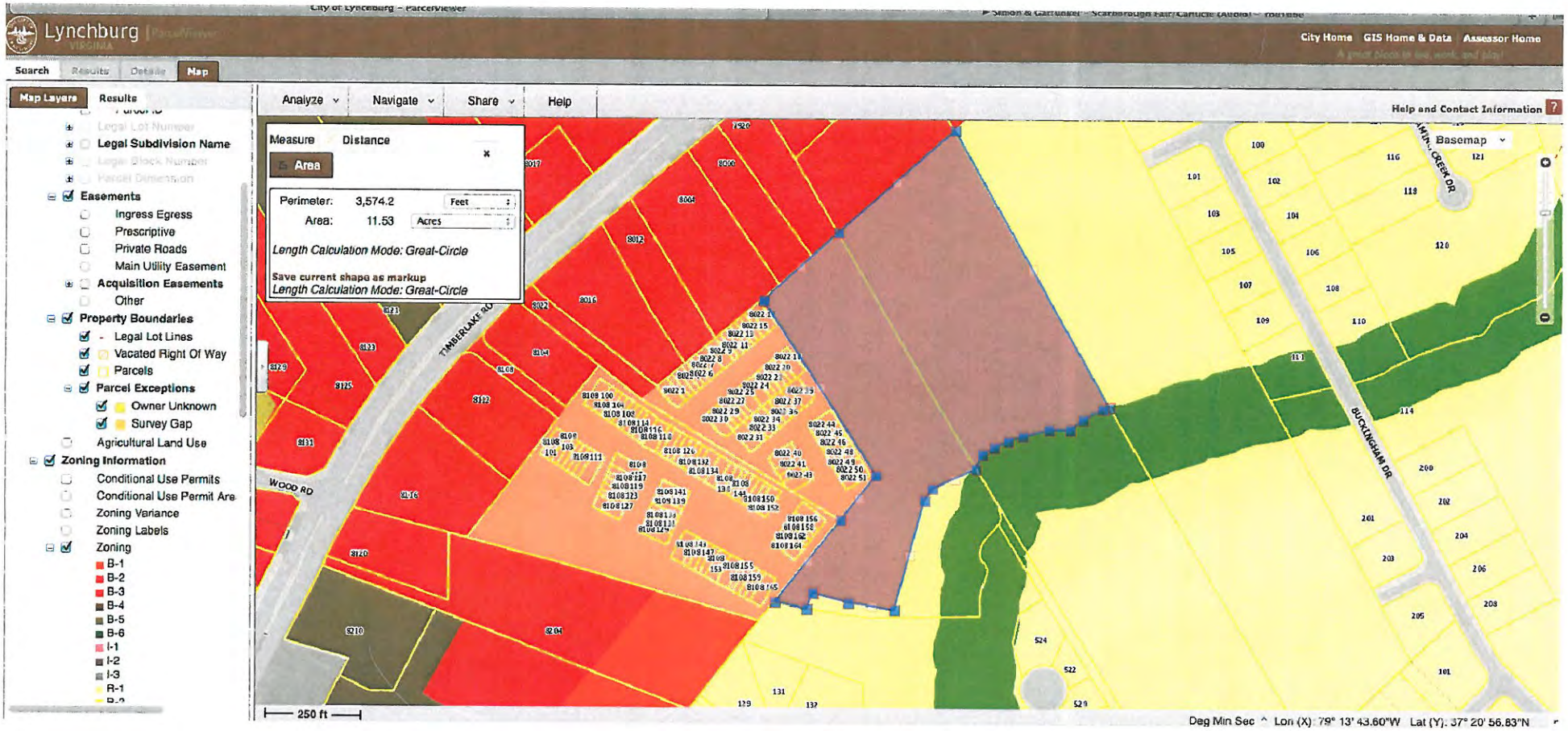

Lynchburg
City Home
GIS Home & Data
Assessor Home
Search
Results
Details
Map
Map Layers
Results
Legal Subdivision Name
Easements
Ingress Egress
Prescriptive
Private Roads
Main Utility Easement
Acquisition Easements
Other
Property Boundaries
Legal Lot Lines
Vacated Right Of Way
Parcels
Parcel Exceptions
Owner Unknown
Survey Gap
Agricultural Land Use
Zoning Information
Conditional Use Permits
Conditional Use Permit Are
Zoning Variance
Zoning Labels
Zoning
B-1
B-2
B-3
B-4
B-5
B-6
I-1
I-2
I-3
R-1
Analyze
Navigate
Share
Help
Help and Contact Information
Measure
Distance
Area
Perimeter: 3,574.2 Feet
Area: 11.53 Acres
Length Calculation Mode: Great-Circle
Save current shape as markup
Length Calculation Mode: Great-Circle
Basemap
TIMBERLAKE RD
WOOD RD
BUCKINGHAM DR
250 ft
Deg Min Sec Lon (X): 79° 13' 43.60"W Lat (Y): 37° 20' 56.83"N

EXHIBIT 2

Lynchburg
City Home
GIS Home & Data
Assessor Home
Search
Results
Details
Map
Map Layers
Results
Analyze
Navigate
Share
Help
Help and Contact Information
Legal Subdivision Name
Easements
Ingress Egress
Prescriptive
Private Roads
Main Utility Easement
Acquisition Easements
Other
Property Boundaries
Legal Lot Lines
Vacated Right Of Way
Parcels
Parcel Exceptions
Owner Unknown
Survey Gap
Agricultural Land Use
Zoning Information
Conditional Use Permits
Conditional Use Permit Are
Zoning Variance
Zoning Labels
Zoning
B-1
B-2
B-3
B-4
B-5
B-6
I-1
I-2
I-3
R-1
Measure
Distance
Area
Perimeter: 2,532.18 Feet
Area: 7.5 Acres
Length Calculation Mode: Great-Circle
Save current shape as markup
Length Calculation Mode: Great-Circle
Basemap
BRUNSWICK DR
DRAWING CREEK DR
BUCKINGHAM DR
SUNBURY PL
250 ft
Deg Min Sec ^ Lon (X): 79° 13' 37.60"W Lat (Y): 37° 21' 01.13"N

EXHIBIT 3

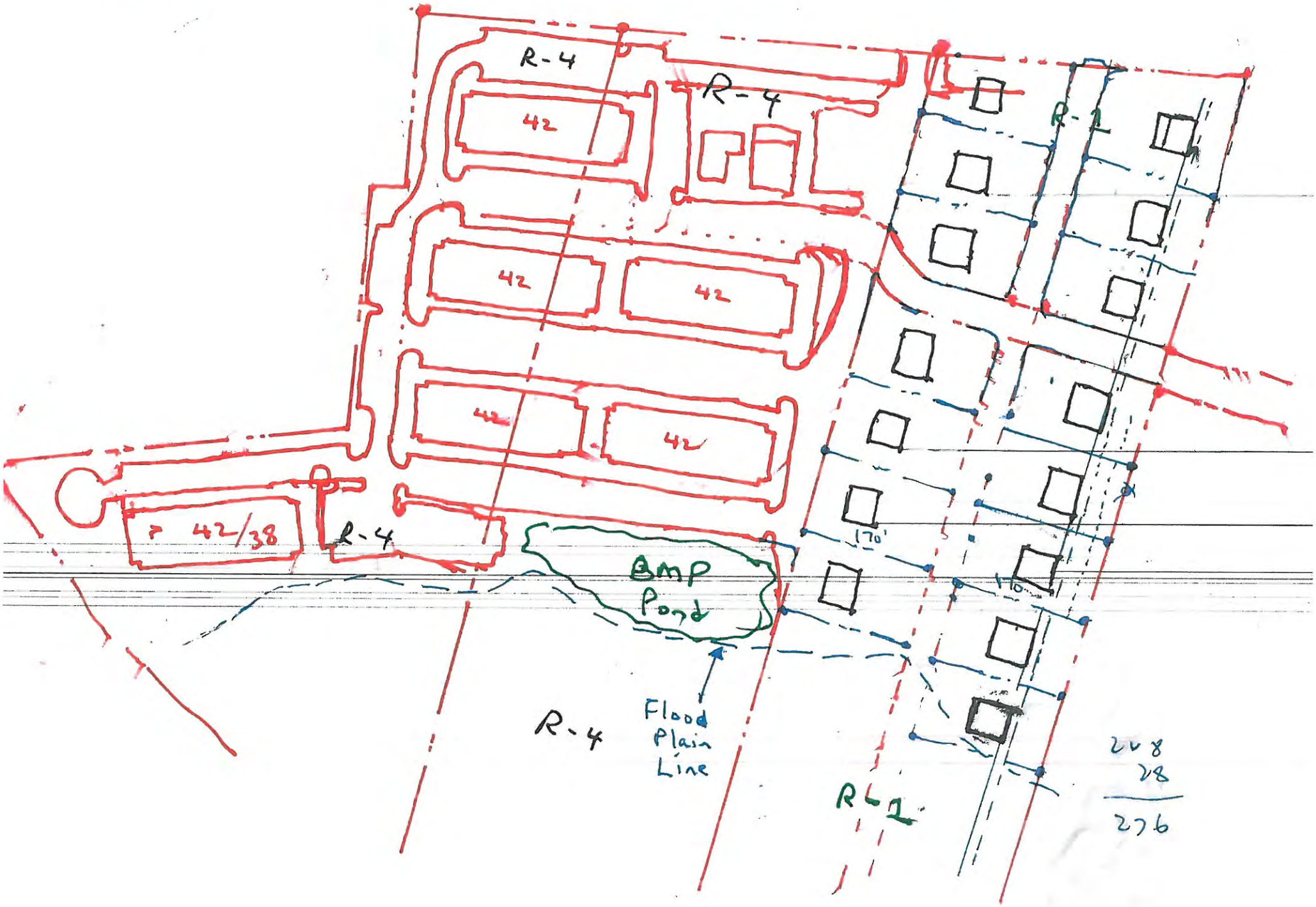
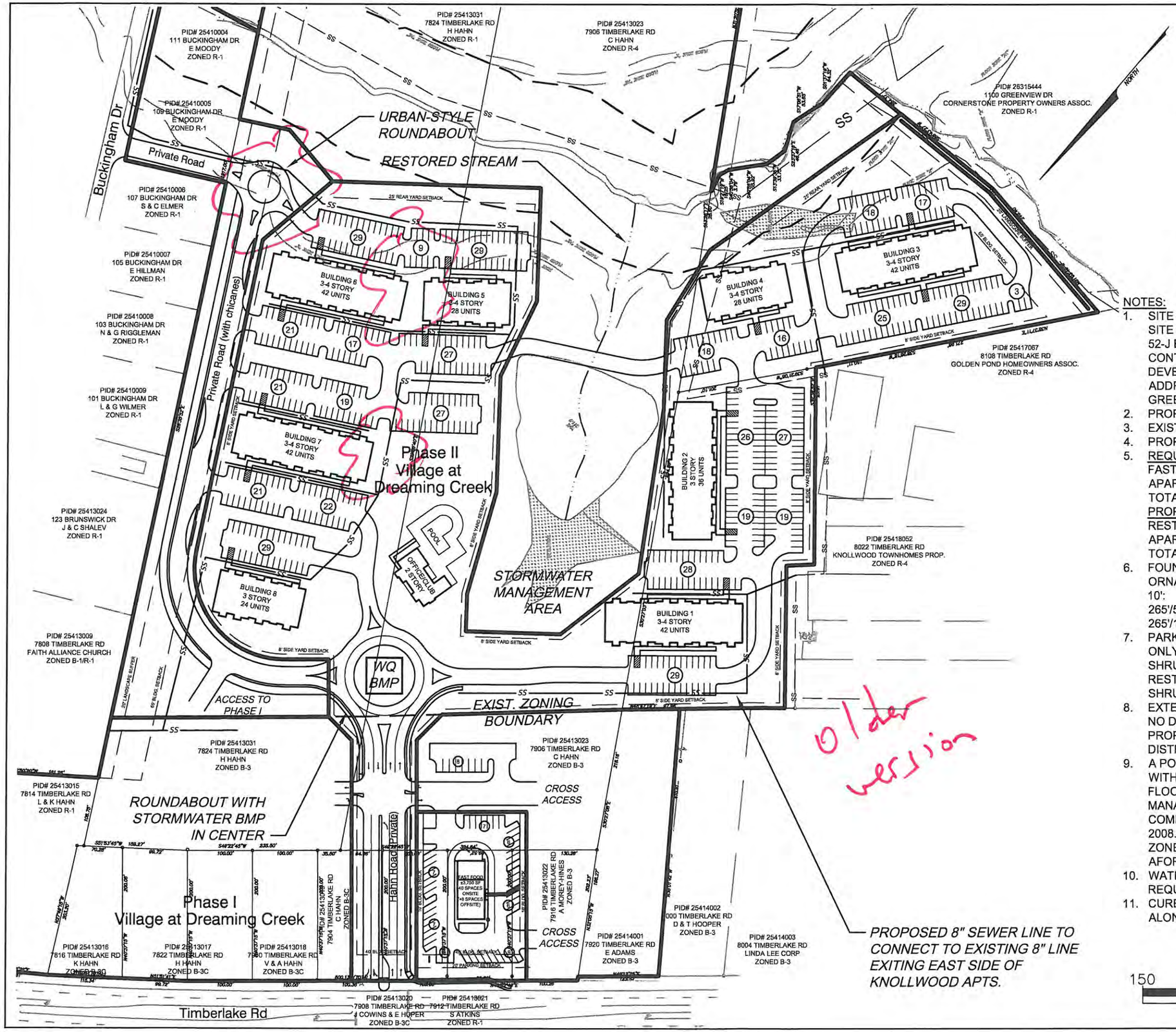
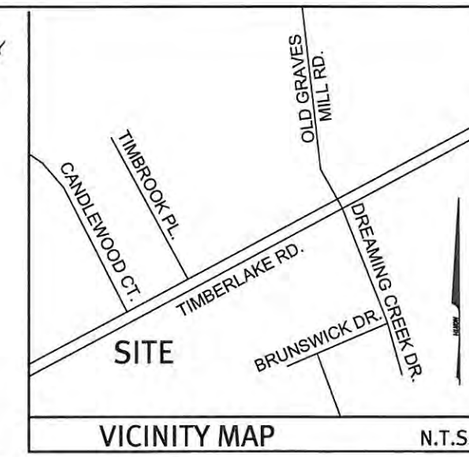

R-4
R-4
42
42
42
42
42
42/38
R-4
BMP Pond
Flood Plain Line
R-4
R-1
R-1
170'
110'
208
28
276

EXHIBIT 4

"Build By Right" vs. Proposed Development Analysis Summary

	Build By Right	Proposed Rezoning	Comments
Density	251 apartment units and 30 SFR units Total of 281 units	270 apartment units total	Lower density than "Build By Right"
Connectivity	At Brunswick	At 111 Buckingham	Brunswick connectivity is least desirable Proposed connectivity is best compromise and no impact until Phase III opens
Screening	None is required	Six feet high decorative wall & 20 feet landscape buffer with 12 feet tall tree mature at 30 feet	Substantial better screeing
Building Set Back	50 feet SFR set back	90 feet multi-family set back	Building setback is farther with proposed development
Adjacent Neighbor's View	Eight buildings at 65 feet wide and 40 feet tall	Three buildings at 72 feet wide and 40 feet tall	More privacy to adjacent neighbors with proposed development
Low Impact Development	Eliminate an acre of wetland Drain pond Pipe existing stream	Preserve wetland Restore stream at old pond area Create additional stormwater wetland Building bio-retention pond at central core Preserve central core as open space amenity	Proposed development is better stalwart of the land by preserving as much of nature as possible as per city's comprehensive plan Best storm water management practice





NOTES:

1. SITE PID#: 25410004-5, 25413021, 25413031, 25418052
   SITE OWNERS: 4&5-E MOODY, 21-S ATKINS, 31-H HAHN, 52-J BARRICK (KNOLLWOOD TOWNHOMES)
   CONTRACT PURCHASER: BELLEAU WOOD DEVELOPMENT, LLC
   ADDRESS: 415 PISGAH CHURCH STREET #363, GREENSBORO, NC 27455
2. PROPOSED USE: COMMERCIAL/RETAIL & APARTMENTS
3. EXISTING ZONING: R-1, B-3C
4. PROPOSED ZONING: R-4C, B-3C
5. REQUIRED PARKING
   FAST FOOD RESTAURANT: 23 SPACES
   APARTMENTS: 284 SPACES
   TOTAL: 307 SPACES REQUIRED
   PROPOSED PARKING
   RESTAURANT: 48 SPACES (INCL. 2 HCP SPACES)
   APARTMENTS: 546 SPACES (INCL. 28 HCP SPACES)
   TOTAL: 594 SPACES
6. FOUNDATION PLANTINGS REQUIRED (FAST FOOD): 1 ORNAMENTAL TREE PER 50' AND 1 LARGE SHRUB PER 10':
   265'/50' = 6 ORNAMENTAL TREES
   265'/10' = 27 LARGE SHRUBS
7. PARKING LOT LANDSCAPING REQUIRED (FAST FOOD ONLY): 1 SHADE TREE PER 8 SPACES AND 1 MEDIUM SHRUB PER SPACE:
   RESTAURANT: 48/8 = 6 SHADE TREES; 48 MEDIUM SHRUBS
8. EXTERIOR LIGHTING SHALL BE CONTROLLED SO THAT NO DIRECT ILLUMINATION WILL OCCUR BEYOND ANY PROPERTY LINE SHARED WITH A RESIDENTIAL DISTRICT.
9. A PORTION OF THE AREA SHOWN HEREON IS LOCATED WITHIN FLOOD HAZARD ZONE 'AE' FOR A 100 YEAR FLOOD AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY AS SHOWN ON COMMUNITY-PANEL MAP #5100930101D DATED JUNE 3, 2008. THE APPROXIMATE LIMITS OF FLOOD HAZARD ZONE 'AE' ARE SHOWN HEREON BY SCALING FROM THE AFOREMENTIONED MAP.
10. WATER SYSTEM BACKFLOW AND SEWER F.O.G. REQUIREMENTS WILL BE MET.
11. CURB & GUTTER AND SIDEWALKS ARE PROPOSED ALONG TIMBERLAKE RD AND HAHN ROAD (PRIVATE).

150 75 0 150 300
GRAPHIC SCALE IN FEET

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REZONING PLAN FOR
PHASE II
VILLAGE AT DREAMING CREEK
CITY OF LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
G.L. NO.	264-01-A3.3
FILE NO.	
DATE:	3/3/2014
DRAWN BY:	BLH/PSB
CHECKED BY:	PSB

SHEET NO.
1 OF 2

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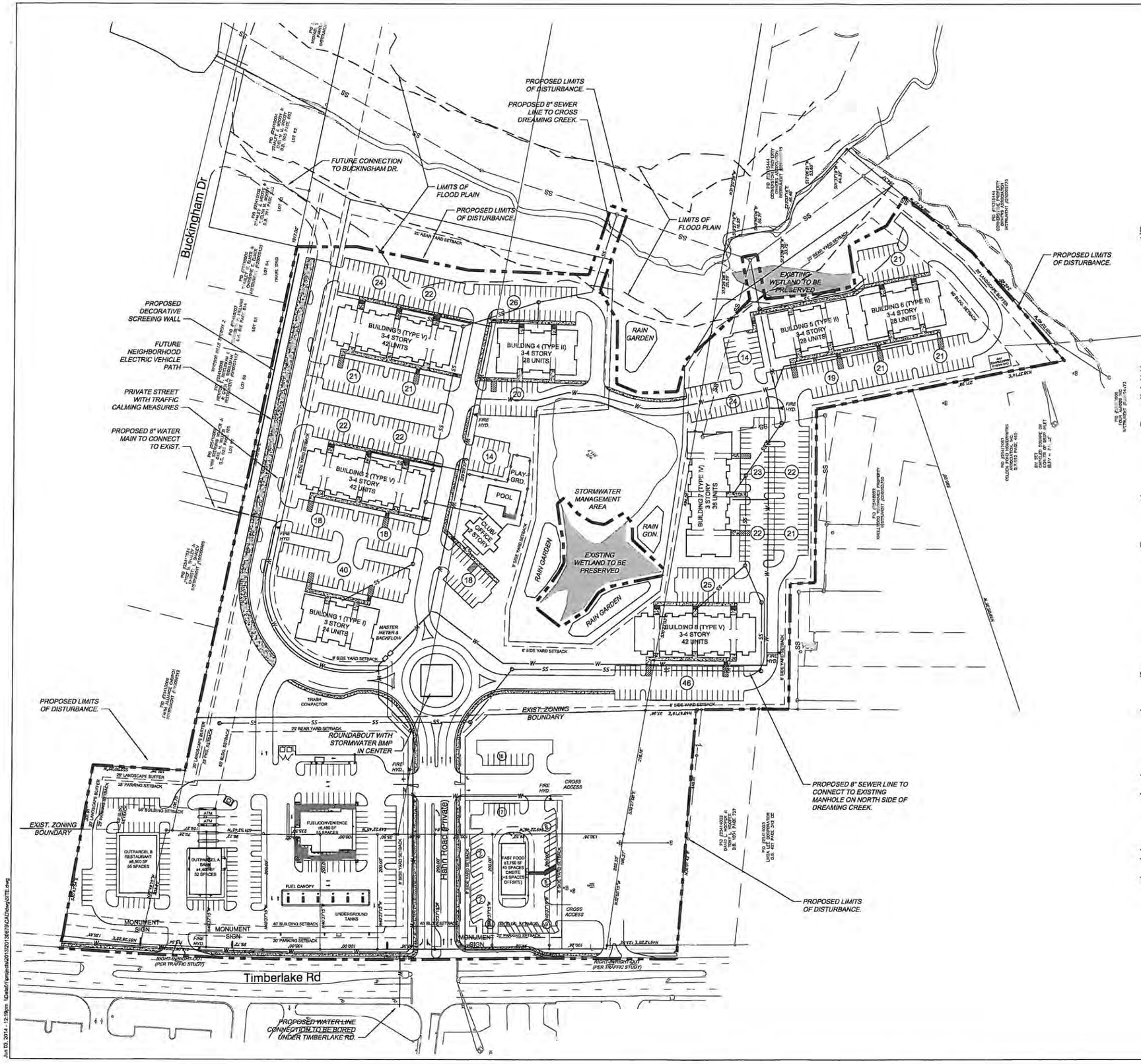

NOTES:

1. SITE PID#:
   PHASE I - RETAIL:
   25413015 - 25413020
   SITE OWNERS: 15-L&K HAHN, 16-K HAHN, 17-H HAHN, 18-V&A HAHN, 19-C HAHN, 20-J COWINS & E HUPER
   PHASE II - MULTIFAMILY APARTMENT COMMUNITY
   25410004-5, 25413021, 25413031, 25418052
   SITE OWNERS: 4&5-E MOODY, 21-S ATKINS, 31-H HAHN, 52-J BARRICK (KNOLLWOOD TOWNHOMES)
   DEVELOPERS:
   BELLEAU WOOD DEVELOPMENT, LLC (RETAIL)
   ADDRESS: 415 PISGAH CHURCH STREET #363, GREENSBORO, NC 27455
   BLUE RIDGE COMPANIES (MULTIFAMILY APARTMENTS)
   ADDRESS: 5826 SAMET DRIVE SUITE 105, HIGH POINT, NC 27265
2. PROPOSED USES: COMMERCIAL/RETAIL & APARTMENTS
3. EXISTING ZONING: R-1, R-4, B-3C
4. PROPOSED ZONING: R-4C, B-3C
5. AREA TO BE REZONED:
   AREA TO BE REZONED B-3C = 8.59 ACRES
   AREA TO BE REZONED R-4C = 19.88 ACRES
6. PROPOSED LOT SIZES:
   PHASE I - EAST (BANK, RESTAURANT & FUEL/CONVENIENCE OUTPARCELS) = 4.88 ACRES
   PHASE I - FAST FOOD = 1.00 ACRE
   PHASE I - WEST (WEST OF FAST FOOD TO HOOPER PROPERTY) = 2.63 ACRES
   PHASE II - ROAD = 3.20 ACRES
   PHASE II - APARTMENT COMMUNITY = 16.49 ACRES
   RESIDUE (STORMWATER/GREEN CORRIDOR AND PHASE III) = 19.74 ACRES
7. DENSITY:
   MAXIMUM NET DENSITY: 21.78 D.U./ACRE
   MAXIMUM ALLOWABLE UNITS = 21.78 D.U. /ACRE X 19.88 ACRES = 432 D.U.
   NUMBER OF PROPOSED UNITS = 270
   ACTUAL DENSITY: 270 D.U./19.88 ACRES = 13.58 D.U./ACRE
8. REQUIRED PARKING
   RESTAURANT: 50 SPACES
   BANK: 13 SPACES
   FUEL/CONVENIENCE: 17 SPACES
   FAST FOOD RESTAURANT: 23 SPACES
   APARTMENTS: 270 SPACES
   TOTAL: 373 SPACES REQUIRED
   PROPOSED PARKING
   RESTAURANT: 54 SPACES (INCL. 3 HCP SPACES)
   BANK: 31 SPACES (INCL. 2 HCP SPACES)
   FUEL/CONVENIENCE: 55 SPACES (INCL. 4 HCP SPACES)
   RESTAURANT: 48 SPACES (INCL. 2 HCP SPACES)
   APARTMENTS: 547 SPACES (INCL. 28 HCP SPACES)
   TOTAL: 735 SPACES
9. FOUNDATION PLANTINGS REQUIRED: 1 ORNAMENTAL TREE PER 50' AND 1 LARGE SHRUB PER 10':
   420'/50' = 9 ORNAMENTAL TREES
   420'/10' = 42 LARGE SHRUBS
10. PARKING LOT LANDSCAPING REQUIRED: 1 SHADE TREE PER 8 SPACES AND 1 MEDIUM SHRUB PER SPACE:
    RESTAURANT: 54/8 = 7 SHADE TREES; 54 MEDIUM SHRUBS
    BANK: 32/8 = 4 SHADE TREES; 32 MEDIUM SHRUBS
    FUEL/CONVENIENCE: 55/8 = 7 SHADE TREES; 55 MEDIUM SHRUBS
    FAST FOOD: 48/8 = 6 SHADE TREES; 48 MEDIUM SHRUBS
    APARTMENTS: 547/8 = 69 SHADE TREES; 547 MEDIUM SHRUBS
11. EXTERIOR LIGHTING SHALL BE CONTROLLED SO THAT NO DIRECT ILLUMINATION WILL OCCUR BEYOND ANY PROPERTY LINE SHARED WITH A RESIDENTIAL DISTRICT.
12. A PORTION OF THE AREA SHOWN HEREON IS LOCATED WITHIN FLOOD HAZARD ZONE 'AE' FOR A 100 YEAR FLOOD AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, COMMUNITY-PANEL MAP #5100930101D DATED JUNE 3, 2008 AND A CORRECTIVE EFFECTIVE HYDRAULIC STUDY DATED MAY 30, 2014. THE APPROXIMATE LIMITS OF THE FLOOD HAZARD ZONE 'AE' ARE SHOWN FROM THE CORRECTED EFFECTIVE STUDY.
13. WATER SYSTEM BACKFLOW AND SEWER F.O.G. REQUIREMENTS WILL BE MET.
14. CURB & GUTTER AND SIDEWALKS ARE PROPOSED ALONG TIMBERLAKE RD AND HAHN ROAD (PRIVATE).
15. THE FOUR CONNECTIONS TO THE DEVELOPMENT DISCUSSED IN THE TRAFFIC STUDY ARE HAHN RD, TWO RIGHT-IN/RIGHT-OUT CONNECTIONS ON TIMBERLAKE RD, AND DREAMING CREEK DR (NOT SHOWN ON THIS PLAN).

80 40 0 80 160
GRAPHIC SCALE IN FEET

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REZONING PLAN FOR VILLAGE AT DREAMING CREEK, PHASE II

LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
G.L. NO.	
FILE NO.	
DATE:	6/17/14
DRAWN BY:	PSB
CHECKED BY:	

COMMONWEALTH OF VIRGINIA
F. SCOTT BAILEY
Lic. No. 041801
PROFESSIONAL ENGINEER
PRELIMINARY

HURT & PROFFITT

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1 OF 2

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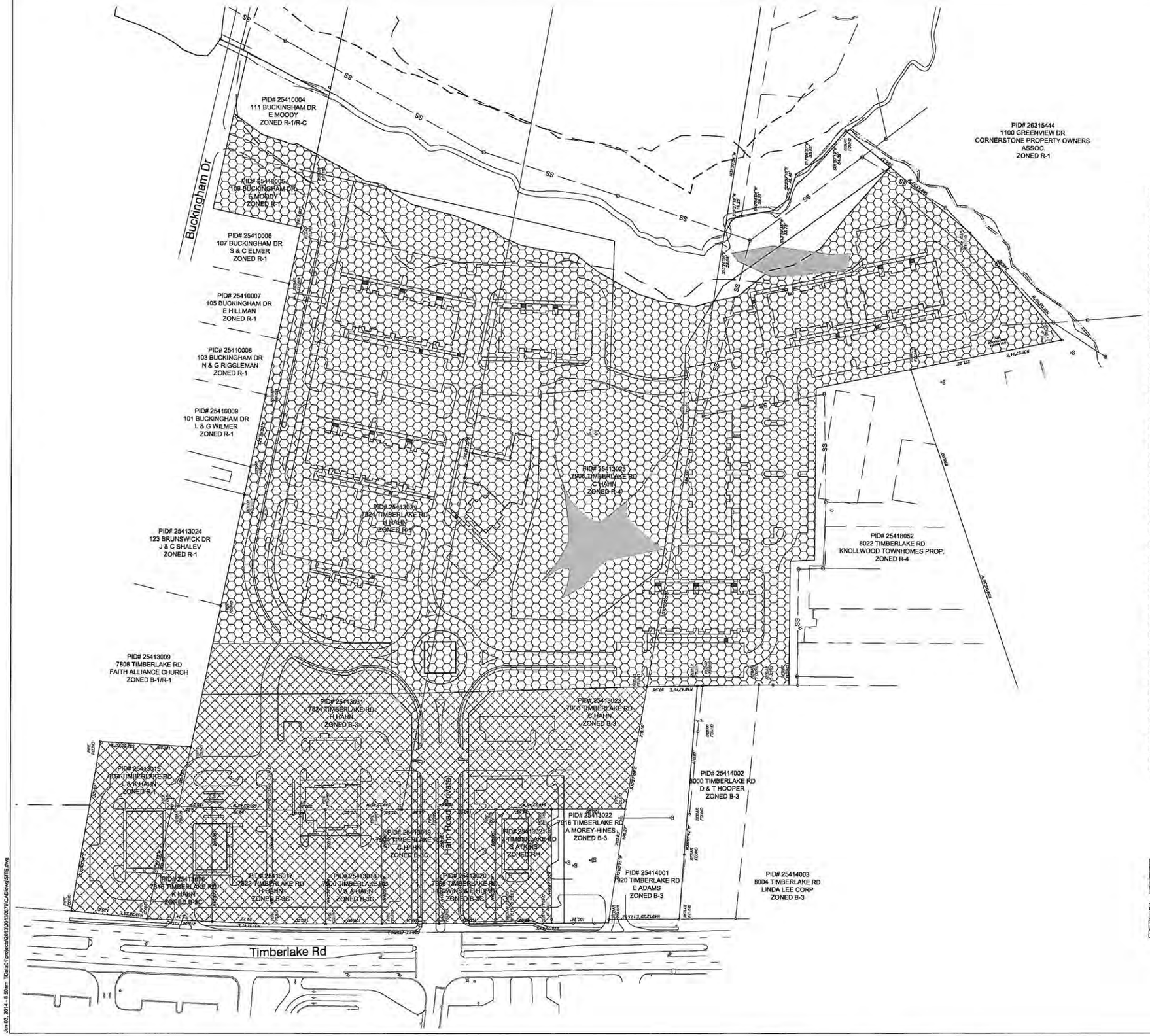

LEGAL DESCRIPTION FOR REZONING

AREA TO BE REZONED: B-3C

BEGINNING AT A POINT ON THE SOUTHERN RIGHT-OF-WAY OF TIMBERLAKE ROAD, THENCE ALONG SAID RIGHT-OF-WAY THE FOLLOWING COURSES; NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 499.88 FEET TO A POINT, NORTH 51 DEGREES 51 MINUTES 41 SECONDS EAST 215.05 FEET TO A POINT, NORTH 55 DEGREES 28 MINUTES 28 SECONDS EAST 135.61 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY SOUTH 30 DEGREES 43 MINUTES 54 SECONDS EAST 301.91 FEET TO A POINT; THENCE SOUTH 52 DEGREES 50 MINUTES 20 SECONDS WEST 161.26 FEET TO POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 185.21 FEET TO A POINT; THENCE SOUTH 49 DEGREES 22 MINUTES 43 SECONDS WEST 314.88 FEET TO A POINT; THENCE NORTH 40 DEGREES 51 MINUTES 02 SECONDS WEST 87.83 FEET TO A POINT; THENCE SOUTH 49 DEGREES 08 MINUTES 58 SECONDS WEST 57.57 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 30 SECONDS WEST 117.47 FEET TO A POINT; THENCE SOUTH 47 DEGREES 57 MINUTES 22 SECONDS WEST 276.80 FEET TO A POINT; THENCE NORTH 30 DEGREES 27 MINUTES 08 SECONDS WEST 218.16 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 45 SECONDS EAST 130.26 FEET TO A POINT; THENCE NORTH 40 DEGREES 37 MINUTES 15 SECONDS WEST 200.00 FEET TO THE POINT OF BEGINNING.

AREA TO BE REZONED: R-4C

BEGINNING AT A POINT ALONG THE EASTERN RIGHT-OF-WAY OF BUCKINGHAM DRIVE, THENCE ALONG SAID RIGHT-OF-WAY SOUTH 28 DEGREES 05 MINUTES 46 SECONDS EAST 171.37 FEET TO A POINT ON THE EXISTING R-C ZONING LINE; THENCE ALONG THIS LINE THE FOLLOWING COURSES; SOUTH 86 DEGREES 04 MINUTES 37 SECONDS WEST 62.13 FEET TO A POINT, SOUTH 63 DEGREES 56 MINUTES 39 SECONDS WEST 62.89 FEET, SOUTH 77 DEGREES 56 MINUTES 15 SECONDS WEST 139.07 FEET TO A POINT, SOUTH 60 DEGREES 23 MINUTES 56 SECONDS WEST 30.87 FEET TO A POINT, SOUTH 83 DEGREES 52 MINUTES 50 SECONDS WEST 62.73 FEET TO A POINT, SOUTH 67 DEGREES 16 MINUTES 41 SECONDS WEST 149.51 FEET TO A POINT, SOUTH 77 DEGREES 10 MINUTES 25 SECONDS WEST 57.43 FEET TO A POINT, SOUTH 58 DEGREES 21 MINUTES 12 SECONDS WEST 95.77 FEET TO A POINT, SOUTH 82 DEGREES 06 MINUTES 33 SECONDS WEST 130.20 FEET TO A POINT, SOUTH 62 DEGREES 14 MINUTES 40 SECONDS WEST 105.62 FEET TO A POINT, SOUTH 36 DEGREES 19 MINUTES 21 SECONDS WEST 77.18 FEET TO A POINT, SOUTH 10 DEGREES 52 MINUTES 01 SECONDS WEST 72.93 FEET TO A POINT, SOUTH 26 DEGREES 21 MINUTES 56 SECONDS WEST 96.33 FEET TO A POINT, SOUTH 00 DEGREES 25 MINUTES 47 SECONDS WEST 190.63 FEET TO A POINT; THENCE LEAVING THE EXISTING R-C ZONING LINE SOUTH 88 DEGREES 43 MINUTES 27 SECONDS WEST 182.71 FEET TO A POINT; THENCE NORTH 81 DEGREES 03 MINUTES 40 SECONDS WEST 249.40 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 49 SECONDS EAST 271.96 FEET TO A POINT; THENCE NORTH 38 DEGREES 35 MINUTES 05 SECONDS EAST 171.31 FEET TO A POINT; THENCE NORTH 40 DEGREES 02 MINUTES 54 SECONDS WEST 302.65 FEET TO A POINT; THENCE NORTH 47 DEGREES 13 MINUTES 09 SECONDS EAST 43.38 FEET TO A POINT; THENCE NORTH 40 DEGREES 04 MINUTES 55 SECONDS WEST 218.48 FEET TO A POINT; THENCE NORTH 49 DEGREES 57 MINUTES 53 SECONDS EAST 53.19 FEET TO A POINT; THENCE NORTH 48 DEGREES 47 MINUTES 19 SECONDS EAST 197.96 FEET TO A POINT; THENCE NORTH 47 DEGREES 57 MINUTES 17 SECONDS EAST 394.29 FEET TO A POINT; THENCE NORTH 49 DEGREES 08 MINUTES 58 SECONDS EAST 57.57 FEET TO A POINT; THENCE SOUTH 40 DEGREES 51 MINUTES 02 SECONDS EAST 87.83 FEET TO A POINT; THENCE NORTH 49 DEGREES 22 MINUTES 43 SECONDS EAST 314.88 FEET TO A POINT; THENCE SOUTH 28 DEGREES 35 MINUTES 52 SECONDS EAST 747.86 FEET TO A POINT; THENCE NORTH 61 DEGREES 54 MINUTES 14 SECONDS EAST 158.97 FEET TO THE POINT OF BEGINNING.

DENOTES AREA TO BE REZONED R-4C

DENOTES AREA TO BE REZONED B-3C

80 40 0 80 160
GRAPHIC SCALE IN FEET

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REZONING PLAN
FOR
VILLAGE AT DREAMING CREEK, PHASE II
LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
G.L. NO.	
FILE NO.	
DATE:	6/17/14
DRAWN BY:	PSB
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COMMONWEALTH OF VIRGINIA
P. SCOTT BAILEY
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2 OF 2

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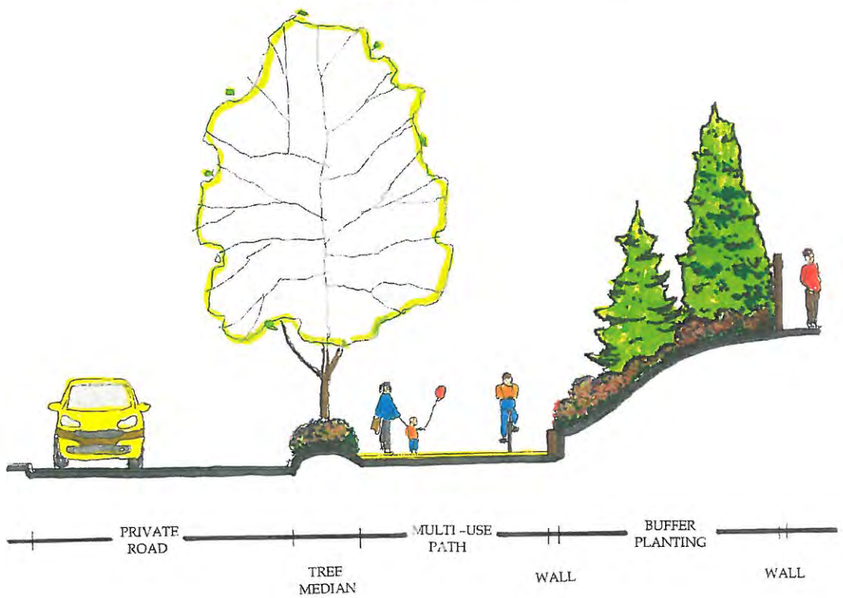
BUFFER CROSS SECTION

SCALE: 3/16" =1'



LANDSCAPE CONCEPT: BUFFER PLAN VIEW

SCALE: 1"=10' +/-

REVISIONS	BY

VILLAGE AT DREAMING CREEK

LYNCHBURG, VIRGINIA

COMMONWEALTH OF VIRGINIA
CAMILL CROSWHITE
No. 1010
LANDSCAPE ARCHITECT

Crowther
LANDSCAPE ARCHITECTURE, LTD
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CONCEPTUAL SITE PLAN
FOR
VILLAGE AT DREAMING CREEK, PHASE II
LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
G.L. NO.	
FILE NO.	
DATE:	6/17/14
DRAWN BY:	PSB
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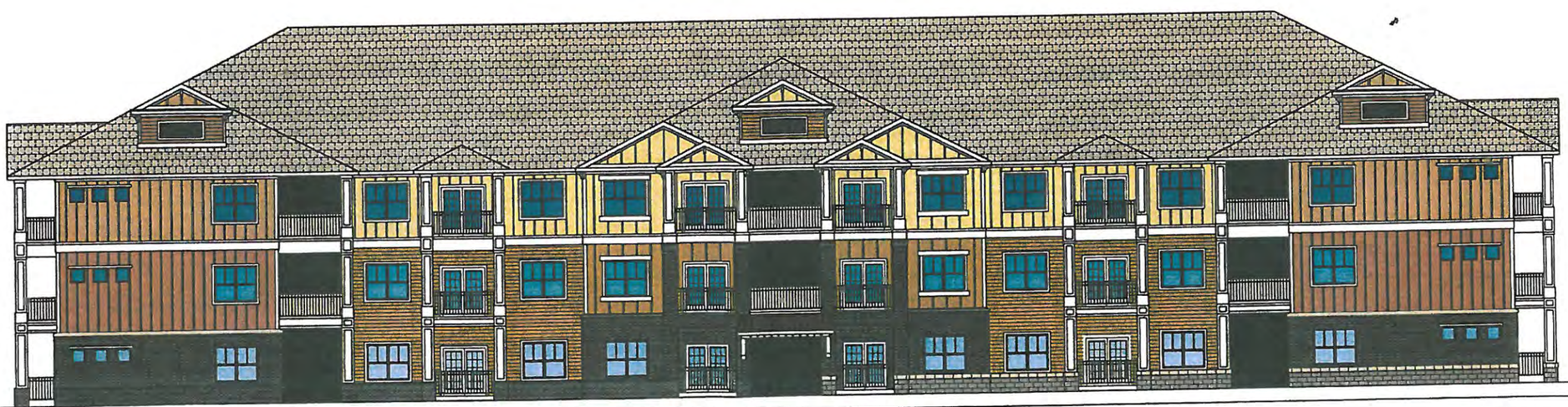
URBAN
ARCHITECTURAL GROUP
704 841.1899 tel 841.8440 fax
1242 Mann Drive Suite 200
Matthews, North Carolina 28105
www.UrbanAIA.com

Seals:

02 BUILDING TYPE II ELEVATION- Masonry Comparison @ Widely-Spaced Batten
1/8" = 1'-0"



01 BUILDING TYPE II ELEVATION- Masonry Comparison
1/8" = 1'-0"

Date:	May 14, 2013
Project Number:	2013-13
Issued For:	

BUILDING TYPE II ELEVATIONS

ELEVATION

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02 **ELEVATION:** 42 Unit Side

1/8" = 1'-0"

01 **ELEVATION:** 42 Unit Front

1/8" = 1'-0"

URBAN
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841.8440 fax
1242 Mann Drive Suite 200
Matthews, North Carolina 28105
www.UrbanAIA.com

Seals:

DREAMING CREEK APARTMENTS

Timberlake Road
City of Lynchburg, Virginia

Date:	May 20, 2014
Project Number:	2014-39
Issued For:	
Construction Only:	

4-STORY ELEVATION

A3.1b

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02 ELEVATION:

01 ELEVATION:

ARCHITECTURAL GROUP

Seal:

DREAMING CREEK APARTMENTS

Timberlake Road
City of Lynchburg, Virginia

Date:	May 30, 2014
Project Number:	20-401
Issued For:	
Construction Only:	

3-STORY ONLY ELEVATION

A3.1

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CONCEPTUAL SITE PLAN
FOR
VILLAGE AT DREAMING CREEK, PHASE II
LYNCHBURG, VIRGINIA

PROJECT NO.	20130679
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1 OF 1

Jun 11, 2014 - 2:10pm \\Data01\projects\20130679\CAD\dwg\Rezoning Plan - Phase II - Full Site.dwg

Planning Commission Public Hearing
Village at Dreaming Creek
June 11, 2014

PLEASE PRINT

NAME	ADDRESS	PHONE	IN FAVOR	IN OPPOSITION	NEUTRAL
Ted Gadd	2306 Atherton				
Gary Case	2910 Sequoia Dr				
Stan Ewner					
Albert Billingsly	1115 Moreview Dr				
MARTHA HICKS	108 Yorkshire				
[illegible]	106 Buckingham Dr				
William Hedrick	108 Buckingham Dr				
[illegible]	105 Buckingham Dr				
TOM JONES	230 CHESTERFIELD PL				
Jill Torrence	102 Buckingham Dr				
Josef Shaler	123 Brunswick				
Duane Fritz	113 Kenridge Pl				
[illegible]	111 Huntsdale				
Ruth [illegible]	210 Buckingham				

TRANSPORTATION IMPACT ANALYSIS
Prepared for Belleau Wood Development, LLC

TIMBERLAKE ROAD AND CANDLEWOOD COURT DEVELOPMENT

Lynchburg, VA

Project Number: 13-366
Date: 1/15/14

DAVENPORT
www.davenportworld.com

DAVENPORT

Transportation Impact Analysis

Timberlake Road and Candlewood Court Development
Lynchburg, VA

Prepared for Belleau Wood Development, LLC
January 15, 2014

SEAL

Analysis by: Mary Morgan P.E.,
Trent Moody

Drafting/Graphics by: Mary Morgan P.E.,
Trent Moody

Reviewed by: Frank Amenya, P.E., PTOE

Sealed by: Mary Morgan P.E.

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Main: 336.744.1636; Fax: 336.458.9377

Serving the So

Timberlake Road and Candlewood Court Development – Transportation Impact Analysis
Lynchburg, VA
Prepared for Belleau Wood Development, LLC
January 15, 2014

Executive Summary

The proposed Timberlake Road and Candlewood Court Development is located on the south side of Timberlake Road (BUS U.S. Rte 460) between the intersections of Candlewood Court and Old Graves Mill Road/ Dreaming Creek Drive in Lynchburg, Virginia. The exact land uses and sizes are not known at this time and have been assumed for analysis purposes. As currently planned, the site will consist of residential and retail uses. The site will be accessed by three (3) entrances on Timberlake Road and also have an interconnection to adjacent subdivision to the south. Figure 1 presents the site plan. Figures 2A and 2B present the site location map and vicinity map, respectively.

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate the impacts of both background traffic and new development traffic. The following intersections were included in the study:

- Timberlake Road at Proposed right-in-right out access (Site Access 1)
- Timberlake Road and Candlewood Court
- Timberlake Road at Proposed eastern full access (Site Access 2)
- Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road

The above-mentioned intersections were analyzed for the following scenarios:

- 2013 Existing Conditions
- 2018 Future No Build Conditions
- 2018 Future Build-Out Conditions
- 2018 Future Build-Out with Improvements (as necessary)

The build-out analysis year for this project was assumed to be 2018. The periods studied were weekday AM (7-9 am), PM (4-6 pm), and Saturday mid-day peak (11 am to 1 pm).

The City of Lynchburg was contacted to obtain background information and to ascertain the elements to be covered in the Transportation Impact Analysis (TIA). Information regarding the property was provided by Belleau Wood Development, LLC.

Level of Service Results

The results of the study are discussed by intersection below:

Timberlake Road at Proposed right-in-right out access (Site Access 1)

In the future build-out conditions, this proposed site access is expected to operate at LOS C in the AM, PM, and mid-day Saturday peaks. This site access meets the warrant for a right turn lane. We recommend the following improvements:

- Provide an eastbound right turn lane with 150 feet of storage and appropriate taper.
- This site access should be designed according to City of Lynchburg standards.

Timberlake Road and Candlewood Court

This signalized intersection currently operates at LOS A in the AM peak and LOS B in the PM and mid-day Saturday peaks. In 2018 future no build conditions, this is expected to remain unchanged. With the addition of proposed site traffic, LOS C is expected in the AM peak and LOS D in the PM and mid-day Saturday peaks. The Sim Traffic simulation indicates potential queuing issues. We recommend the following improvements:

- Provide an eastbound right turn lane with 200 feet of storage and appropriate taper.
- Extend the westbound left turn lane to 300 feet of storage, or the maximum available length.
- On the northbound approach of Candlewood Court Extension, provide a left turn lane and a left/through/right lane.
- Provide two entering lanes into the site on the Candlewood Court Extension.
- Modify signal and set the northbound and southbound approaches to split phasing.
- Modify signal to provide permitted plus protected phasing for the westbound left turn lane.
- Optimize cycle length and signal timing to accommodate future traffic volumes.

With these improvements in place, the intersection is expected to operate at LOS C during the AM, PM, and mid-day Saturday peaks.

Timberlake Road at Proposed eastern full access (Site Access 2)

The southbound approach of this intersection currently operates at LOS B during the AM, PM and mid-day Saturday peaks. This is expected to remain in future no build conditions. In future build-out conditions, the southbound approach is anticipated to operate at LOS C during the AM peak, LOS E during the PM peak, and LOS E during the mid-day Saturday peak. The northbound approach is anticipated to operate at LOS E during the AM peak, and LOS F during the PM and mid-day Saturday peaks. The following improvements are recommended:

- Given the level of delay anticipated at this site access and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration.
- Provide an eastbound right turn lane with 150 feet of storage and appropriate taper.
- This site access should be designed according to City of Lynchburg standards.

Left turning traffic in and out of the site at this access was reassigned to Candlewood Court. The future build volumes with Site Access 2 restricted to a right-in right-out are depicted in Figure 10. With these improvements in place, the northbound and southbound approaches are anticipated to operate at LOS B in the peak periods.

Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road

This signalized intersection currently operates at LOS B during the AM peak, and LOS C during the PM and mid-day Saturday peaks. This is expected to remain unchanged in future no build conditions. With the addition of site traffic, LOS C is anticipated during the AM peak and mid-day Saturday peak, and LOS D during the PM peak. The Sim Traffic simulation indicates potential queuing issues for the eastbound left turning movement. The following improvements are recommended:

- Extend the eastbound left turn lane to the full length of storage available, approximately 450 feet.

Level of Service Summary

Tables A through D present the summary of the level of service analysis.

DAVENPORT

Table A - Timberlake Road and Site Access 1 (RIRO)												
	AM Peak				PM Peak				Sat. Midday Peak			
Unsignalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
NB Approach			C (16.9)	C (16.1)			C (17.4)	C (16.3)			C (17.2)	C (16.0)
LOS (delay in seconds)												

DAVENPORT

Table B - Timberlake Road and Candlewood Ct.												
	AM Peak				PM Peak				Sat. Midday Peak			
Signalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
EB L	A (4.4)	A (4.3)	A (4.9)	B (11.2)	B (10.2)	B (10.7)	B (17.4)	C (221.)	A (6.8)	A (7.0)	A (6.4)	B (14.7)
EB T	A (6.9)	A (6.9)	A (8.1)	D (35.7)	A (5.7)	A (5.7)	A (6.4)	C (31.6)	A (6.8)	A (6.9)	A (6.4)	C (33.7)
EBR	-	-	-	B (15.1)	-	-	-	B (17.1)	-	-	-	B (17.4)
EB Overall	A (6.9)	A (6.9)	A (8.0)	C (34.0)	A (6.1)	A (6.2)	A (7.3)	C (29.3)	A (6.8)	A (6.9)	A (6.4)	C (31.1)
WB U	A (6.4)	A (6.3)	-	-	A (8.0)	A (7.9)	-	-	A (8.5)	A (8.5)	-	-
WB LU	-	-	E (59.9)	C (22.9)	-	-	F (119.9)	D (45.4)	-	-	F (129.6)	D (44.1)
WB T	A (7.9)	A (7.8)	B (10.7)	B (15.0)	B (18.8)	B (19.3)	B (14.7)	C (26.7)	B (14.1)	B (14.3)	B (11.2)	B (18.1)
WB R	A (6.3)	A (6.2)	A (8.5)	B (11.8)	A (7.5)	A (7.4)	A (7.4)	B (11.5)	A (8.0)	A (7.9)	A (7.3)	B (11.5)
WB Overall	A (7.9)	A (7.8)	B (18.6)	B (16.8)	B (18.3)	B (18.7)	C (37.6)	C (29.6)	B (13.8)	B (13.9)	C (30.2)	C (23.8)
NB L				D (45.6)				E (57.2)				E (67.0)
NB LTR				C (33.3)				D (37.2)				D (39.0)
NB Overall			E (79.8)	D (39.7)			F (212.1)	D (47.6)			F (264.4)	D (53.6)
SB LR	B (16.8)	B (17.2)	-	-	C (21.7)	C (22.3)	-	-	B (16.1)	B (16.4)	-	-
SB LTR			C (24.0)	D (38.9)			C (33.4)	E (74.2)			C (31.1)	D (50.7)
SB Overall	B (16.8)	B (17.2)	C (24.0)	D (38.9)	C (21.7)	C (22.3)	C (33.4)	E (74.2)	B (16.1)	B (16.4)	C (31.1)	D (50.7)
Intersection Overall	A (7.3)	A (7.3)	C (20.0)	C (29.0)	B (13.2)	B (13.5)	D (36.9)	C (32.4)	B (10.4)	B (10.5)	D (47.5)	C (31.1)

LOS (delay in seconds)

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Table C - Timberlake Road and Site Access 2												
	AM Peak				**PM Peak**				**Sat. Midday Peak**			
Unsignalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
NB Approach			E (39.7)	B (11.2)			F (683.8)	B (10.6)			F (354.1)	B (10.8)
SB Approach	B (11.1)	B (11.2)	C (15.8)	B (11.6)	B (12.3)	B (12.6)	D (25.9)	B (13.0)	B (12.5)	B (12.7)	E (35.2)	B (14.0)
LOS (delay in seconds)												

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Table D - Timberlake Road and Old Graves Mill Road/Dreaming Creek Road												
	AM Peak				PM Peak				Sat. Midday Peak			
Signalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
EB L	B (13.1)	B (13.7)	B (16.7)	B (16.7)	D (45.1)	D (50.7)	E (71.9)	E (71.9)	B (17.9)	C (20.9)	D (50.7)	D (50.7)
EB T	B (15.1)	B (15.3)	B (16.5)	B (16.5)	B (17.0)	B (18.0)	C (20.6)	C (20.6)	B (12.8)	B (12.8)	B (14.2)	B (14.2)
EB R	B (11.0)	B (11.0)	B (11.1)	B (11.1)	B (13.1)	B (13.8)	B (14.7)	B (14.7)	A (9.9)	A (9.9)	B (10.3)	B (10.3)
EB Overall	B (14.5)	B (14.8)	B (16.5)	B (16.5)	C (23.8)	C (25.9)	C (32.5)	C (32.5)	B (14.0)	B (14.9)	C (23.2)	C (23.2)
WB L	B (18.1)	B (18.3)	B (18.7)	B (18.7)	B (19.9)	B (19.8)	C (21.7)	C (21.7)	B (17.7)	B (18.0)	B (17.5)	B (17.5)
WB T	C (22.5)	C (22.9)	C (25.1)	C (25.1)	C (33.2)	D (35.0)	E (57.2)	E (57.2)	C (25.9)	C (26.7)	C (29.3)	C (29.3)
WB R	B (19.2)	B (19.4)	C (20.4)	C (20.4)	C (21.9)	C (22.4)	C (24.2)	C (24.2)	B (19.0)	B (19.4)	B (19.3)	B (19.3)
WB Overall	C (21.9)	C (22.2)	C (24.3)	C (24.3)	C (31.6)	C (33.2)	D (52.8)	D (52.8)	C (25.0)	C (25.7)	C (28.0)	C (28.0)
NB Overall	C (34.5)	D (35.4)	D (40.5)	D (40.5)	E (57.2)	E (58.7)	E (55.7)	E (55.7)	D (45.1)	D (46.0)	D (48.9)	D (48.9)
SB LT	C (30.6)	C (31.3)	D (36.3)	D (36.3)	D (51.0)	D (52.1)	D (54.3)	D (54.3)	D (42.9)	D (44.7)	D (49.3)	D (49.3)
SB R	B (16.8)	B (17.0)	B (18.8)	B (18.8)	C (29.3)	C (30.0)	C (32.7)	C (32.7)	C (22.8)	C (23.1)	C (26.4)	C (26.4)
SB Overall	C (23.0)	C (23.4)	C (26.0)	C (26.0)	D (37.8)	D (38.6)	D (40.7)	D (40.7)	C (31.5)	C (32.4)	D (35.4)	D (35.4)
Intersection Overall	B (18.4)	B (18.7)	C (20.8)	C (20.8)	C (31.0)	C (32.6)	D (43.0)	D (43.0)	C (22.0)	C (22.8)	C (27.7)	C (27.7)
LOS (delay in seconds)												

Queuing Analysis

A queuing analysis for the intersections was conducted based on max and 95th percentile queuing results from Sim Traffic software for the study intersections. Existing storage bays at the study intersections were compared to future storage requirements to determine if any additional storage would be required. The results of the queuing analysis are summarized in the tables below. The tables also show where additional storage has been recommended.

Timberlake Road and Old Graves Mill Road/
Dreaming Creek Road looking east

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Table E - Timberlake Road and Site Access 1 (RIRO) Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB T	-	-	31	-	-	-	-	-	-	FULL	
NB R	-	-	53	-	-	78	-	-	56	FULL	
95th Percentile Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB T	-	-	10	-	-	-	-	-	-	FULL	
NB R	-	-	53	-	-	63	-	-	53	FULL	

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Table F - Timberlake Road at Candlewood Court Queue Analysis

Max Queue Length (ft)

	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	31	29	27	186	96	90	93	75	199	75	75
EB T	118	178	226	153	177	223	119	162	263	FULL	
EB T	137	115	-	184	181	-	140	119	-	FULL	
EB TR	-	-	224	-	-	253	-	-	193	FULL	
WB U	31	26	-	124	125	-	53	54	-	75	
WB UL	-	-	125	-	-	125	-	-	125	75	300
WB T	115	133	246	440	518	522	245	244	510	FULL	
WB T	134	157	242	459	543	560	278	292	512	FULL	
WB R	31	31	28	175	175	175	175	175	175	125	125
NB LR	-	-	412	-	-	378	-	-	413	FULL	
SB LR	20	21	28	148	66	138	64	68	87	FULL	

95th Percentile Queue Length (ft)

	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	29	25	30	109	83	79	75	62	120	75	75
EB T	100	139	189	124	145	188	126	140	198	FULL	
EB T	105	97	-	114	129	-	115	117	-	FULL	
EB TR	-	-	186	-	-	187	-	-	169	FULL	
WB U	10	12	-	76	98	-	45	47	-	75	
WB UL	-	-	139	-	-	140	-	-	133	75	300
WB T	86	96	200	377	458	555	220	220	541	FULL	
WB T	122	114	196	402	481	566	245	247	512	FULL	
WB R	20	18	19	149	152	139	126	72	94	125	125
NB LR	-	-	421	-	-	378	-	-	389	FULL	
SB LR	15	16	26	82	63	113	57	53	61	FULL	

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Table G - Timberlake Road and Site Access 2 Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	54	72	110	159	174	174	113	141	136	75	75
EB TR	-	-	-	-	-	22	-	-	-	FULL	
WB T	-	-	-	-	29	-	-	-	-	FULL	
WB LT	-	-	191	-	-	484	-	-	303	FULL	
WB TR	-	22	120	22	94	488	22	-	287	FULL	
NB LR	-	-	141	-	-	240	-	-	240	FULL	
SB LR	54	49	55	119	118	249	118	158	138	FULL	
95th Percentile Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	52	54	79	144	157	152	95	112	116	75	75
EB TR	-	-	-	-	-	15	-	-	-	FULL	
WB T	-	-	-	-	12	-	-	-	-	FULL	
WB LT	-	-	138	-	-	457	-	-	244	FULL	
WB TR	-	7	63	13	43	439	7	-	183	FULL	
NB LR	-	-	116	-	-	228	-	-	274	FULL	
SB LR	45	40	54	108	106	269	85	104	106	FULL	

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Table H - Timberlake Road and Old Graves Mill Road/Dreaming Creek Road Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	200	244	348	255	344	267	308	289	224	250	Maximum Allowable
EB T	160	156	428	270	372	288	182	163	211	FULL	
EB T	179	172	220	324	310	301	224	199	222	FULL	
EB R	26	29	186	43	224	199	52	28	200	175	175
WB L	47	26	45	199	199	199	27	25	45	100	100
WB T	217	137	237	366	398	345	328	287	326	FULL	
WB T	171	136	205	366	398	374	348	330	328	FULL	
WB R	67	52	67	294	265	250	54	71	250	215	215
NB LTR	110	106	109	131	107	109	86	107	86	FULL	
SB LT	222	136	138	218	242	216	218	156	204	FULL	
SB R	86	51	106	229	218	216	151	204	175	FULL	
95th Percentile Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	168	184	258	201	251	242	193	229	224	250	Maximum Allowable
EB T	159	141	226	221	267	208	152	139	190	FULL	
EB T	183	175	189	236	273	226	176	164	211	FULL	
EB R	17	9	64	38	84	74	31	23	75	175	175
WB L	30	24	38	125	74	94	21	14	33	100	100
WB T	163	119	190	404	420	335	261	255	381	FULL	
WB T	146	122	181	423	431	349	270	274	377	FULL	
WB R	49	46	51	281	232	248	55	63	248	215	215
NB LTR	85	71	89	116	99	100	56	81	80	FULL	
SB LT	135	113	140	225	242	258	183	158	182	FULL	
SB R	64	49	83	221	232	248	115	158	151	FULL	

Summary and Conclusion

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate the impacts of both background traffic and new development traffic.

The exact land uses and sizes are not known at this time and have been assumed for analysis purposes. As currently planned, the site will consist of residential and retail uses. The ITE trip generation indicates that based on the current site plan, the Timberlake Road and Candlewood Court Development has a trip generation potential of 11,333 net new trips per day.

A right turn lane is recommended at Site Access 1. Given the level of delay anticipated at Site Access 2 and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration. A right turn lane is also recommended for this site access.

At the proposed access at Timberlake Road and Candlewood Court, it is recommended to extend the existing westbound left turn lane to 300 feet of storage, or the maximum available length. An eastbound right turn lane is also recommended. In addition, signal modification and optimization has been recommended in order to accommodate future traffic volumes.

At the intersection of Timberlake Road and Old Graves Mill Road/Dreaming Creek Road, it is recommended to extend the existing eastbound left turn lane to the full storage length available. This will better accommodate the project queue lengths at the intersection.

In conclusion, this study has determined the potential traffic impacts of this development and identified transportation improvements that will be required to accommodate the impacts of both background traffic and new development traffic. The recommended improvements are summarized in Table I on the following page and are illustrated in Figure 11.

Table I - Recommended Improvement Summary	
Timberlake Road at Proposed right-in-right out access (Site Access 1)	• Provide an eastbound right turn lane with 150 feet of storage and appropriate taper. • This site access should be designed according to City of Lynchburg standards.
Timberlake Road and Candlewood Court	• Provide an eastbound right turn lane with 200 feet of storage and appropriate taper. • Extend the westbound left turn lane to 300 feet of storage, or the maximum available length. • On the northbound approach of Candlewood Court Extension, provide a left turn lane and a left/through/right lane. • Provide two entering lanes into the site on the Candlewood Court Extension. • Modify signal and set the northbound and southbound approaches to split phasing. • Modify signal to provide permitted plus protected phasing for the westbound left turn lane. • Optimize cycle length and signal timing to accommodate future traffic volumes.
Timberlake Road at Proposed eastern full access (Site Access 2)	• Given the level of delay anticipated at this site access and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration. • Provide an eastbound right turn lane with 150 feet of storage and appropriate taper. • This site access should be designed according to City of Lynchburg standards.
Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road	• Extend the eastbound left turn lane to the full length of storage available, approximately 450 feet.

Timberlake Road and Candlewood Court Development – Transportation Impact Analysis
Lynchburg, VA
Prepared for Belleau Wood Development, LLC
January 15, 2014

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Timberlake Road and Candlewood Court Development – Transportation Impact Analysis
Lynchburg, VA
Prepared for Belleau Wood Development, LLC
January 15, 2014

1.0 Introduction

The proposed Timberlake Road and Candlewood Court Development is located on the south side of Timberlake Road (BUS U.S. Rte 460) between the intersections of Candlewood Court and Old Graves Mill Road/ Dreaming Creek Drive in Lynchburg, Virginia. The exact land uses and sizes are not known at this time and have been assumed for analysis purposes. As currently planned, the site will consist of residential and retail uses. The site will be accessed by three (3) entrances on Timberlake Road and also have an interconnection to adjacent subdivision to the south. Figure 1 presents the site plan. Figures 2A and 2B present the site location map and vicinity map, respectively.

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate the impacts of both background traffic and new development traffic. The following intersections were included in the study:

- Timberlake Road at Proposed right-in-right out access (Site Access 1)
- Timberlake Road and Candlewood Court
- Timberlake Road at Proposed eastern full access (Site Access 2)
- Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road

The above-mentioned intersections were analyzed for the following scenarios:

- 2013 Existing Conditions
- 2018 Future No Build Conditions
- 2018 Future Build-Out Conditions
- 2018 Future Build-Out with Improvements (as necessary)

The build-out analysis year for this project was assumed to be 2018. The periods studied were weekday AM (7-9 am), PM (4-6 pm), and Saturday mid-day peak (11 am to 1 pm).

The City of Lynchburg was contacted to obtain background information and to ascertain the elements to be covered in the Transportation Impact Analysis (TIA). Information regarding the property was provided by Belleau Wood Development, LLC.

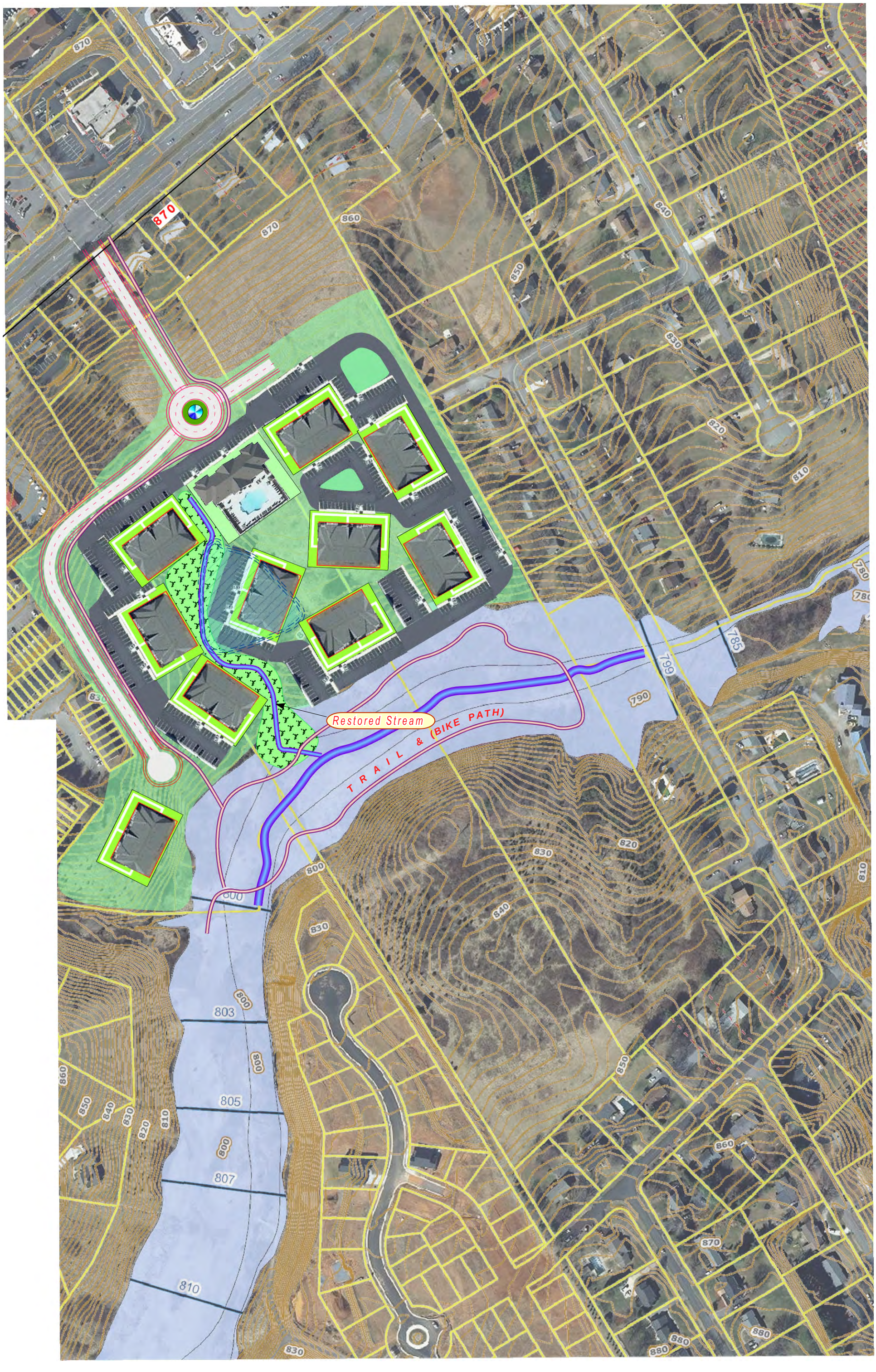
870
Restored Stream
TRAIL & (BIKE PATH)
803
805
807
810
785
799
790
800

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FIGURE 2A
SITE LOCATION MAP

SITE INDICATOR

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FIGURE 2B
VICINITY MAP

STUDY INTERSECTIONS
EXISTING
PROPOSED

2.0 Existing Conditions

2.1 Inventory

A field investigation was conducted by DAVENPORT staff to determine the existing roadway conditions in the study area. Table 2.1 presents a summary of this review. Figure 3 illustrates the existing lane geometry.

Table 2.1 - Street Inventory

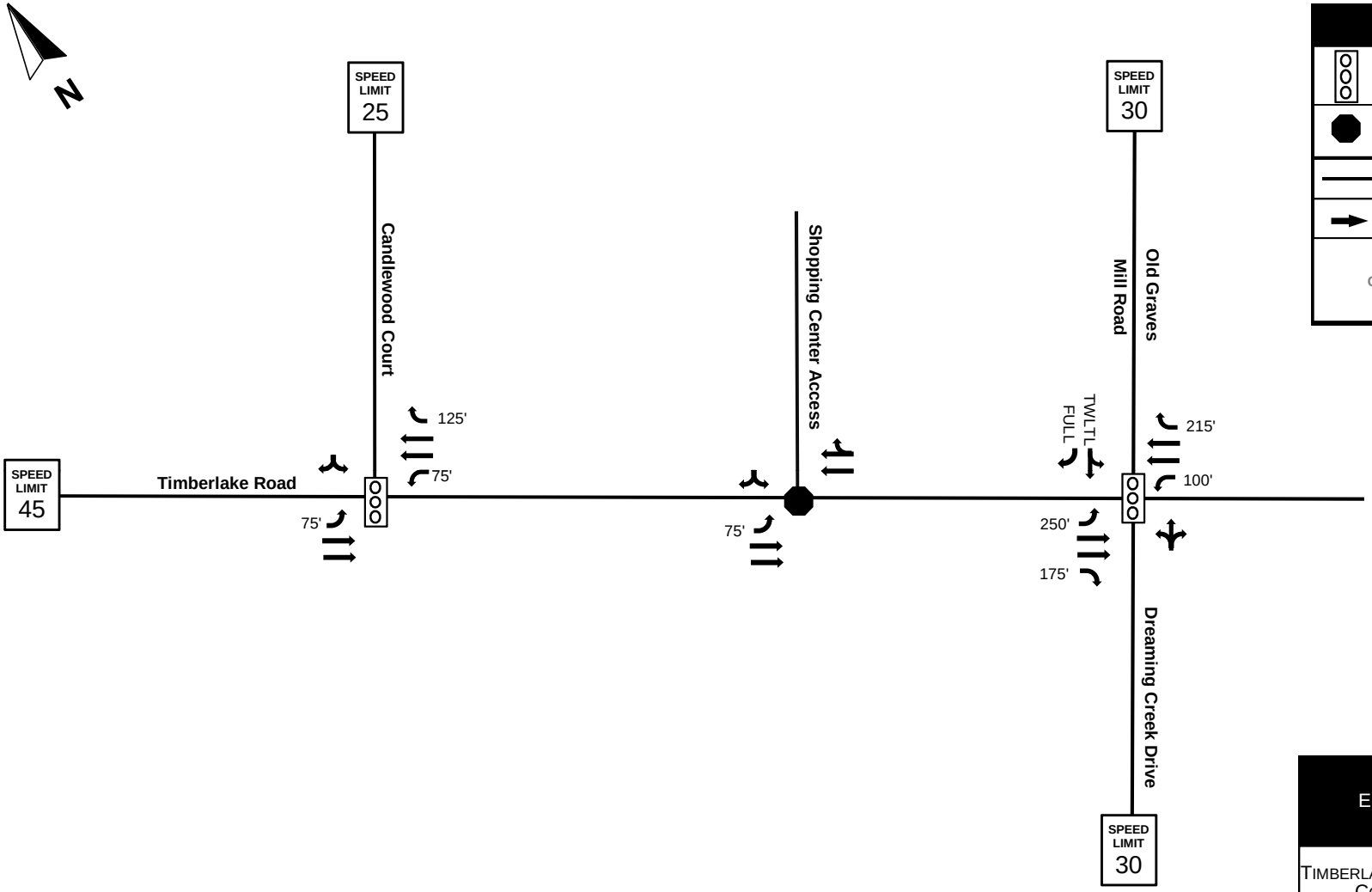
Facility Name	Route #	Typical Cross Section	Pavement Width	Speed Limit	Maintained By
Timberlake Road	BUS US 460	4-lane divided	Approx. 70'	45 MPH	City of Lynchburg
Candlewood Court	N/A	2-lane undivided	Approx. 26'	25 MPH	City of Lynchburg
Old Graves Mill Road	N/A	2-lane undivided	Approx. 35'	35 MPH	City of Lynchburg
Dreaming Creek Drive	N/A	2-lane undivided	Approx. 24'	25 MPH	City of Lynchburg

2.2 Existing Traffic Volumes

Existing traffic volumes for this project were collected by DAVENPORT staff. Table 2.2 below contains the dates these counts were conducted. Figure 4 shows existing AM and PM peak hour and Saturday mid-day peak hour volumes. To account to variations of traffic volumes during the different dates of data collection, existing traffic volumes were balanced up along Timberlake Road in order to provide a conservative analysis. The full reports for these volumes can be found in the appendix.

Table 2.2 - Traffic Volume Data

Count Location:	Date Taken:	By:
Timberlake Road and Candlewood Court	11/21/2013	DAVENPORT
Timberlake Road and Old Graves Mill Road/ Dreaming Creek Drive	7/16/2013	DAVENPORT
Timberlake Road and Existing Shopping Center/ Site Access 2	1/11/2014	DAVENPORT



LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	ROADWAY
	TRAFFIC MOVEMENT

BLACK = EXISTING
GREY = UNANALYZED
BLUE = PROPOSED

FIGURE 3
EXISTING LANE GEOMETRY

TIMBERLAKE ROAD & CANDLEWOOD COURT DEVELOPMENT
LYNCHBURG, VA

PROJECT NUMBER 13-366

DAVENPORT

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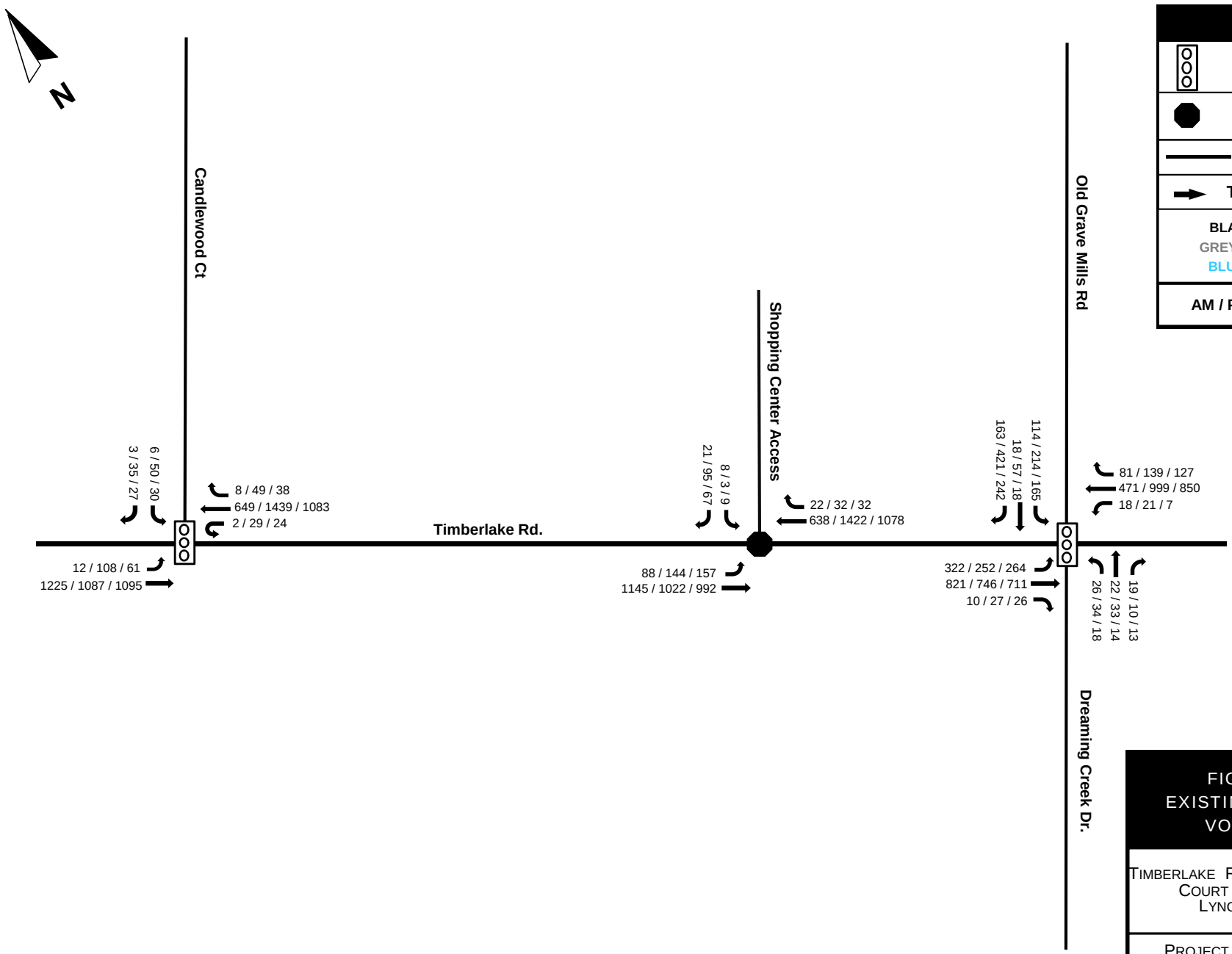

LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	ROADWAY
	TRAFFIC MOVEMENT

BLACK = EXISTING
GREY = UNANALYZED
BLUE = PROPOSED

AM / PM /SAT. MIDDAY

*** NOT TO SCALE ***

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FIGURE 4
EXISTING TRAFFIC VOLUMES

TIMBERLAKE ROAD & CANDLEWOOD COURT DEVELOPMENT
LYNCHBURG, VA

PROJECT NUMBER 13-366

DAVENPORT

3.0 Approved Developments and Committed Improvements

3.1 Approved Developments

Approved developments are developments that have been recently approved in the area, but not yet constructed. Per City of Lynchburg staff, there are no approved developments to be considered in this analysis, but the 0.5% annual growth rate would be sufficient to account for background traffic growth.

3.2 Committed Improvements

Committed Improvements are improvements that are planned by VDOT, City of Lynchburg, or a developer in the area, but not yet constructed. Per City of Lynchburg, there are no committed developments in the study area.

4.0 Methodology

4.1 Base Assumptions and Standards

In general, the analysis for this project was conducted utilizing commonly accepted NCDOT standards. The following table contains a summary of the base assumptions:

Table 4.1 - Assumptions	
Peak Hour Factor	0.92
Background Traffic Annual Growth Rate	0.5% per year for all roadways
Base Signal Timing/Phasing	Provided by City of Lynchburg
Analysis Software	Synchro/SimTraffic Version 7.0
Lane widths	12-feet
Truck percentages	2%

4.2 Trip Generation

As currently planned, this development will consist of residential and retail uses. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, was used to estimate the projected trips created by this development. Table 4.2 contains the results.

Mixed-use developments of this type are designed to combine a number of uses into one site, allowing people to live, work and shop in the same area and without dependence on a vehicle. This proposed development meets the criteria as defined in the ITE Trip Generation Handbook for a "multi-use" development. However, internal capture was not applied in order to provide a conservative analysis since the exact land uses and sizes of the development are unknown at this time.

Developments of this type also generate what are called "pass-by" trips. The ITE Trip Generation Manual defines "pass-by" trips as trips that are generated by the development, but are already on the adjacent roadway. These trips are not new trips, but are a part of the existing background traffic on Timberlake Road. As shown in Table 4.2, a "pass by" reduction of 40% was applied to retail trips.

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Table 4.2 - Trip Generation										
Summary of Multi-Use Trip Generation										
Average Weekday Driveway Volumes				24 Hour Two-Way	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
Land Use	ITE Land Code	Size		Volume	Enter	Exit	Enter	Exit	Enter	Exit
Apartments	220	324	Dwelling Units	2087	32	130	127	69	76	76
Senior Adult Housing - Attached	252	60	Dwelling Units	200	4	8	9	7	11	8
Convenience Market with Gasoline Pumps	853	16	VFP	8,682	133	132	153	152	82	78
Fast -Food Restaurant with Drive-Thru	934	3	Th.Sq.Ft. GFA	1,488	69	67	51	47	90	87
Fast -Food Restaurant with Drive-Thru	934	3	Th.Sq.Ft. GFA	1,488	69	67	51	47	90	87
High Turnover Sit-Down Restaurant	932	5	Th.Sq.Ft. GFA	636	30	24	29	20	37	33
Drive-In Bank	912	4	Drive Thru Lanes	557	22	15	65	68	56	59
Shopping Center	820	20	Th.Sq.Ft. GFA	2,386	36	22	98	106	160	147
Total Unadjusted Trips				**17,524**	**395**	**465**	**583**	**516**	**602**	**575**
40% AM/ 40% PM/ 40% Saturday Pass-by reduction (LUC 853)				3,473	53	53	61	61	33	31
40% AM/ 40% PM/ 40% Satuday Pass-by reduction (LUC 934)				1,190	55	54	41	38	72	70
40% AM/ 40% PM/ 40% Saturday Pass-by reduction (LUC 932)				254	12	10	12	8	15	13
40% AM/ 40% PM/ 40% Saturday Pass-by reduction (LUC 820)				954	14	9	39	42	64	59
40% AM/ 40% PM/ 40% Saturday Pass-by reduction (LUC 912)				223	9	6	26	27	22	24
Total Adjusted Trips				**11,429**	**251**	**334**	**404**	**340**	**396**	**379**

Note: Since the exact land uses and sizes of the development are unknown at this time, internal capture was not applied to the trip generation estimate in order to provide a conservative analysis.

4.3 Trip Distribution

Site trips for this proposed development were distributed based on the existing traffic patterns and engineering judgment. The directional distributions for the primary site trips are as follows:

- 45% to/from the east on Timberlake Road
- 45% to/from the west on Timberlake Road
- 10% to/from the north on Old Grave Mill Road

The primary trip distribution is shown in Figure 5A. 50% of pass-by trips were assumed to originate from the east on Timberlake Road and 50% of pass-by trips from the west on Timberlake Road. The pass-by trip distribution for this development is illustrated in Figure 5B.

4.4 Future No Build Traffic

The 2018 future no build traffic volumes were computed by applying a 0.5% compounded annual growth rate to the 2013 existing traffic volumes. Figure 6 shows the 2018 future no build traffic volumes for AM and PM peaks and mid-day Saturday peak.

4.5 Total Traffic

The 2018 build-out traffic volumes were obtained by summing 2018 future no build volumes and primary and pass-by site trips due to the proposed project. Primary site trips are illustrated in Figure 7. Pass-by trips are illustrated in Figure 8. The resulting build volume totals for weekday AM, PM peaks and mid-day Saturday peaks are illustrated in Figure 9. More information can be found in the Traffic Volume Data section of the appendix.

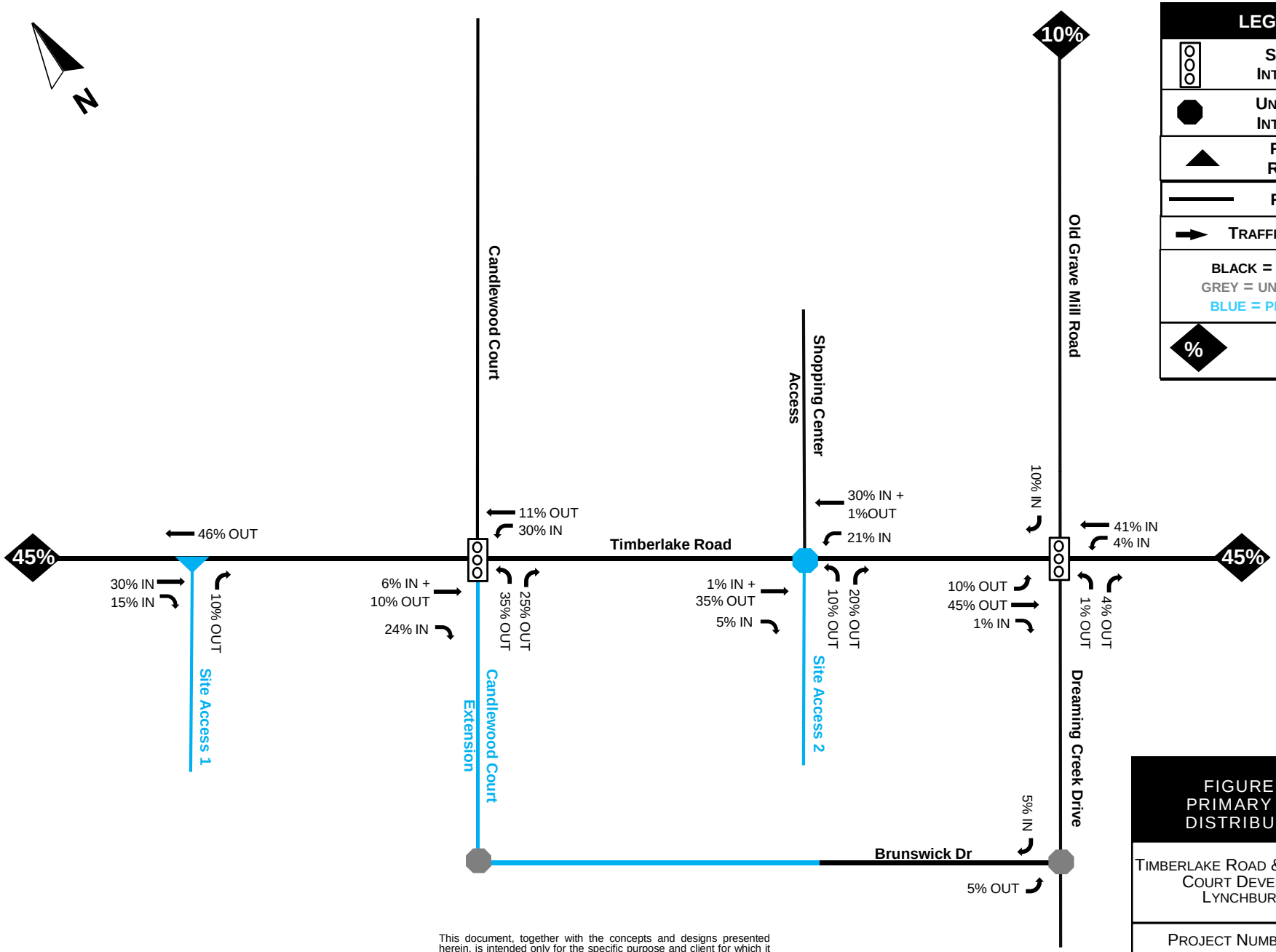

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FIGURE 5A
PRIMARY TRIP DISTRIBUTION

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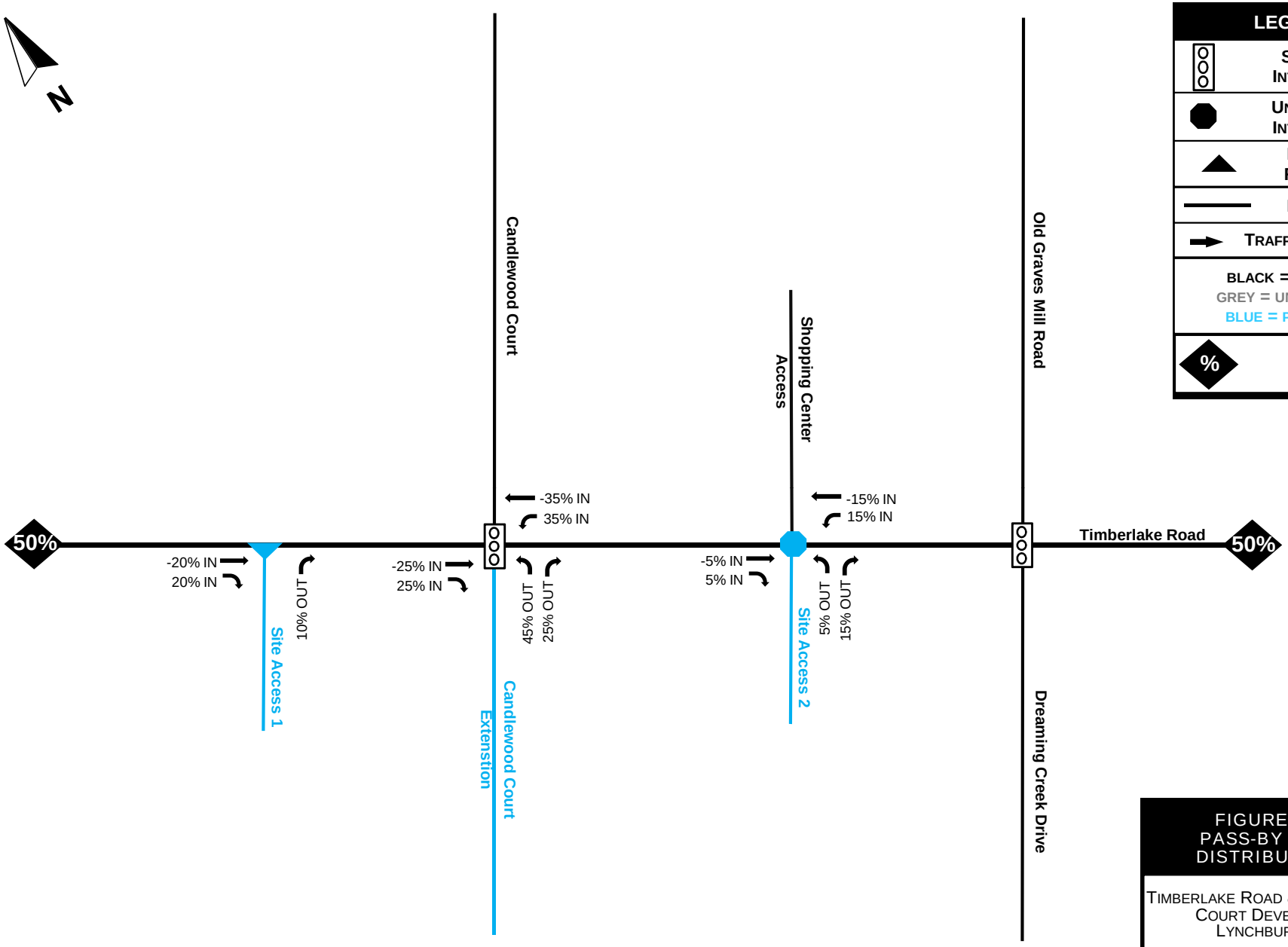

LEGEND	
	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	RIGHT IN / RIGHT OUT
	ROADWAY
	TRAFFIC MOVEMENT
BLACK = EXISTING GREY = UNANALYZED BLUE = PROPOSED	
%	ORIGIN NODE

FIGURE 5B
PASS-BY TRIP DISTRIBUTION

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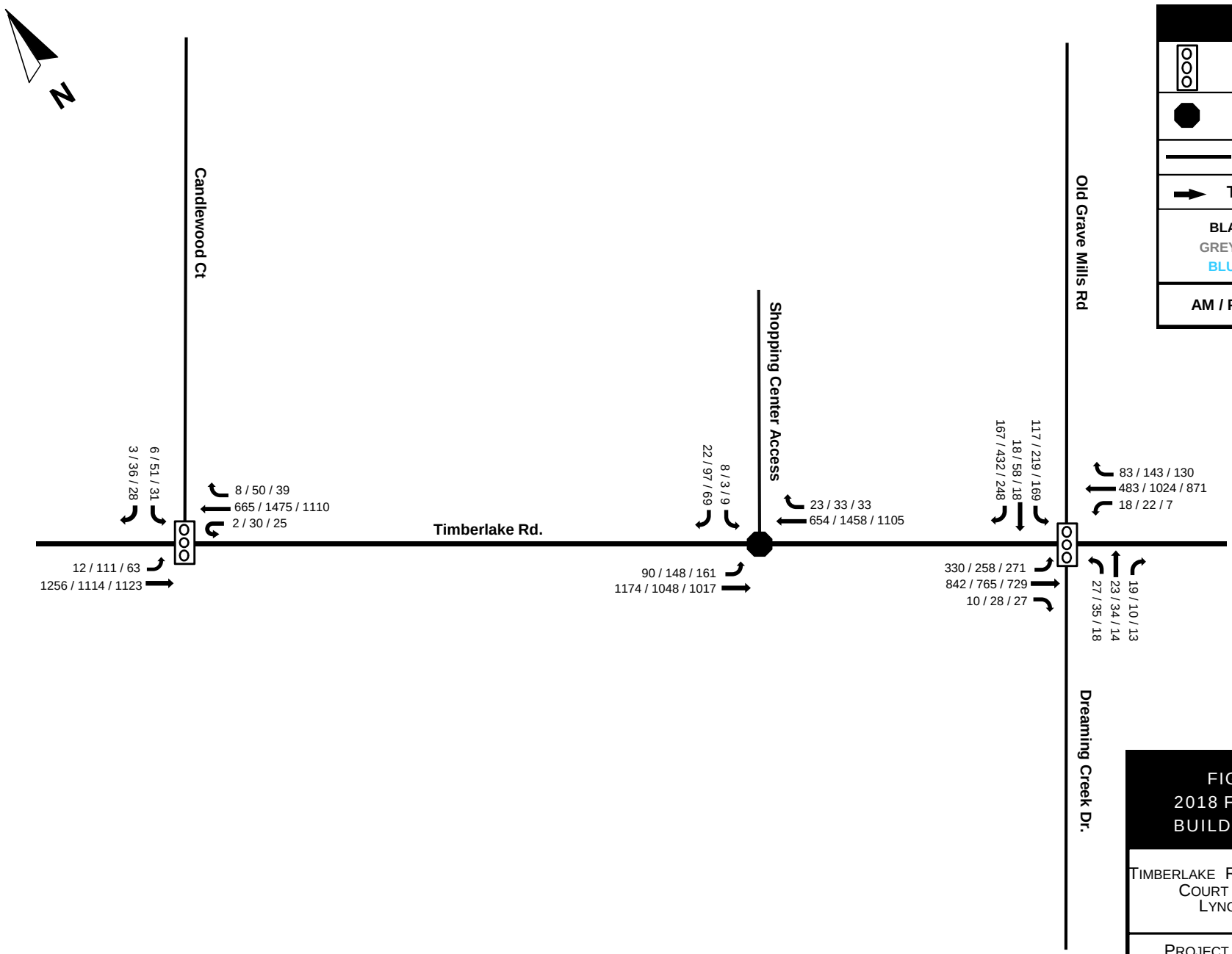

LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	ROADWAY
	TRAFFIC MOVEMENT

BLACK = EXISTING
GREY = UNANALYZED
BLUE = PROPOSED

AM / PM /SAT. MIDDAY

FIGURE 6
2018 FUTURE NO BUILD VOLUMES

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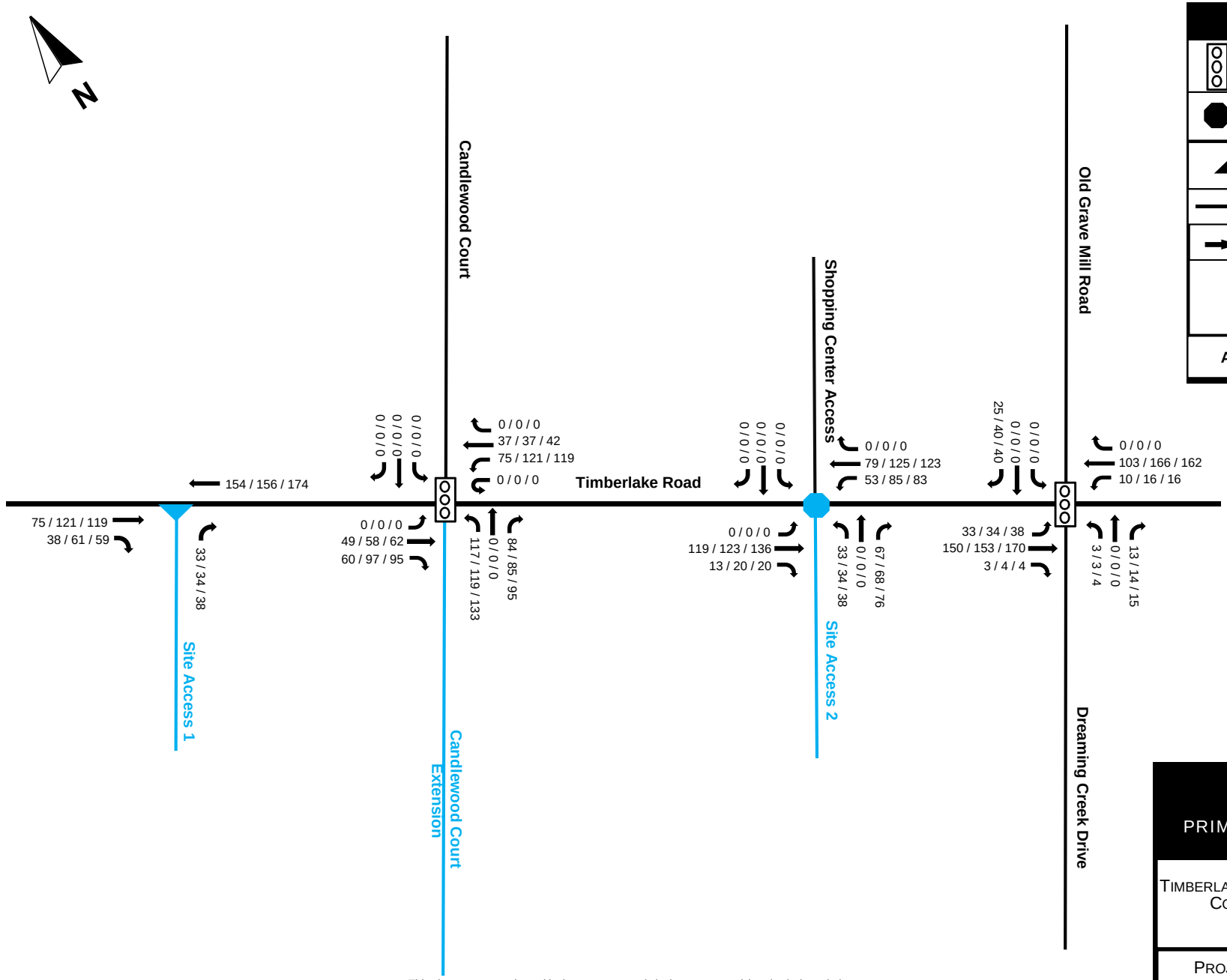

LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	RIGHT IN / RIGHT OUT
	ROADWAY
	TRAFFIC MOVEMENT
	BLACK = EXISTING GREY = UNANALYZED BLUE = PROPOSED
	AM / PM /SAT. MIDDAY

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FIGURE 7
PRIMARY SITE TRIPS

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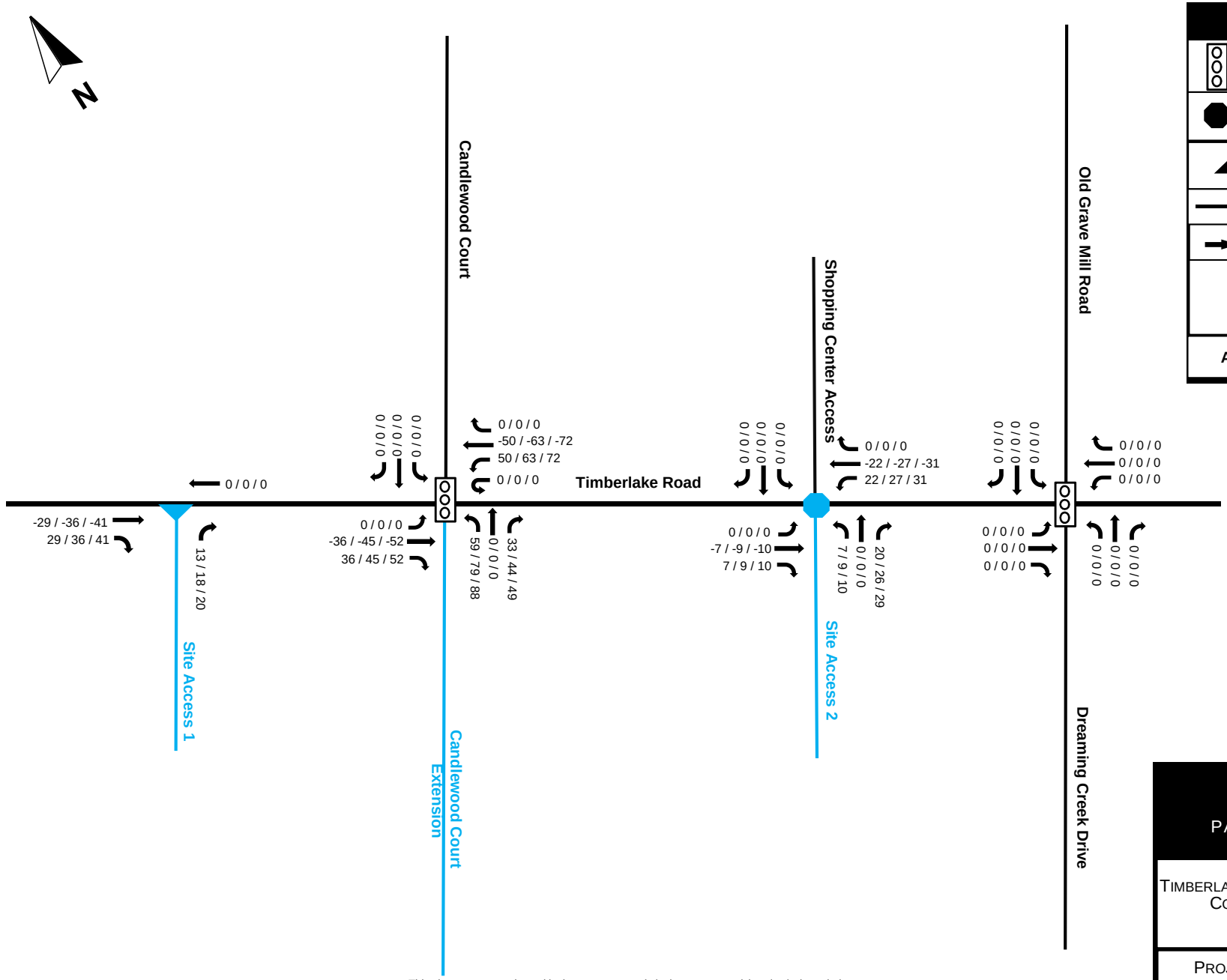

LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	RIGHT IN / RIGHT OUT
	ROADWAY
	TRAFFIC MOVEMENT
	BLACK = EXISTING GREY = UNANALYZED BLUE = PROPOSED
	AM / PM /SAT. MIDDAY

FIGURE 8
PASS-BY TRIPS

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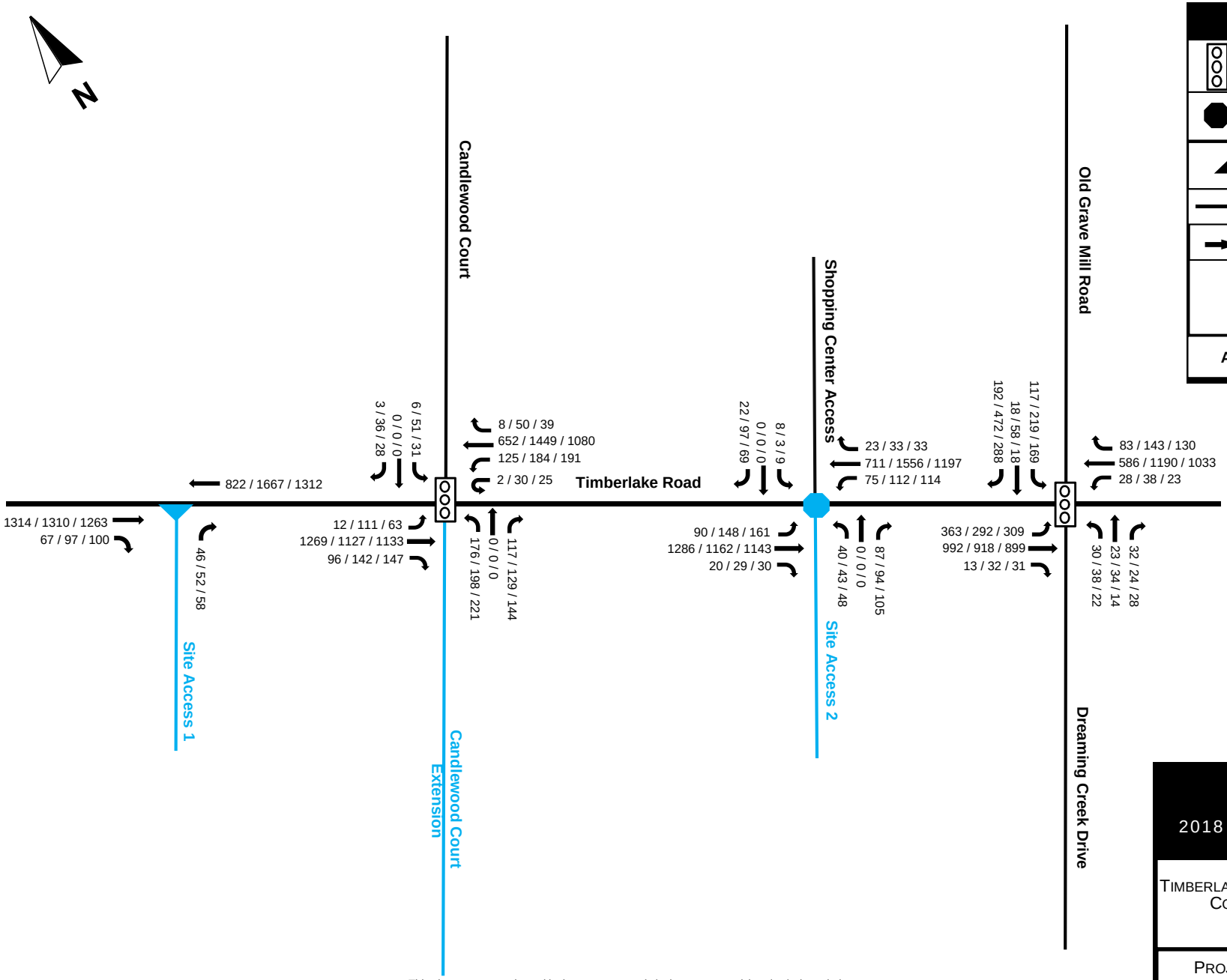

LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	RIGHT IN / RIGHT OUT
	ROADWAY
	TRAFFIC MOVEMENT
	BLACK = EXISTING GREY = UNANALYZED BLUE = PROPOSED
	AM / PM /SAT. MIDDAY

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FIGURE 9
2018 BUILD VOLUMES

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5.0 Capacity Analysis

5.1 Level of Service Evaluation Criteria

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" to measure how traffic operates in intersections and on roadway segments. There are currently six levels of service ranging from A to F. Level of service "A" represents the best conditions and Level of Service "F" represents the worst. Synchro Traffic Modeling software was used to determine the level of service for studied intersections. All worksheet reports from the analyses can be found in the Appendix.

Table 5.1 – Highway Capacity Manual

Levels of Service and Control Delay Criteria			
Signalized Intersection		**Unsignalized Intersection**	
Level of Service	Control Delay Per vehicle (sec)	Level of Service	Delay Range (sec)
A	≤ 10	A	≤ 10
B	> 10 and ≤ 20	B	> 10 and ≤ 15
C	> 20 and ≤ 35	C	> 15 and ≤ 25
D	> 35 and ≤ 55	D	> 25 and ≤ 35
E	> 55 and ≤ 80	E	> 35 and ≤ 50
F	> 80	F	> 50

5.2 Level of Service Results

The results of the study are discussed by intersection below:

Timberlake Road at Proposed right-in-right out access (Site Access 1)

In the future build-out conditions, this proposed site access is expected to operate at LOS C in the AM, PM, and mid-day Saturday peaks. This site access meets the warrant for a right turn lane. We recommend the following improvements:

- Provide an eastbound right turn lane with 150 feet of storage and appropriate taper.
- This site access should be designed according to City of Lynchburg standards.

Timberlake Road and Candlewood Court

This signalized intersection currently operates at LOS A in the AM peak and LOS B in the PM and mid-day Saturday peaks. In 2018 future no build conditions, this is expected to remain unchanged. With the addition of proposed site traffic, LOS C is expected in the AM peak and LOS D in the PM and mid-day Saturday peaks. The Sim Traffic simulation indicates potential queuing issues. We recommend the following improvements:

- Provide an eastbound right turn lane with 200 feet of storage and appropriate taper.
- Extend the westbound left turn lane to 300 feet of storage, or the maximum available length.
- On the northbound approach of Candlewood Court Extension, provide a left turn lane and a left/through/right lane.
- Provide two entering lanes into the site on the Candlewood Court Extension.
- Modify signal and set the northbound and southbound approaches to split phasing.
- Modify signal to provide permitted plus protected phasing for the westbound left turn lane.
- Optimize cycle length and signal timing to accommodate future traffic volumes.

With these improvements in place, the intersection is expected to operate at LOS C during the AM, PM, and mid-day Saturday peaks.

Timberlake Road at Proposed eastern full access (Site Access 2)

The southbound approach of this intersection currently operates at LOS B during the AM, PM and mid-day Saturday peaks. This is expected to remain in future no build conditions. In future build-out conditions, the southbound approach is anticipated to operate at LOS C during the AM peak, LOS E during the PM peak, and LOS E during the mid-day Saturday peak. The northbound approach is anticipated to operate at LOS E during the AM peak, and LOS F during the PM and mid-day Saturday peaks. The following improvements are recommended:

- Given the level of delay anticipated at this site access and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration.
- Provide an eastbound right turn lane with 150 feet of storage and appropriate taper.
- This site access should be designed according to City of Lynchburg standards.

Left turning traffic in and out of the site at this access was reassigned to Candlewood Court. The future build volumes with Site Access 2 restricted to a right-in right-out are depicted in Figure 10. With these improvements in place, the northbound and southbound approaches are anticipated to operate at LOS B in the peak periods.

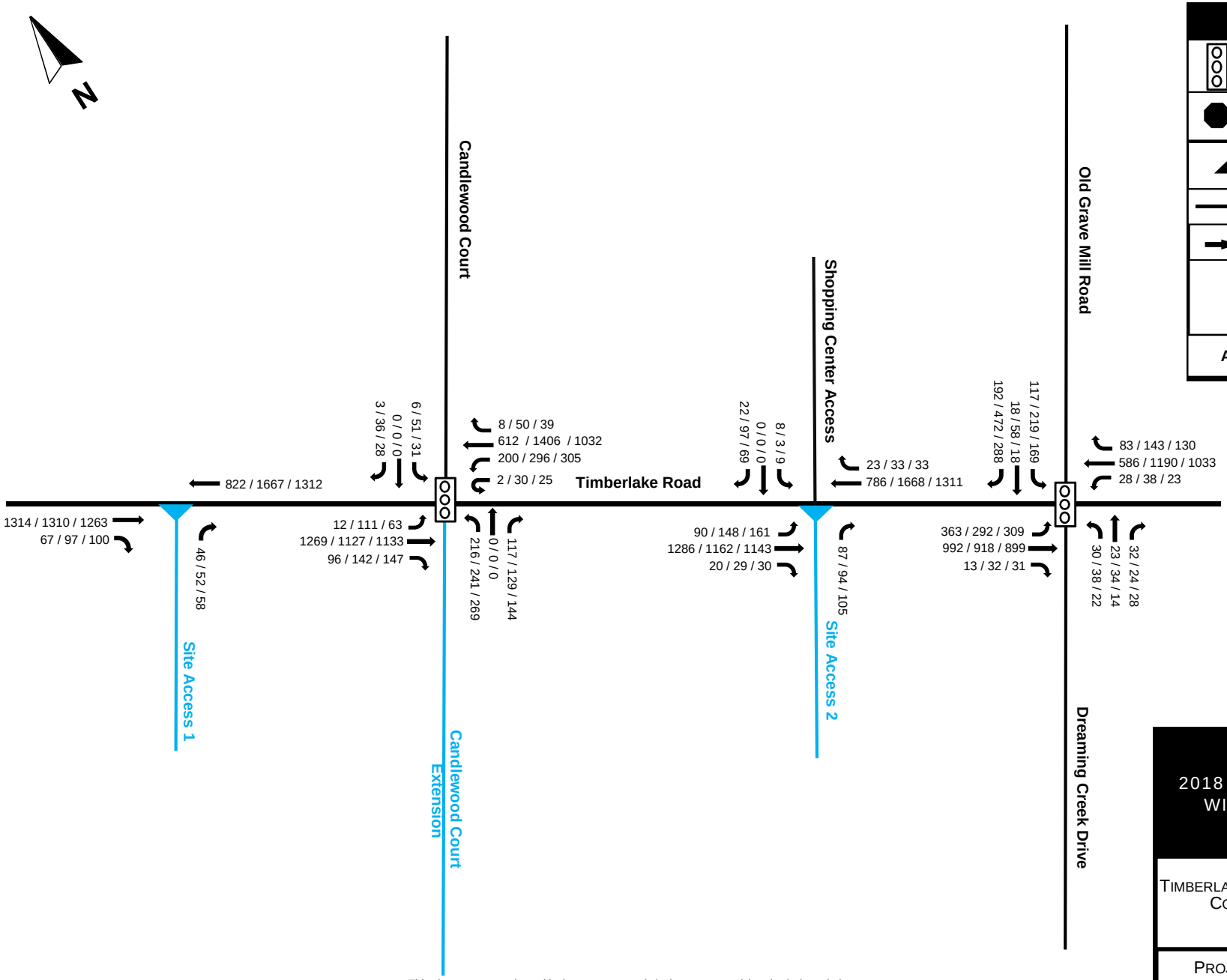
Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road

This signalized intersection currently operates at LOS B during the AM peak, and LOS C during the PM and mid-day Saturday peaks. This is expected to remain unchanged in future no build conditions. With the addition of site traffic, LOS C is anticipated during the AM peak and mid-day Saturday peak, and LOS D during the PM peak. The Sim Traffic simulation indicates potential queuing issues for the eastbound left turning movement. The following improvements are recommended:

- Extend the eastbound left turn lane to the full length of storage available, approximately 450 feet.

5.3 Level of Service Summary

Tables 5.2 through 5.6 present the summary of the level of service analysis.



LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	RIGHT IN / RIGHT OUT
	ROADWAY
	TRAFFIC MOVEMENT
	BLACK = EXISTING GREY = UNANALYZED BLUE = PROPOSED
	AM / PM /SAT. MIDDAY

FIGURE 10
2018 BUILD VOLUMES WITH RIRO SITE ACCESS 2

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Table 5.2 - Timberlake Road and Site Access 1 (RIRO)												
	AM Peak				**PM Peak**				**Sat. Midday Peak**			
Unsignalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
NB Approach			C (16.9)	C (16.1)			C (17.4)	C (16.3)			C (17.2)	C (16.0)
LOS (delay in seconds)												

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Table 5.3 - Timberlake Road and Candlewood Ct.												
	AM Peak				PM Peak				Sat. Midday Peak			
Signalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
EB L	A (4.4)	A (4.3)	A (4.9)	B (11.2)	B (10.2)	B (10.7)	B (17.4)	C (221.)	A (6.8)	A (7.0)	A (6.4)	B (14.7)
EB T	A (6.9)	A (6.9)	A (8.1)	D (35.7)	A (5.7)	A (5.7)	A (6.4)	C (31.6)	A (6.8)	A (6.9)	A (6.4)	C (33.7)
EBR	-	-	-	B (15.1)	-	-	-	B (17.1)	-	-	-	B (17.4)
EB Overall	A (6.9)	A (6.9)	A (8.0)	C (34.0)	A (6.1)	A (6.2)	A (7.3)	C (29.3)	A (6.8)	A (6.9)	A (6.4)	C (31.1)
WB U	A (6.4)	A (6.3)	-	-	A (8.0)	A (7.9)	-	-	A (8.5)	A (8.5)	-	-
WB LU	-	-	E (59.9)	C (22.9)	-	-	F (119.9)	D (45.4)	-	-	F (129.6)	D (44.1)
WB T	A (7.9)	A (7.8)	B (10.7)	B (15.0)	B (18.8)	B (19.3)	B (14.7)	C (26.7)	B (14.1)	B (14.3)	B (11.2)	B (18.1)
WB R	A (6.3)	A (6.2)	A (8.5)	B (11.8)	A (7.5)	A (7.4)	A (7.4)	B (11.5)	A (8.0)	A (7.9)	A (7.3)	B (11.5)
WB Overall	A (7.9)	A (7.8)	B (18.6)	B (16.8)	B (18.3)	B (18.7)	C (37.6)	C (29.6)	B (13.8)	B (13.9)	C (30.2)	C (23.8)
NB L				D (45.6)				E (57.2)				E (67.0)
NB LTR				C (33.3)				D (37.2)				D (39.0)
NB Overall			E (79.8)	D (39.7)			F (212.1)	D (47.6)			F (264.4)	D (53.6)
SB LR	B (16.8)	B (17.2)	-	-	C (21.7)	C (22.3)	-	-	B (16.1)	B (16.4)	-	-
SB LTR			C (24.0)	D (38.9)			C (33.4)	E (74.2)			C (31.1)	D (50.7)
SB Overall	B (16.8)	B (17.2)	C (24.0)	D (38.9)	C (21.7)	C (22.3)	C (33.4)	E (74.2)	B (16.1)	B (16.4)	C (31.1)	D (50.7)
Intersection Overall	A (7.3)	A (7.3)	C (20.0)	C (29.0)	B (13.2)	B (13.5)	D (36.9)	C (32.4)	B (10.4)	B (10.5)	D (47.5)	C (31.1)
LOS (delay in seconds)												

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Table 5.4 - Timberlake Road and Site Access 2												
	AM Peak				**PM Peak**				**Sat. Midday Peak**			
Unsignalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
NB Approach			E (39.7)	B (11.2)			F (683.8)	B (10.6)			F (354.1)	B (10.8)
SB Approach	B (11.1)	B (11.2)	C (15.8)	B (11.6)	B (12.3)	B (12.6)	D (25.9)	B (13.0)	B (12.5)	B (12.7)	E (35.2)	B (14.0)
LOS (delay in seconds)												

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Table 5.5 - Timberlake Road and Old Graves Mill Road/Dreaming Creek Road												
	AM Peak				PM Peak				Sat. Midday Peak			
Signalized	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements	2013 Existing	2018 Future No Build	2018 Future Build	2018 Future Build with Improvements
EB L	B (13.1)	B (13.7)	B (16.7)	B (16.7)	D (45.1)	D (50.7)	E (71.9)	E (71.9)	B (17.9)	C (20.9)	D (50.7)	D (50.7)
EB T	B (15.1)	B (15.3)	B (16.5)	B (16.5)	B (17.0)	B (18.0)	C (20.6)	C (20.6)	B (12.8)	B (12.8)	B (14.2)	B (14.2)
EB R	B (11.0)	B (11.0)	B (11.1)	B (11.1)	B (13.1)	B (13.8)	B (14.7)	B (14.7)	A (9.9)	A (9.9)	B (10.3)	B (10.3)
EB Overall	B (14.5)	B (14.8)	B (16.5)	B (16.5)	C (23.8)	C (25.9)	C (32.5)	C (32.5)	B (14.0)	B (14.9)	C (23.2)	C (23.2)
WB L	B (18.1)	B (18.3)	B (18.7)	B (18.7)	B (19.9)	B (19.8)	C (21.7)	C (21.7)	B (17.7)	B (18.0)	B (17.5)	B (17.5)
WB T	C (22.5)	C (22.9)	C (25.1)	C (25.1)	C (33.2)	D (35.0)	E (57.2)	E (57.2)	C (25.9)	C (26.7)	C (29.3)	C (29.3)
WB R	B (19.2)	B (19.4)	C (20.4)	C (20.4)	C (21.9)	C (22.4)	C (24.2)	C (24.2)	B (19.0)	B (19.4)	B (19.3)	B (19.3)
WB Overall	C (21.9)	C (22.2)	C (24.3)	C (24.3)	C (31.6)	C (33.2)	D (52.8)	D (52.8)	C (25.0)	C (25.7)	C (28.0)	C (28.0)
NB Overall	C (34.5)	D (35.4)	D (40.5)	D (40.5)	E (57.2)	E (58.7)	E (55.7)	E (55.7)	D (45.1)	D (46.0)	D (48.9)	D (48.9)
SB LT	C (30.6)	C (31.3)	D (36.3)	D (36.3)	D (51.0)	D (52.1)	D (54.3)	D (54.3)	D (42.9)	D (44.7)	D (49.3)	D (49.3)
SB R	B (16.8)	B (17.0)	B (18.8)	B (18.8)	C (29.3)	C (30.0)	C (32.7)	C (32.7)	C (22.8)	C (23.1)	C (26.4)	C (26.4)
SB Overall	C (23.0)	C (23.4)	C (26.0)	C (26.0)	D (37.8)	D (38.6)	D (40.7)	D (40.7)	C (31.5)	C (32.4)	D (35.4)	D (35.4)
Intersection Overall	B (18.4)	B (18.7)	C (20.8)	C (20.8)	C (31.0)	C (32.6)	D (43.0)	D (43.0)	C (22.0)	C (22.8)	C (27.7)	C (27.7)
LOS (delay in seconds)												

6.0 Queuing Analysis

A queuing analysis for the intersections was conducted based on max and 95th percentile queuing results from Sim Traffic software for the study intersections. Existing storage bays at the study intersections were compared to future storage requirements to determine if any additional storage would be required. The results of the queuing analysis are summarized in the tables below. The tables also show where additional storage has been recommended.

Timberlake Road and Old Graves Mill Road/
Dreaming Creek Road looking east

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Table 6.1 - Timberlake Road and Site Access 1 (RIRO) Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB T	-	-	31	-	-	-	-	-	-	FULL	
NB R	-	-	53	-	-	78	-	-	56	FULL	
95th Percentile Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB T	-	-	10	-	-	-	-	-	-	FULL	
NB R	-	-	53	-	-	63	-	-	53	FULL	

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Table 6.2- Timberlake Road at Candlewood Court Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	31	29	27	186	96	90	93	75	199	75	75
EB T	118	178	226	153	177	223	119	162	263	FULL	
EB T	137	115	-	184	181	-	140	119	-	FULL	
EB TR	-	-	224	-	-	253	-	-	193	FULL	
WB U	31	26	-	124	125	-	53	54	-	75	
WB UL	-	-	125	-	-	125	-	-	125	75	300
WB T	115	133	246	440	518	522	245	244	510	FULL	
WB T	134	157	242	459	543	560	278	292	512	FULL	
WB R	31	31	28	175	175	175	175	175	175	125	125
NB LR	-	-	412	-	-	378	-	-	413	FULL	
SB LR	20	21	28	148	66	138	64	68	87	FULL	
95th Percentile Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	29	25	30	109	83	79	75	62	120	75	75
EB T	100	139	189	124	145	188	126	140	198	FULL	
EB T	105	97	-	114	129	-	115	117	-	FULL	
EB TR	-	-	186	-	-	187	-	-	169	FULL	
WB U	10	12	-	76	98	-	45	47	-	75	
WB UL	-	-	139	-	-	140	-	-	133	75	300
WB T	86	96	200	377	458	555	220	220	541	FULL	
WB T	122	114	196	402	481	566	245	247	512	FULL	
WB R	20	18	19	149	152	139	126	72	94	125	125
NB LR	-	-	421	-	-	378	-	-	389	FULL	
SB LR	15	16	26	82	63	113	57	53	61	FULL	

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Table 6.3 - Timberlake Road and Site Access 2 Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	54	72	110	159	174	174	113	141	136	75	75
EB TR	-	-	-	-	-	22	-	-	-	FULL	
WB T	-	-	-	-	29	-	-	-	-	FULL	
WB LT	-	-	191	-	-	484	-	-	303	FULL	
WB TR	-	22	120	22	94	488	22	-	287	FULL	
NB LR	-	-	141	-	-	240	-	-	240	FULL	
SB LR	54	49	55	119	118	249	118	158	138	FULL	
95th Percentile Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	52	54	79	144	157	152	95	112	116	75	75
EB TR	-	-	-	-	-	15	-	-	-	FULL	
WB T	-	-	-	-	12	-	-	-	-	FULL	
WB LT	-	-	138	-	-	457	-	-	244	FULL	
WB TR	-	7	63	13	43	439	7	-	183	FULL	
NB LR	-	-	116	-	-	228	-	-	274	FULL	
SB LR	45	40	54	108	106	269	85	104	106	FULL	

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Table 6.4 - Timberlake Road and Old Graves Mill Road/Dreaming Creek Road Queue Analysis											
Max Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	200	244	348	255	344	267	308	289	224	250	Maximum Allowable
EB T	160	156	428	270	372	288	182	163	211	FULL	
EB T	179	172	220	324	310	301	224	199	222	FULL	
EB R	26	29	186	43	224	199	52	28	200	175	175
WB L	47	26	45	199	199	199	27	25	45	100	100
WB T	217	137	237	366	398	345	328	287	326	FULL	
WB T	171	136	205	366	398	374	348	330	328	FULL	
WB R	67	52	67	294	265	250	54	71	250	215	215
NB LTR	110	106	109	131	107	109	86	107	86	FULL	
SB LT	222	136	138	218	242	216	218	156	204	FULL	
SB R	86	51	106	229	218	216	151	204	175	FULL	
95th Percentile Queue Length (ft)											
	AM Existing	AM Future No Build	AM Future Build	PM Existing	PM Future No Build	PM Future Build	Sat. Midday Existing	Sat. Midday Future No Build	Sat. Midday Future Build	Available Storage	Recommended Storage
EB L	168	184	258	201	251	242	193	229	224	250	Maximum Allowable
EB T	159	141	226	221	267	208	152	139	190	FULL	
EB T	183	175	189	236	273	226	176	164	211	FULL	
EB R	17	9	64	38	84	74	31	23	75	175	175
WB L	30	24	38	125	74	94	21	14	33	100	100
WB T	163	119	190	404	420	335	261	255	381	FULL	
WB T	146	122	181	423	431	349	270	274	377	FULL	
WB R	49	46	51	281	232	248	55	63	248	215	215
NB LTR	85	71	89	116	99	100	56	81	80	FULL	
SB LT	135	113	140	225	242	258	183	158	182	FULL	
SB R	64	49	83	221	232	248	115	158	151	FULL	

7.0 Summary and Conclusion

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate the impacts of both background traffic and new development traffic.

The exact land uses and sizes are not known at this time and have been assumed for analysis purposes. As currently planned, the site will consist of residential and retail uses. The ITE trip generation indicates that based on the current site plan, the Timberlake Road and Candlewood Court Development has a trip generation potential of 11,333 net new trips per day.

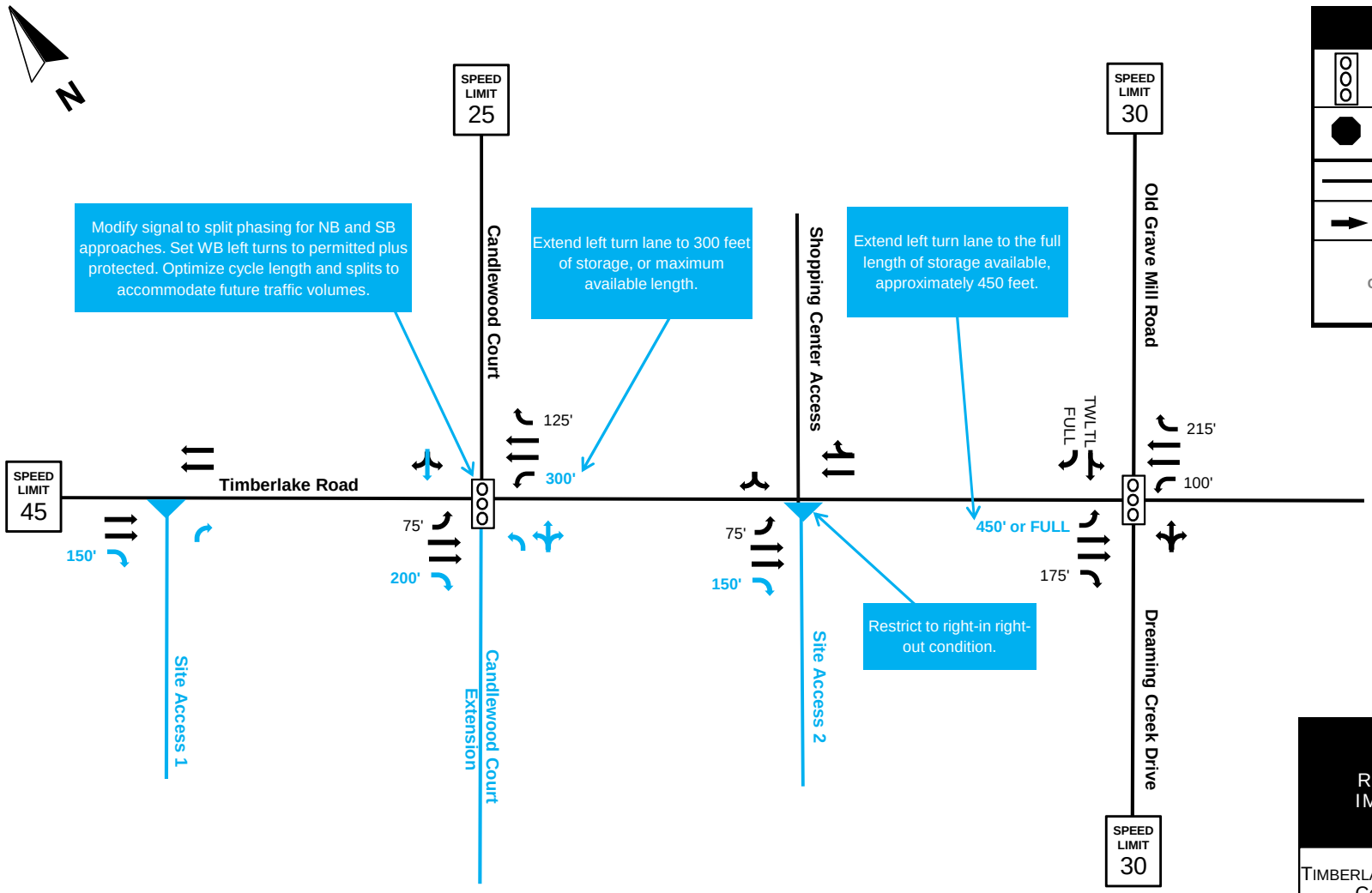
A right turn lane is recommended at Site Access 1. Given the level of delay anticipated at Site Access 2 and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration. A right turn lane is also recommended for this site access.

At the proposed access at Timberlake Road and Candlewood Court, it is recommended to extend the existing westbound left turn lane to 300 feet of storage, or the maximum available length. An eastbound right turn lane is also recommended. In addition, signal modification and optimization has been recommended in order to accommodate future traffic volumes.

At the intersection of Timberlake Road and Old Graves Mill Road/Dreaming Creek Road, it is recommended to extend the existing eastbound left turn lane to the full storage length available. This will better accommodate the project queue lengths at the intersection.

In conclusion, this study has determined the potential traffic impacts of this development and identified transportation improvements that will be required to accommodate the impacts of both background traffic and new development traffic. The recommended improvements are summarized in Table 7.0 on the following page and are illustrated in Figure 11.

Table 7.0 - Recommended Improvement Summary	
Timberlake Road at Proposed right-in-right out access (Site Access 1)	• Provide an eastbound right turn lane with 150 feet of storage and appropriate taper. • This site access should be designed according to City of Lynchburg standards.
Timberlake Road and Candlewood Court	• Provide an eastbound right turn lane with 200 feet of storage and appropriate taper. • Extend the westbound left turn lane to 300 feet of storage, or the maximum available length. • On the northbound approach of Candlewood Court Extension, provide a left turn lane and a left/through/right lane. • Provide two entering lanes into the site on the Candlewood Court Extension. • Modify signal and set the northbound and southbound approaches to split phasing. • Modify signal to provide permitted plus protected phasing for the westbound left turn lane. • Optimize cycle length and signal timing to accommodate future traffic volumes.
Timberlake Road at Proposed eastern full access (Site Access 2)	• Given the level of delay anticipated at this site access and the proximity of adjacent signals, it is recommended to restrict this access to a right-in right-out configuration. • Provide an eastbound right turn lane with 150 feet of storage and appropriate taper. • This site access should be designed according to City of Lynchburg standards.
Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road	• Extend the eastbound left turn lane to the full length of storage available, approximately 450 feet.



LEGEND

	SIGNALIZED INTERSECTION
	UNSIGNALIZED INTERSECTION
	ROADWAY
	TRAFFIC MOVEMENT

BLACK = EXISTING
GREY = UNANALYZED
BLUE = PROPOSED

*** NOT TO SCALE ***

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FIGURE 11
RECOMMENDED IMPROVEMENTS

TIMBERLAKE ROAD & CANDLEWOOD COURT DEVELOPMENT
LYNCHBURG, VA

PROJECT NUMBER 13-366

DAVENPORT

Appendix

Level of Service Analysis

Timberlake Road at Proposed right-in-right out access (Site Access 1)

HCM Unsignalized Intersection Capacity Analysis
100: Timberlake Rd & Site Access 1

1/14/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1314	67	0	822	0	46
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1428	73	0	893	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.88	
vC, conflicting volume			1501		1911	751
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1501		1768	751
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	86
cM capacity (veh/h)			442		66	354

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	952	549	447	447	50
Volume Left	0	0	0	0	0
Volume Right	0	73	0	0	50
cSH	1700	1700	1700	1700	354
Volume to Capacity	0.56	0.32	0.26	0.26	0.14
Queue Length 95th (ft)	0	0	0	0	12
Control Delay (s)	0.0	0.0	0.0	0.0	16.9
Lane LOS					C
Approach Delay (s)	0.0		0.0		16.9
Approach LOS					C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
100: Timberlake Rd & Site Access 1

1/14/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1314	67	0	822	0	46
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1428	73	0	893	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.87	
vC, conflicting volume			1501		1875	714
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1501		1711	714
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	87
cM capacity (veh/h)			442		71	374

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	714	714	73	447	447	50
Volume Left	0	0	0	0	0	0
Volume Right	0	0	73	0	0	50
cSH	1700	1700	1700	1700	1700	374
Volume to Capacity	0.42	0.42	0.04	0.26	0.26	0.13
Queue Length 95th (ft)	0	0	0	0	0	11
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	16.1
Lane LOS						C
Approach Delay (s)	0.0			0.0		16.1
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1310	97	0	1667	0	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1424	105	0	1812	0	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.65	
vC, conflicting volume			1529		2383	765
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1529		2057	765
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			431		31	346

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	949	580	906	906	57
Volume Left	0	0	0	0	0
Volume Right	0	105	0	0	57
cSH	1700	1700	1700	1700	346
Volume to Capacity	0.56	0.34	0.53	0.53	0.16
Queue Length 95th (ft)	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	17.4
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.4
Approach LOS					C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
100: Timberlake Rd & Site Access 1

1/14/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1310	97	0	1667	0	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1424	105	0	1812	0	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.59	
vC, conflicting volume			1529		2330	712
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1529		1855	712
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	85
cM capacity (veh/h)			431		38	375

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	712	712	105	906	906	57
Volume Left	0	0	0	0	0	0
Volume Right	0	0	105	0	0	57
cSH	1700	1700	1700	1700	1700	375
Volume to Capacity	0.42	0.42	0.06	0.53	0.53	0.15
Queue Length 95th (ft)	0	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	16.3
Lane LOS						C
Approach Delay (s)	0.0			0.0		16.3
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
100: Timberlake Rd & Site Access 1

1/14/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1263	100	0	1312	0	58
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1373	109	0	1426	0	63
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.79	
vC, conflicting volume			1482		2140	741
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1482		1914	741
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	82
cM capacity (veh/h)			450		47	359

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	915	566	713	713	63
Volume Left	0	0	0	0	0
Volume Right	0	109	0	0	63
cSH	1700	1700	1700	1700	359
Volume to Capacity	0.54	0.33	0.42	0.42	0.18
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	17.2
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.2
Approach LOS					C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
100: Timberlake Rd & Site Access 1

1/14/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1263	100	0	1312	0	58
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1373	109	0	1426	0	63
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				313		
pX, platoon unblocked					0.75	
vC, conflicting volume			1482		2086	686
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1482		1777	686
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			450		55	390

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	686	686	109	713	713	63
Volume Left	0	0	0	0	0	0
Volume Right	0	0	109	0	0	63
cSH	1700	1700	1700	1700	1700	390
Volume to Capacity	0.40	0.40	0.06	0.42	0.42	0.16
Queue Length 95th (ft)	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	16.0
Lane LOS						C
Approach Delay (s)	0.0			0.0		16.0
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

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Timberlake Road at Candlewood Court

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	12	1225	2	649	8	6	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1727	
Flt Permitted	0.31	1.00	0.19	1.00	1.00	0.97	
Satd. Flow (perm)	572	3539	345	3539	1583	1727	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	1332	2	705	9	7	3
RTOR Reduction (vph)	0	0	0	0	4	2	0
Lane Group Flow (vph)	13	1332	2	705	5	8	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	31.4	31.4	26.1	26.1	26.1	10.2	
Effective Green, g (s)	31.4	31.4	26.1	26.1	26.1	10.2	
Actuated g/C Ratio	0.61	0.61	0.51	0.51	0.51	0.20	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	367	2154	175	1790	801	341	
v/s Ratio Prot	0.00	c0.38		0.20		c0.00	
v/s Ratio Perm	0.02		0.01		0.00		
v/c Ratio	0.04	0.62	0.01	0.39	0.01	0.02	
Uniform Delay, d1	4.4	6.3	6.3	7.9	6.3	16.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.6	0.0	0.1	0.0	0.1	
Delay (s)	4.4	6.9	6.3	7.9	6.3	16.8	
Level of Service	A	A	A	A	A	B	
Approach Delay (s)		6.9		7.9		16.8	
Approach LOS		A		A		B	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	12	1256	2	665	8	6	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1727	
Flt Permitted	0.30	1.00	0.18	1.00	1.00	0.97	
Satd. Flow (perm)	560	3539	327	3539	1583	1727	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	1365	2	723	9	7	3
RTOR Reduction (vph)	0	0	0	0	4	2	0
Lane Group Flow (vph)	13	1365	2	723	5	8	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	32.2	32.2	26.9	26.9	26.9	10.2	
Effective Green, g (s)	32.2	32.2	26.9	26.9	26.9	10.2	
Actuated g/C Ratio	0.61	0.61	0.51	0.51	0.51	0.19	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	363	2175	168	1817	813	336	
v/s Ratio Prot	0.00	c0.39		0.20		c0.00	
v/s Ratio Perm	0.02		0.01		0.00		
v/c Ratio	0.04	0.63	0.01	0.40	0.01	0.02	
Uniform Delay, d1	4.3	6.3	6.2	7.8	6.2	17.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.6	0.0	0.1	0.0	0.1	
Delay (s)	4.3	6.9	6.3	7.8	6.2	17.2	
Level of Service	A	A	A	A	A	B	
Approach Delay (s)		6.9		7.8		17.2	
Approach LOS		A		A		B	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	12	1269	96	2	125	652	8	176	0	117	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00		1.00			1.00
Frt	1.00	0.99			1.00	1.00	0.85		0.95			0.96
Flt Protected	0.95	1.00			0.95	1.00	1.00		0.97			0.97
Satd. Flow (prot)	1770	3502			1770	3539	1583		1711			1727
Flt Permitted	0.31	1.00			0.16	1.00	1.00		0.81			0.83
Satd. Flow (perm)	569	3502			293	3539	1583		1428			1482
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	1379	104	2	136	709	9	191	0	127	7	0
RTOR Reduction (vph)	0	7	0	0	0	0	4	0	27	0	0	2
Lane Group Flow (vph)	13	1476	0	0	138	709	5	0	291	0	0	8
Turn Type	pm+pt			Perm	Perm		Perm	Perm			Perm	
Protected Phases	5	2				6			8			4
Permitted Phases	2			6	6		6	8			4	
Actuated Green, G (s)	49.8	49.8			39.6	39.6	39.6		15.5			15.5
Effective Green, g (s)	49.8	49.8			39.6	39.6	39.6		15.5			15.5
Actuated g/C Ratio	0.66	0.66			0.53	0.53	0.53		0.21			0.21
Clearance Time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Vehicle Extension (s)	2.0	3.5			3.5	3.5	3.5		3.5			2.0
Lane Grp Cap (vph)	467	2316			154	1861	832		294			305
v/s Ratio Prot	0.00	c0.42				0.20						
v/s Ratio Perm	0.02				c0.47		0.00		c0.20			0.01
v/c Ratio	0.03	0.64			0.90	0.38	0.01		0.99			0.02
Uniform Delay, d1	4.9	7.5			16.0	10.6	8.5		29.8			23.9
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			1.00
Incremental Delay, d2	0.0	0.6			43.9	0.2	0.0		50.0			0.2
Delay (s)	4.9	8.1			59.9	10.7	8.5		79.8			24.0
Level of Service	A	A			E	B	A		E			C
Approach Delay (s)		8.0				18.6			79.8			24.0
Approach LOS		A				B			E			C

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	3
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	3
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	12	1269	96	2	200	652	8	216	0	117	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	0.95	0.95			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.89			0.96
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	0.99			0.97
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1681	1555			1727
Flt Permitted	0.36	1.00	1.00		0.10	1.00	1.00	0.95	0.99			0.97
Satd. Flow (perm)	673	3539	1583		191	3539	1583	1681	1555			1727
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	1379	104	2	217	709	9	235	0	127	7	0
RTOR Reduction (vph)	0	0	49	0	0	0	5	0	106	0	0	3
Lane Group Flow (vph)	13	1379	55	0	219	709	4	188	68	0	0	7
Turn Type	pm+pt		Perm	pm+pt	pm+pt		Perm	Split			Split	
Protected Phases	5	2		1	1	6		8	8		4	4
Permitted Phases	2		2	6	6		6					
Actuated Green, G (s)	41.3	35.1	35.1		50.6	39.9	39.9	14.0	14.0			5.0
Effective Green, g (s)	41.3	35.1	35.1		50.6	39.9	39.9	14.0	14.0			5.0
Actuated g/C Ratio	0.49	0.41	0.41		0.60	0.47	0.47	0.17	0.17			0.06
Clearance Time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Vehicle Extension (s)	2.0	3.5	3.5		3.0	3.5	3.5	3.5	3.5			2.0
Lane Grp Cap (vph)	409	1468	657		329	1669	747	278	257			102
v/s Ratio Prot	0.00	c0.39			c0.09	0.20		c0.11	0.04			c0.00
v/s Ratio Perm	0.01		0.03		0.31		0.00					
v/c Ratio	0.03	0.94	0.08		0.67	0.42	0.01	0.68	0.26			0.07
Uniform Delay, d1	11.2	23.7	15.0		17.8	14.8	11.8	33.2	30.8			37.6
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.0	11.9	0.1		5.0	0.2	0.0	12.5	2.5			1.3
Delay (s)	11.2	35.7	15.1		22.9	15.0	11.8	45.6	33.3			38.9
Level of Service	B	D	B		C	B	B	D	C			D
Approach Delay (s)		34.0				16.8			39.7			38.9
Approach LOS		C				B			D			D

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	84.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	3
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	3
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	108	1087	29	1439	49	50	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1709	
Flt Permitted	0.12	1.00	0.24	1.00	1.00	0.97	
Satd. Flow (perm)	224	3539	445	3539	1583	1709	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	1182	32	1564	53	54	38
RTOR Reduction (vph)	0	0	0	0	23	28	0
Lane Group Flow (vph)	117	1182	32	1564	30	64	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	37.4	37.4	28.8	28.8	28.8	10.5	
Effective Green, g (s)	37.4	37.4	28.8	28.8	28.8	10.5	
Actuated g/C Ratio	0.65	0.65	0.50	0.50	0.50	0.18	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	254	2286	221	1760	787	310	
v/s Ratio Prot	0.03	c0.33		c0.44		c0.04	
v/s Ratio Perm	0.27		0.07		0.02		
v/c Ratio	0.46	0.52	0.14	0.89	0.04	0.21	
Uniform Delay, d1	9.7	5.4	7.9	13.1	7.5	20.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.2	0.1	5.7	0.0	1.5	
Delay (s)	10.2	5.7	8.0	18.8	7.5	21.7	
Level of Service	B	A	A	B	A	C	
Approach Delay (s)		6.1		18.3		21.7	
Approach LOS		A		B		C	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	111	1114	30	1475	50	51	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1708	
Flt Permitted	0.12	1.00	0.23	1.00	1.00	0.97	
Satd. Flow (perm)	217	3539	432	3539	1583	1708	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	1211	33	1603	54	55	39
RTOR Reduction (vph)	0	0	0	0	23	28	0
Lane Group Flow (vph)	121	1211	33	1603	31	66	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	38.5	38.5	29.9	29.9	29.9	10.6	
Effective Green, g (s)	38.5	38.5	29.9	29.9	29.9	10.6	
Actuated g/C Ratio	0.65	0.65	0.51	0.51	0.51	0.18	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	249	2305	219	1790	801	306	
v/s Ratio Prot	0.03	c0.34		c0.45		c0.04	
v/s Ratio Perm	0.28		0.08		0.02		
v/c Ratio	0.49	0.53	0.15	0.90	0.04	0.22	
Uniform Delay, d1	10.2	5.5	7.8	13.2	7.4	20.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.2	0.1	6.1	0.0	1.6	
Delay (s)	10.7	5.7	7.9	19.3	7.4	22.3	
Level of Service	B	A	A	B	A	C	
Approach Delay (s)		6.2		18.7		22.3	
Approach LOS		A		B		C	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	111	1127	142	30	184	1449	50	198	0	129	51	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00		1.00			1.00
Frt	1.00	0.98			1.00	1.00	0.85		0.95			0.94
Flt Protected	0.95	1.00			0.95	1.00	1.00		0.97			0.97
Satd. Flow (prot)	1770	3480			1770	3539	1583		1712			1708
Flt Permitted	0.07	1.00			0.19	1.00	1.00		0.79			0.73
Satd. Flow (perm)	138	3480			351	3539	1583		1391			1289
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	1225	154	33	200	1575	54	215	0	140	55	0
RTOR Reduction (vph)	0	11	0	0	0	0	16	0	27	0	0	30
Lane Group Flow (vph)	121	1368	0	0	233	1575	38	0	328	0	0	64
Turn Type	pm+pt			Perm	Perm		Perm	Perm			Perm	
Protected Phases	5	2				6			8			4
Permitted Phases	2			6	6		6	8			4	
Actuated Green, G (s)	60.0	60.0			50.0	50.0	50.0		15.0			15.0
Effective Green, g (s)	60.0	60.0			50.0	50.0	50.0		15.0			15.0
Actuated g/C Ratio	0.71	0.71			0.59	0.59	0.59		0.18			0.18
Clearance Time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Vehicle Extension (s)	2.0	3.5			3.5	3.5	3.5		3.5			2.0
Lane Grp Cap (vph)	203	2456			206	2082	931		245			227
v/s Ratio Prot	0.04	c0.39				0.45						
v/s Ratio Perm	0.38				c0.66		0.02		c0.24			0.05
v/c Ratio	0.60	0.56			1.13	0.76	0.04		1.34			0.28
Uniform Delay, d1	12.5	6.1			17.5	13.0	7.4		35.0			30.3
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			1.00
Incremental Delay, d2	4.9	0.3			102.4	1.7	0.0		177.1			3.1
Delay (s)	17.4	6.4			119.9	14.7	7.4		212.1			33.4
Level of Service	B	A			F	B	A		F			C
Approach Delay (s)		7.3				27.6			212.1			33.4
Approach LOS		A				C			F			C

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	36
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	39
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	111	1127	142	30	296	1449	50	241	0	129	51	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	0.95	0.95			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.89			0.94
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	0.99			0.97
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1681	1555			1708
Flt Permitted	0.11	1.00	1.00		0.10	1.00	1.00	0.95	0.99			0.97
Satd. Flow (perm)	212	3539	1583		191	3539	1583	1681	1555			1708
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	1225	154	33	322	1575	54	262	0	140	55	0
RTOR Reduction (vph)	0	0	85	0	0	0	16	0	108	0	0	28
Lane Group Flow (vph)	121	1225	69	0	355	1575	38	210	84	0	0	66
Turn Type	pm+pt		Perm	pm+pt	pm+pt		Perm	Split			Split	
Protected Phases	5	2		1	1	6		8	8		4	4
Permitted Phases	2		2	6	6		6					
Actuated Green, G (s)	41.3	35.1	35.1		54.9	44.2	44.2	14.0	14.0			5.0
Effective Green, g (s)	41.3	35.1	35.1		54.9	44.2	44.2	14.0	14.0			5.0
Actuated g/C Ratio	0.46	0.39	0.39		0.62	0.50	0.50	0.16	0.16			0.06
Clearance Time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Vehicle Extension (s)	2.0	3.5	3.5		3.0	3.5	3.5	3.5	3.5			2.0
Lane Grp Cap (vph)	207	1397	625		399	1760	787	265	245			96
v/s Ratio Prot	0.04	0.35			c0.16	c0.45		c0.12	0.05			c0.04
v/s Ratio Perm	0.23		0.04		0.39		0.02					
v/c Ratio	0.58	0.88	0.11		0.89	0.89	0.05	0.79	0.34			0.68
Uniform Delay, d1	17.6	24.9	17.0		24.7	20.2	11.5	36.1	33.4			41.2
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.4	6.7	0.1		20.7	6.5	0.0	21.1	3.8			33.0
Delay (s)	22.1	31.6	17.1		45.4	26.7	11.5	57.2	37.2			74.2
Level of Service	C	C	B		D	C	B	E	D			E
Approach Delay (s)		29.3				29.6			47.6			74.2
Approach LOS		C				C			D			E

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	14.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	36
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	39
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	61	1095	24	1083	38	30	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1700	
Flt Permitted	0.16	1.00	0.24	1.00	1.00	0.97	
Satd. Flow (perm)	293	3539	442	3539	1583	1700	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	1190	26	1177	41	33	29
RTOR Reduction (vph)	0	0	0	0	23	23	0
Lane Group Flow (vph)	66	1190	26	1177	18	39	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	28.3	28.3	20.9	20.9	20.9	10.3	
Effective Green, g (s)	28.3	28.3	20.9	20.9	20.9	10.3	
Actuated g/C Ratio	0.58	0.58	0.43	0.43	0.43	0.21	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	259	2061	190	1522	681	360	
v/s Ratio Prot	0.02	c0.34		c0.33		c0.02	
v/s Ratio Perm	0.13		0.06		0.01		
v/c Ratio	0.25	0.58	0.14	0.77	0.03	0.11	
Uniform Delay, d1	6.7	6.4	8.4	11.8	8.0	15.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.4	0.1	2.3	0.0	0.6	
Delay (s)	6.8	6.8	8.5	14.1	8.0	16.1	
Level of Service	A	A	A	B	A	B	
Approach Delay (s)		6.8		13.8		16.1	
Approach LOS		A		B		B	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	63	1123	25	1110	39	31	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.97	
Satd. Flow (prot)	1770	3539	1770	3539	1583	1700	
Flt Permitted	0.15	1.00	0.23	1.00	1.00	0.97	
Satd. Flow (perm)	287	3539	428	3539	1583	1700	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	1221	27	1207	42	34	30
RTOR Reduction (vph)	0	0	0	0	24	24	0
Lane Group Flow (vph)	68	1221	27	1207	18	40	0
Turn Type	pm+pt		Perm		Perm		
Protected Phases	5	2		6		4	
Permitted Phases	2		6		6		
Actuated Green, G (s)	28.9	28.9	21.5	21.5	21.5	10.3	
Effective Green, g (s)	28.9	28.9	21.5	21.5	21.5	10.3	
Actuated g/C Ratio	0.59	0.59	0.44	0.44	0.44	0.21	
Clearance Time (s)	4.5	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	2.0	3.5	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	256	2079	187	1547	692	356	
v/s Ratio Prot	0.02	c0.34		c0.34		c0.02	
v/s Ratio Perm	0.14		0.06		0.01		
v/c Ratio	0.27	0.59	0.14	0.78	0.03	0.11	
Uniform Delay, d1	6.8	6.4	8.3	11.8	7.9	15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.5	0.1	2.4	0.0	0.6	
Delay (s)	7.0	6.9	8.5	14.3	7.9	16.4	
Level of Service	A	A	A	B	A	B	
Approach Delay (s)		6.9		13.9		16.4	
Approach LOS		A		B		B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	63	1133	147	25	191	1080	39	221	0	144	31	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Lane Util. Factor	1.00	0.95			1.00	0.95	1.00		1.00			1.00
Frt	1.00	0.98			1.00	1.00	0.85		0.95			0.94
Flt Protected	0.95	1.00			0.95	1.00	1.00		0.97			0.97
Satd. Flow (prot)	1770	3478			1770	3539	1583		1712			1700
Flt Permitted	0.16	1.00			0.19	1.00	1.00		0.81			0.78
Satd. Flow (perm)	302	3478			345	3539	1583		1426			1359
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	1232	160	27	208	1174	42	240	0	157	34	0
RTOR Reduction (vph)	0	12	0	0	0	0	17	0	28	0	0	25
Lane Group Flow (vph)	68	1380	0	0	235	1174	25	0	369	0	0	39
Turn Type	pm+pt			Perm	Perm		Perm	Perm			Perm	
Protected Phases	5	2				6			8			4
Permitted Phases	2			6	6		6	8			4	
Actuated Green, G (s)	60.0	60.0			50.0	50.0	50.0		15.0			15.0
Effective Green, g (s)	60.0	60.0			50.0	50.0	50.0		15.0			15.0
Actuated g/C Ratio	0.71	0.71			0.59	0.59	0.59		0.18			0.18
Clearance Time (s)	4.5	5.0			5.0	5.0	5.0		5.0			5.0
Vehicle Extension (s)	2.0	3.5			3.5	3.5	3.5		3.5			2.0
Lane Grp Cap (vph)	308	2455			203	2082	931		252			240
v/s Ratio Prot	0.01	c0.40				0.33						
v/s Ratio Perm	0.14				c0.68		0.02		c0.26			0.03
v/c Ratio	0.22	0.56			1.16	0.56	0.03		1.46			0.16
Uniform Delay, d1	6.0	6.1			17.5	10.8	7.3		35.0			29.7
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			1.00
Incremental Delay, d2	0.4	0.3			112.1	0.4	0.0		229.4			1.5
Delay (s)	6.4	6.4			129.6	11.2	7.3		264.4			31.1
Level of Service	A	A			F	B	A		F			C
Approach Delay (s)		6.4				30.2			264.4			31.1
Approach LOS		A				C			F			C

Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	28
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	30
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
200: Timberlake Rd & Candlewood Ct

1/14/2014

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	63	1133	147	25	305	1080	39	269	0	144	31	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95	1.00	0.95	0.95			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.89			0.94
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	0.99			0.97
Satd. Flow (prot)	1770	3539	1583		1770	3539	1583	1681	1555			1700
Flt Permitted	0.18	1.00	1.00		0.10	1.00	1.00	0.95	0.99			0.97
Satd. Flow (perm)	329	3539	1583		196	3539	1583	1681	1555			1700
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	1232	160	27	332	1174	42	292	0	157	34	0
RTOR Reduction (vph)	0	0	89	0	0	0	17	0	108	0	0	28
Lane Group Flow (vph)	68	1232	71	0	359	1174	25	234	107	0	0	36
Turn Type	pm+pt		Perm	pm+pt	pm+pt		Perm	Split			Split	
Protected Phases	5	2		1	1	6		8	8		4	4
Permitted Phases	2		2	6	6		6					
Actuated Green, G (s)	40.3	34.1	34.1		54.1	43.4	43.4	14.0	14.0			5.0
Effective Green, g (s)	40.3	34.1	34.1		54.1	43.4	43.4	14.0	14.0			5.0
Actuated g/C Ratio	0.46	0.39	0.39		0.61	0.49	0.49	0.16	0.16			0.06
Clearance Time (s)	4.5	5.0	5.0		4.0	5.0	5.0	5.0	5.0			5.0
Vehicle Extension (s)	2.0	3.5	3.5		3.0	3.5	3.5	3.5	3.5			2.0
Lane Grp Cap (vph)	252	1370	613		406	1743	780	267	247			96
v/s Ratio Prot	0.02	0.35			c0.16	0.33		c0.14	0.07			c0.02
v/s Ratio Perm	0.10		0.04		c0.38		0.02					
v/c Ratio	0.27	0.90	0.12		0.88	0.67	0.03	0.88	0.43			0.37
Uniform Delay, d1	14.0	25.4	17.3		24.3	17.0	11.5	36.2	33.5			40.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.7	8.4	0.1		19.8	1.1	0.0	30.8	5.5			10.7
Delay (s)	14.7	33.7	17.4		44.1	18.1	11.5	67.0	39.0			50.7
Level of Service	B	C	B		D	B	B	E	D			D
Approach Delay (s)		31.1				23.8			53.6			50.7
Approach LOS		C				C			D			D

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	28
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	30
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Timberlake Road at Proposed eastern full access (Site Access 2)

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	88	1145	638	22	8	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	96	1245	693	24	9	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		551	510			
pX, platoon unblocked	0.89				0.82	0.89
vC, conflicting volume	717				1519	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430				578	27
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				97	98
cM capacity (veh/h)	1000				331	926

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	96	622	622	462	255	32
Volume Left	96	0	0	0	0	9
Volume Right	0	0	0	0	24	23
cSH	1000	1700	1700	1700	1700	619
Volume to Capacity	0.10	0.37	0.37	0.27	0.15	0.05
Queue Length 95th (ft)	8	0	0	0	0	4
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	11.1
Lane LOS	A					B
Approach Delay (s)	0.6			0.0		11.1
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	1174	654	23	8	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	1276	711	25	9	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		573	549			
pX, platoon unblocked	0.89				0.81	0.89
vC, conflicting volume	736				1557	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	443				591	28
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				97	97
cM capacity (veh/h)	986				321	922

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	98	638	638	474	262	33
Volume Left	98	0	0	0	0	9
Volume Right	0	0	0	0	25	24
cSH	986	1700	1700	1700	1700	615
Volume to Capacity	0.10	0.38	0.38	0.28	0.15	0.05
Queue Length 95th (ft)	8	0	0	0	0	4
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	11.2
Lane LOS	A					B
Approach Delay (s)	0.6			0.0		11.2
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1286	20	75	711	23	40	0	87	8	0	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	1398	22	82	773	25	43	0	95	9	0	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.85			0.76			0.83	0.83	0.76	0.83	0.83	0.85
vC, conflicting volume	798			1420			2178	2565	710	1938	2564	399
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			916			1208	1673	0	919	1671	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			85			53	100	89	94	100	97
cM capacity (veh/h)	973			561			93	61	822	137	61	923

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	98	932	488	468	411	138	33
Volume Left	98	0	0	82	0	43	9
Volume Right	0	0	22	0	25	95	24
cSH	973	1700	1700	561	1700	236	365
Volume to Capacity	0.10	0.55	0.29	0.15	0.24	0.58	0.09
Queue Length 95th (ft)	8	0	0	13	0	83	7
Control Delay (s)	9.1	0.0	0.0	4.1	0.0	39.7	15.8
Lane LOS	A			A		E	C
Approach Delay (s)	0.6			2.2		39.7	15.8
Approach LOS						E	C

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	1286	20	0	786	23	0	0	87	8	0	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	1398	22	0	854	25	0	0	95	9	0	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.85			0.62			0.69	0.69	0.62	0.69	0.69	0.85
vC, conflicting volume	879			1420			2055	2484	710	1856	2482	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	519			458			699	1316	0	412	1313	5
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			100			100	100	86	97	100	97
cM capacity (veh/h)	892			683			202	97	674	287	97	920

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	98	932	488	570	310	95	33
Volume Left	98	0	0	0	0	0	9
Volume Right	0	0	22	0	25	95	24
cSH	892	1700	1700	1700	1700	674	579
Volume to Capacity	0.11	0.55	0.29	0.34	0.18	0.14	0.06
Queue Length 95th (ft)	9	0	0	0	0	12	4
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	11.2	11.6
Lane LOS	A					B	B
Approach Delay (s)	0.6			0.0		11.2	11.6
Approach LOS						B	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	144	1022	1422	32	3	95
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	157	1111	1546	35	3	103
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		592	520			
pX, platoon unblocked	0.72				0.80	0.72
vC, conflicting volume	1580				2432	790
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1038				1414	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	67				95	87
cM capacity (veh/h)	482				70	784

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	157	555	555	1030	550	107
Volume Left	157	0	0	0	0	3
Volume Right	0	0	0	0	35	103
cSH	482	1700	1700	1700	1700	597
Volume to Capacity	0.33	0.33	0.33	0.61	0.32	0.18
Queue Length 95th (ft)	35	0	0	0	0	16
Control Delay (s)	16.0	0.0	0.0	0.0	0.0	12.3
Lane LOS	C					B
Approach Delay (s)	2.0			0.0		12.3
Approach LOS						B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangles/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	148	1048	1458	33	3	97
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	161	1139	1585	36	3	105
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		573	549			
pX, platoon unblocked	0.71				0.79	0.71
vC, conflicting volume	1621				2494	810
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1063				1440	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	65				95	86
cM capacity (veh/h)	464				64	772

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	161	570	570	1057	564	109
Volume Left	161	0	0	0	0	3
Volume Right	0	0	0	0	36	105
cSH	464	1700	1700	1700	1700	580
Volume to Capacity	0.35	0.34	0.34	0.62	0.33	0.19
Queue Length 95th (ft)	38	0	0	0	0	17
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	12.6
Lane LOS	C					B
Approach Delay (s)	2.1			0.0		12.6
Approach LOS						B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	1162	29	112	1556	33	43	0	94	3	0	97
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	161	1263	32	122	1691	36	47	0	102	3	0	105
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.64			0.83			0.72	0.72	0.83	0.72	0.72	0.64
vC, conflicting volume	1727			1295			2795	3571	647	3008	3569	864
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1017			956			1688	2759	180	1982	2756	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	63			80			0	100	85	76	100	85
cM capacity (veh/h)	435			597			23	7	694	14	7	696

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	161	842	453	967	882	149	109
Volume Left	161	0	0	122	0	47	3
Volume Right	0	0	32	0	36	102	105
cSH	435	1700	1700	597	1700	68	279
Volume to Capacity	0.37	0.50	0.27	0.20	0.52	2.20	0.39
Queue Length 95th (ft)	42	0	0	19	0	353	44
Control Delay (s)	18.1	0.0	0.0	6.0	0.0	683.8	25.9
Lane LOS	C			A		F	D
Approach Delay (s)	2.0			3.2		683.8	25.9
Approach LOS						F	D

Intersection Summary			
Average Delay	31.8		
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	1162	29	0	1668	33	0	0	94	3	0	97
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	161	1263	32	0	1813	36	0	0	102	3	0	105
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.64			0.69			0.80	0.80	0.69	0.80	0.80	0.64
vC, conflicting volume	1849			1295			2612	3449	647	2886	3447	924
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1207			517			750	1798	0	1093	1795	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	56			100			100	100	86	96	100	85
cM capacity (veh/h)	368			718			134	36	745	77	36	696

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	161	842	453	1209	640	102	109
Volume Left	161	0	0	0	0	0	3
Volume Right	0	0	32	0	36	102	105
cSH	368	1700	1700	1700	1700	745	560
Volume to Capacity	0.44	0.50	0.27	0.71	0.38	0.14	0.19
Queue Length 95th (ft)	54	0	0	0	0	12	18
Control Delay (s)	22.1	0.0	0.0	0.0	0.0	10.6	13.0
Lane LOS	C					B	B
Approach Delay (s)	2.4			0.0		10.6	13.0
Approach LOS						B	B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	157	992	1078	32	9	67
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	171	1078	1172	35	10	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		570	531			
pX, platoon unblocked	0.78				0.87	0.78
vC, conflicting volume	1207				2070	603
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	706				987	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	75				94	91
cM capacity (veh/h)	694				161	848

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	171	539	539	781	425	83
Volume Left	171	0	0	0	0	10
Volume Right	0	0	0	0	35	73
cSH	694	1700	1700	1700	1700	563
Volume to Capacity	0.25	0.32	0.32	0.46	0.25	0.15
Queue Length 95th (ft)	24	0	0	0	0	13
Control Delay (s)	11.9	0.0	0.0	0.0	0.0	12.5
Lane LOS	B					B
Approach Delay (s)	1.6			0.0		12.5
Approach LOS						B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	161	1017	1105	33	9	69
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	175	1105	1201	36	10	75
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		573	549			
pX, platoon unblocked	0.77				0.87	0.77
vC, conflicting volume	1237				2122	618
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	723				1003	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	74				94	91
cM capacity (veh/h)	678				154	839

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	175	553	553	801	436	85
Volume Left	175	0	0	0	0	10
Volume Right	0	0	0	0	36	75
cSH	678	1700	1700	1700	1700	555
Volume to Capacity	0.26	0.33	0.33	0.47	0.26	0.15
Queue Length 95th (ft)	26	0	0	0	0	13
Control Delay (s)	12.2	0.0	0.0	0.0	0.0	12.7
Lane LOS	B					B
Approach Delay (s)	1.7			0.0		12.7
Approach LOS						B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	161	1143	30	114	1197	33	48	0	105	9	0	69
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	175	1242	33	124	1301	36	52	0	114	10	0	75
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.72			0.83			0.80	0.80	0.83	0.80	0.80	0.72
vC, conflicting volume	1337			1275			2582	3193	638	2652	3192	668
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	690			931			1548	2310	167	1636	2308	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	73			80			0	100	84	68	100	90
cM capacity (veh/h)	648			609			38	18	707	30	18	781

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	175	828	447	774	686	166	85
Volume Left	175	0	0	124	0	52	10
Volume Right	0	0	33	0	36	114	75
cSH	648	1700	1700	609	1700	108	202
Volume to Capacity	0.27	0.49	0.26	0.20	0.40	1.54	0.42
Queue Length 95th (ft)	27	0	0	19	0	308	48
Control Delay (s)	12.6	0.0	0.0	5.4	0.0	354.1	35.2
Lane LOS	B			A		F	E
Approach Delay (s)	1.5			2.9		354.1	35.2
Approach LOS						F	E

Intersection Summary			
Average Delay	21.6		
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
300: Timberlake Rd & Bojangle's/TGI Fridays Access

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	161	1143	30	0	1311	33	0	0	105	9	0	69
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	175	1242	33	0	1425	36	0	0	114	10	0	75
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		557			545							
pX, platoon unblocked	0.72			0.68			0.82	0.82	0.68	0.82	0.82	0.72
vC, conflicting volume	1461			1275			2396	3070	638	2528	3068	730
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	862			468			730	1550	0	891	1548	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	69			100			100	100	85	92	100	90
cM capacity (veh/h)	559			742			174	64	739	125	64	781

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	175	828	447	950	511	114	85
Volume Left	175	0	0	0	0	0	10
Volume Right	0	0	33	0	36	114	75
cSH	559	1700	1700	1700	1700	739	486
Volume to Capacity	0.31	0.49	0.26	0.56	0.30	0.15	0.17
Queue Length 95th (ft)	33	0	0	0	0	14	16
Control Delay (s)	14.4	0.0	0.0	0.0	0.0	10.8	14.0
Lane LOS	B					B	B
Approach Delay (s)	1.7			0.0		10.8	14.0
Approach LOS						B	B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Timberlake Road and Old Graves Mill Road/ Dreaming Creek Road

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	821	10	18	471	81	26	22	19	114	18	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1757			1786	1583
Flt Permitted	0.31	1.00	1.00	0.32	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	583	3539	1583	594	3539	1583		1757			1786	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	350	892	11	20	512	88	28	24	21	124	20	177
RTOR Reduction (vph)	0	0	5	0	0	62	0	12	0	0	0	116
Lane Group Flow (vph)	350	892	6	20	512	26	0	61	0	0	144	61
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	41.8	35.2	35.2	24.1	22.5	22.5		6.6			12.1	26.4
Effective Green, g (s)	41.8	35.2	35.2	24.1	22.5	22.5		6.6			12.1	26.4
Actuated g/C Ratio	0.55	0.46	0.46	0.32	0.30	0.30		0.09			0.16	0.35
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	544	1639	733	213	1048	469		153			284	654
v/s Ratio Prot	c0.12	0.25		0.00	0.14			c0.03			c0.08	0.02
v/s Ratio Perm	c0.23		0.00	0.03		0.02						0.02
v/c Ratio	0.64	0.54	0.01	0.09	0.49	0.06		0.40			0.51	0.09
Uniform Delay, d1	10.5	14.6	11.0	17.9	22.0	19.1		32.8			29.2	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	2.6	0.5	0.0	0.2	0.5	0.1		1.7			1.4	0.1
Delay (s)	13.1	15.1	11.0	18.1	22.5	19.2		34.5			30.6	16.8
Level of Service	B	B	B	B	C	B		C			C	B
Approach Delay (s)		14.5			21.9			34.5			23.0	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	842	10	18	483	83	27	23	19	117	18	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1758			1786	1583
Flt Permitted	0.31	1.00	1.00	0.31	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	569	3539	1583	581	3539	1583		1758			1786	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	915	11	20	525	90	29	25	21	127	20	182
RTOR Reduction (vph)	0	0	5	0	0	63	0	11	0	0	0	118
Lane Group Flow (vph)	359	915	6	20	525	27	0	64	0	0	147	64
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	42.8	36.2	36.2	24.7	23.1	23.1		6.7			12.4	27.1
Effective Green, g (s)	42.8	36.2	36.2	24.7	23.1	23.1		6.7			12.4	27.1
Actuated g/C Ratio	0.55	0.47	0.47	0.32	0.30	0.30		0.09			0.16	0.35
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	543	1655	740	210	1056	472		152			286	657
v/s Ratio Prot	c0.13	0.26		0.00	0.15			c0.04			c0.08	0.02
v/s Ratio Perm	c0.24		0.00	0.03		0.02						0.02
v/c Ratio	0.66	0.55	0.01	0.10	0.50	0.06		0.42			0.51	0.10
Uniform Delay, d1	10.7	14.8	11.0	18.1	22.4	19.4		33.5			29.7	16.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	3.0	0.5	0.0	0.2	0.5	0.1		1.9			1.6	0.1
Delay (s)	13.7	15.3	11.0	18.3	22.9	19.4		35.4			31.3	17.0
Level of Service	B	B	B	B	C	B		D			C	B
Approach Delay (s)		14.8			22.2			35.4			23.4	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	77.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	363	992	13	28	586	83	30	23	32	117	18	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1737			1786	1583
Flt Permitted	0.25	1.00	1.00	0.27	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	463	3539	1583	494	3539	1583		1737			1786	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	1078	14	30	637	90	33	25	35	127	20	209
RTOR Reduction (vph)	0	0	5	0	0	61	0	17	0	0	0	135
Lane Group Flow (vph)	395	1078	9	30	637	29	0	76	0	0	147	74
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	50.6	42.9	42.9	30.5	27.8	27.8		7.4			13.0	30.8
Effective Green, g (s)	50.6	42.9	42.9	30.5	27.8	27.8		7.4			13.0	30.8
Actuated g/C Ratio	0.58	0.50	0.50	0.35	0.32	0.32		0.09			0.15	0.36
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	540	1755	785	214	1137	509		149			268	655
v/s Ratio Prot	c0.15	0.30		0.00	0.18			c0.04			c0.08	0.02
v/s Ratio Perm	c0.28		0.01	0.05		0.02						0.02
v/c Ratio	0.73	0.61	0.01	0.14	0.56	0.06		0.51			0.55	0.11
Uniform Delay, d1	11.6	15.8	11.1	18.4	24.3	20.3		37.8			34.0	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	5.1	0.7	0.0	0.3	0.8	0.1		2.7			2.3	0.1
Delay (s)	16.7	16.5	11.1	18.7	25.1	20.4		40.5			36.3	18.8
Level of Service	B	B	B	B	C	C		D			D	B
Approach Delay (s)		16.5			24.3			40.5			26.0	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	363	992	13	28	586	83	30	23	32	117	18	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1737			1786	1583
Flt Permitted	0.25	1.00	1.00	0.27	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	463	3539	1583	494	3539	1583		1737			1786	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	1078	14	30	637	90	33	25	35	127	20	209
RTOR Reduction (vph)	0	0	5	0	0	61	0	17	0	0	0	135
Lane Group Flow (vph)	395	1078	9	30	637	29	0	76	0	0	147	74
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	50.6	42.9	42.9	30.5	27.8	27.8		7.4			13.0	30.8
Effective Green, g (s)	50.6	42.9	42.9	30.5	27.8	27.8		7.4			13.0	30.8
Actuated g/C Ratio	0.58	0.50	0.50	0.35	0.32	0.32		0.09			0.15	0.36
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	540	1755	785	214	1137	509		149			268	655
v/s Ratio Prot	c0.15	0.30		0.00	0.18			c0.04			c0.08	0.02
v/s Ratio Perm	c0.28		0.01	0.05		0.02						0.02
v/c Ratio	0.73	0.61	0.01	0.14	0.56	0.06		0.51			0.55	0.11
Uniform Delay, d1	11.6	15.8	11.1	18.4	24.3	20.3		37.8			34.0	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	5.1	0.7	0.0	0.3	0.8	0.1		2.7			2.3	0.1
Delay (s)	16.7	16.5	11.1	18.7	25.1	20.4		40.5			36.3	18.8
Level of Service	B	B	B	B	C	C		D			D	B
Approach Delay (s)		16.5			24.3			40.5			26.0	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	746	27	21	999	139	34	33	10	214	57	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1790			1792	1583
Flt Permitted	0.09	1.00	1.00	0.35	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	170	3539	1583	644	3539	1583		1790			1792	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	274	811	29	23	1086	151	37	36	11	233	62	458
RTOR Reduction (vph)	0	0	13	0	0	66	0	5	0	0	0	106
Lane Group Flow (vph)	274	811	16	23	1086	85	0	79	0	0	295	352
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	62.6	55.8	55.8	43.7	41.9	41.9		7.9			22.8	38.5
Effective Green, g (s)	62.6	55.8	55.8	43.7	41.9	41.9		7.9			22.8	38.5
Actuated g/C Ratio	0.58	0.51	0.51	0.40	0.39	0.39		0.07			0.21	0.35
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	329	1815	812	277	1363	610		130			376	633
v/s Ratio Prot	c0.12	0.23		0.00	0.31			c0.04			c0.16	c0.08
v/s Ratio Perm	c0.36		0.01	0.03		0.05						0.14
v/c Ratio	0.83	0.45	0.02	0.08	0.80	0.14		0.61			0.78	0.56
Uniform Delay, d1	28.7	16.7	13.0	19.7	29.7	21.7		49.0			40.7	28.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	16.3	0.2	0.0	0.1	3.5	0.1		8.2			10.3	1.1
Delay (s)	45.1	17.0	13.1	19.9	33.2	21.9		57.2			51.0	29.3
Level of Service	D	B	B	B	C	C		E			D	C
Approach Delay (s)		23.8			31.6			57.2			37.8	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	108.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	258	765	28	22	1024	143	35	34	10	219	58	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1791			1792	1583
Flt Permitted	0.08	1.00	1.00	0.34	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	157	3539	1583	631	3539	1583		1791			1792	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	280	832	30	24	1113	155	38	37	11	238	63	470
RTOR Reduction (vph)	0	0	13	0	0	67	0	5	0	0	0	103
Lane Group Flow (vph)	280	832	17	24	1113	88	0	81	0	0	301	367
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	63.7	55.9	55.9	45.3	42.5	42.5		8.1			23.5	39.7
Effective Green, g (s)	63.7	55.9	55.9	45.3	42.5	42.5		8.1			23.5	39.7
Actuated g/C Ratio	0.57	0.50	0.50	0.41	0.38	0.38		0.07			0.21	0.36
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	326	1785	799	287	1357	607		131			380	639
v/s Ratio Prot	c0.13	0.24		0.00	0.31			c0.05			c0.17	0.08
v/s Ratio Perm	c0.37		0.01	0.03		0.06						0.15
v/c Ratio	0.86	0.47	0.02	0.08	0.82	0.15		0.62			0.79	0.57
Uniform Delay, d1	31.2	17.8	13.7	19.6	30.7	22.3		49.9			41.3	28.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	19.5	0.3	0.0	0.1	4.3	0.2		8.8			10.8	1.3
Delay (s)	50.7	18.0	13.8	19.8	35.0	22.4		58.7			52.1	30.0
Level of Service	D	B	B	B	D	C		E			D	C
Approach Delay (s)		25.9			33.2			58.7			38.6	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	918	32	38	1190	143	38	34	24	219	58	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1765			1792	1583
Flt Permitted	0.09	1.00	1.00	0.26	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	159	3539	1583	486	3539	1583		1765			1792	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	998	35	41	1293	155	41	37	26	238	63	513
RTOR Reduction (vph)	0	0	12	0	0	55	0	10	0	0	0	97
Lane Group Flow (vph)	317	998	23	41	1293	100	0	94	0	0	301	416
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	64.0	56.1	56.1	44.8	41.9	41.9		10.1			23.7	40.8
Effective Green, g (s)	64.0	56.1	56.1	44.8	41.9	41.9		10.1			23.7	40.8
Actuated g/C Ratio	0.56	0.50	0.50	0.40	0.37	0.37		0.09			0.21	0.36
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	333	1752	784	225	1309	585		157			375	640
v/s Ratio Prot	c0.14	0.28		0.00	0.37			c0.05			c0.17	0.10
v/s Ratio Perm	c0.39		0.01	0.07		0.06						0.16
v/c Ratio	0.95	0.57	0.03	0.18	0.99	0.17		0.60			0.80	0.65
Uniform Delay, d1	35.3	20.1	14.7	21.3	35.4	24.0		49.6			42.6	30.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	36.6	0.5	0.0	0.4	21.8	0.2		6.0			11.7	2.4
Delay (s)	71.9	20.6	14.7	21.7	57.2	24.2		55.7			54.3	32.7
Level of Service	E	C	B	C	E	C		E			D	C
Approach Delay (s)		32.5			52.8			55.7			40.7	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	113.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	918	32	38	1190	143	38	34	24	219	58	472
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.97			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1765			1792	1583
Flt Permitted	0.09	1.00	1.00	0.26	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	159	3539	1583	486	3539	1583		1765			1792	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	998	35	41	1293	155	41	37	26	238	63	513
RTOR Reduction (vph)	0	0	12	0	0	55	0	10	0	0	0	97
Lane Group Flow (vph)	317	998	23	41	1293	100	0	94	0	0	301	416
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	64.0	56.1	56.1	44.8	41.9	41.9		10.1			23.7	40.8
Effective Green, g (s)	64.0	56.1	56.1	44.8	41.9	41.9		10.1			23.7	40.8
Actuated g/C Ratio	0.56	0.50	0.50	0.40	0.37	0.37		0.09			0.21	0.36
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	333	1752	784	225	1309	585		157			375	640
v/s Ratio Prot	c0.14	0.28		0.00	0.37			c0.05			c0.17	0.10
v/s Ratio Perm	c0.39		0.01	0.07		0.06						0.16
v/c Ratio	0.95	0.57	0.03	0.18	0.99	0.17		0.60			0.80	0.65
Uniform Delay, d1	35.3	20.1	14.7	21.3	35.4	24.0		49.6			42.6	30.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	36.6	0.5	0.0	0.4	21.8	0.2		6.0			11.7	2.4
Delay (s)	71.9	20.6	14.7	21.7	57.2	24.2		55.7			54.3	32.7
Level of Service	E	C	B	C	E	C		E			D	C
Approach Delay (s)		32.5			52.8			55.7			40.7	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	113.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	711	26	7	850	127	18	14	13	165	18	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1755			1783	1583
Flt Permitted	0.15	1.00	1.00	0.36	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	285	3539	1583	668	3539	1583		1755			1783	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	287	773	28	8	924	138	20	15	14	179	20	263
RTOR Reduction (vph)	0	0	12	0	0	71	0	12	0	0	0	140
Lane Group Flow (vph)	287	773	16	8	924	67	0	37	0	0	199	123
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	58.6	52.8	52.8	38.1	37.3	37.3		6.0			16.2	32.5
Effective Green, g (s)	58.6	52.8	52.8	38.1	37.3	37.3		6.0			16.2	32.5
Actuated g/C Ratio	0.61	0.55	0.55	0.40	0.39	0.39		0.06			0.17	0.34
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	425	1940	868	273	1371	613		109			300	616
v/s Ratio Prot	c0.11	0.22		0.00	0.26			c0.02			c0.11	0.03
v/s Ratio Perm	c0.30		0.01	0.01		0.04						0.04
v/c Ratio	0.68	0.40	0.02	0.03	0.67	0.11		0.34			0.66	0.20
Uniform Delay, d1	13.6	12.6	9.9	17.7	24.5	18.9		43.2			37.5	22.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	4.2	0.2	0.0	0.0	1.4	0.1		1.8			5.4	0.2
Delay (s)	17.9	12.8	9.9	17.7	25.9	19.0		45.1			42.9	22.8
Level of Service	B	B	A	B	C	B		D			D	C
Approach Delay (s)		14.0			25.0			45.1			31.5	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	96.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	729	27	7	871	130	18	14	13	169	18	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1755			1782	1583
Flt Permitted	0.14	1.00	1.00	0.35	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	269	3539	1583	656	3539	1583		1755			1782	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	295	792	29	8	947	141	20	15	14	184	20	270
RTOR Reduction (vph)	0	0	13	0	0	71	0	12	0	0	0	138
Lane Group Flow (vph)	295	792	16	8	947	70	0	37	0	0	204	132
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	60.1	54.3	54.3	38.9	38.1	38.1		6.1			16.5	33.5
Effective Green, g (s)	60.1	54.3	54.3	38.9	38.1	38.1		6.1			16.5	33.5
Actuated g/C Ratio	0.61	0.55	0.55	0.40	0.39	0.39		0.06			0.17	0.34
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	424	1957	875	269	1373	614		109			299	621
v/s Ratio Prot	c0.12	0.22		0.00	0.27			c0.02			c0.11	0.04
v/s Ratio Perm	c0.31		0.01	0.01		0.04						0.05
v/c Ratio	0.70	0.40	0.02	0.03	0.69	0.11		0.34			0.68	0.21
Uniform Delay, d1	16.0	12.6	9.9	18.0	25.1	19.2		44.1			38.4	23.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	4.9	0.2	0.0	0.0	1.6	0.1		1.8			6.3	0.2
Delay (s)	20.9	12.8	9.9	18.0	26.7	19.4		46.0			44.7	23.1
Level of Service	C	B	A	B	C	B		D			D	C
Approach Delay (s)		14.9			25.7			46.0			32.4	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	98.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	899	31	23	1033	130	22	14	28	169	18	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1723			1782	1583
Flt Permitted	0.10	1.00	1.00	0.29	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	179	3539	1583	546	3539	1583		1723			1782	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	336	977	34	25	1123	141	24	15	30	184	20	313
RTOR Reduction (vph)	0	0	10	0	0	54	0	23	0	0	0	129
Lane Group Flow (vph)	336	977	24	25	1123	87	0	46	0	0	204	184
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	64.8	58.0	58.0	44.3	42.5	42.5		6.8			16.7	34.0
Effective Green, g (s)	64.8	58.0	58.0	44.3	42.5	42.5		6.8			16.7	34.0
Actuated g/C Ratio	0.62	0.56	0.56	0.43	0.41	0.41		0.07			0.16	0.33
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	377	1977	885	254	1449	648		113			287	595
v/s Ratio Prot	c0.15	0.28		0.00	0.32			c0.03			c0.11	0.05
v/s Ratio Perm	c0.41		0.02	0.04		0.06						0.06
v/c Ratio	0.89	0.49	0.03	0.10	0.78	0.13		0.40			0.71	0.31
Uniform Delay, d1	28.5	14.0	10.3	17.3	26.5	19.2		46.6			41.3	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	22.2	0.3	0.0	0.2	2.8	0.1		2.4			8.0	0.3
Delay (s)	50.7	14.2	10.3	17.5	29.3	19.3		48.9			49.3	26.4
Level of Service	D	B	B	B	C	B		D			D	C
Approach Delay (s)		23.2			28.0			48.9			35.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
400: Timberlake Rd & Old Graves Mill Rd

1/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	899	31	23	1033	130	22	14	28	169	18	288
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1723			1782	1583
Flt Permitted	0.10	1.00	1.00	0.29	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	179	3539	1583	546	3539	1583		1723			1782	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	336	977	34	25	1123	141	24	15	30	184	20	313
RTOR Reduction (vph)	0	0	10	0	0	54	0	23	0	0	0	129
Lane Group Flow (vph)	336	977	24	25	1123	87	0	46	0	0	204	184
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	1	6		5	2		3	3		4	4	1
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	64.8	58.0	58.0	44.3	42.5	42.5		6.8			16.7	34.0
Effective Green, g (s)	64.8	58.0	58.0	44.3	42.5	42.5		6.8			16.7	34.0
Actuated g/C Ratio	0.62	0.56	0.56	0.43	0.41	0.41		0.07			0.16	0.33
Clearance Time (s)	5.0	5.5	5.5	5.0	5.5	5.5		5.0			5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0		3.0			3.0	3.0
Lane Grp Cap (vph)	377	1977	885	254	1449	648		113			287	595
v/s Ratio Prot	c0.15	0.28		0.00	0.32			c0.03			c0.11	0.05
v/s Ratio Perm	c0.41		0.02	0.04		0.06						0.06
v/c Ratio	0.89	0.49	0.03	0.10	0.78	0.13		0.40			0.71	0.31
Uniform Delay, d1	28.5	14.0	10.3	17.3	26.5	19.2		46.6			41.3	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	22.2	0.3	0.0	0.2	2.8	0.1		2.4			8.0	0.3
Delay (s)	50.7	14.2	10.3	17.5	29.3	19.3		48.9			49.3	26.4
Level of Service	D	B	B	B	C	B		D			D	C
Approach Delay (s)		23.2			28.0			48.9			35.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Queuing and Blocking Reports

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	31	118	137	31	115	134	31	20
Average Queue (ft)	8	65	66	1	43	65	4	3
95th Queue (ft)	29	100	105	10	86	122	20	15
Link Distance (ft)		486	486		488	488		281
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)		2			1	0		
Queuing Penalty (veh)		0			0	0		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	54	54
Average Queue (ft)	24	17
95th Queue (ft)	52	45
Link Distance (ft)		248
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	75	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	200	160	179	26	47	217	171	67	110	222	86
Average Queue (ft)	101	78	94	3	8	90	91	28	42	69	34
95th Queue (ft)	168	159	183	17	30	163	146	49	85	135	64
Link Distance (ft)		446	446			404	404		371	221	221
Upstream Blk Time (%)										0	
Queuing Penalty (veh)										0	
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)			1			4					
Queuing Penalty (veh)			0			1					

Network Summary

Network wide Queuing Penalty: 1

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	29	178	115	26	133	157	31	21
Average Queue (ft)	6	77	59	2	37	59	3	4
95th Queue (ft)	25	139	97	12	96	114	18	16
Link Distance (ft)		494	494		512	512		283
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)		4			0	0		
Queuing Penalty (veh)		0			0	0		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	72	22	49
Average Queue (ft)	27	1	15
95th Queue (ft)	54	7	40
Link Distance (ft)		483	257
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	75		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	1		

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	244	156	172	29	26	137	136	52	106	136	51
Average Queue (ft)	99	68	93	1	7	71	79	26	30	61	32
95th Queue (ft)	185	141	175	9	24	119	122	46	71	113	49
Link Distance (ft)		483	483			383	383		237	203	203
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)	0		0			2					
Queuing Penalty (veh)	0		0			0					

Network Summary

Network wide Queuing Penalty: 2

Intersection: 100: Timberlake Rd & Site Access 1

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	31	53
Average Queue (ft)	1	30
95th Queue (ft)	10	53
Link Distance (ft)	239	229
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	UL	T	T	R	LR	LR
Maximum Queue (ft)	27	266	224	125	246	242	28	412	28
Average Queue (ft)	9	120	112	83	102	116	4	257	7
95th Queue (ft)	30	189	186	139	200	196	19	421	26
Link Distance (ft)		253	253		493	493		363	284
Upstream Blk Time (%)		0						8	
Queuing Penalty (veh)		1						0	
Storage Bay Dist (ft)	75			75			125		
Storage Blk Time (%)		12		24	6	3			
Queuing Penalty (veh)		1		78	8	0			

Intersection: 300: Timberlake Rd & Bojangle's/TGI Fridays Access

Movement	EB	WB	WB	NB	SB
Directions Served	L	LT	TR	LR	LR
Maximum Queue (ft)	110	191	120	141	55
Average Queue (ft)	31	61	11	67	24
95th Queue (ft)	79	138	63	116	54
Link Distance (ft)		480	480	206	197
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	75				
Storage Blk Time (%)	1				
Queuing Penalty (veh)	8				

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	348	428	220	186	45	237	205	67	109	138	106
Average Queue (ft)	142	97	101	9	15	113	109	29	46	79	38
95th Queue (ft)	258	226	189	64	38	190	181	51	89	140	83
Link Distance (ft)		480	480			311	311		253	201	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150	100			200			200
Storage Blk Time (%)	2		3			8	0				
Queuing Penalty (veh)	8		0			2	0				

Network Summary

Network wide Queuing Penalty: 107

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	186	153	184	124	440	459	175	148
Average Queue (ft)	54	71	67	26	227	256	46	34
95th Queue (ft)	109	124	114	76	377	402	149	82
Link Distance (ft)		494	494		529	529		283
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)	5	3		1	25	21		
Queuing Penalty (veh)	28	3		8	7	10		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	159	22	119
Average Queue (ft)	82	2	59
95th Queue (ft)	144	13	108
Link Distance (ft)		455	258
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	75		
Storage Blk Time (%)	16		
Queuing Penalty (veh)	80		

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	255	270	324	43	199	366	366	294	131	218	229
Average Queue (ft)	121	123	135	14	31	284	295	105	62	146	128
95th Queue (ft)	201	221	236	38	125	404	423	281	116	225	221
Link Distance (ft)		455	455			351	351		263	203	203
Upstream Blk Time (%)						4	6			4	3
Queuing Penalty (veh)						0	0			0	0
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)	0	0	3			39	17	0			
Queuing Penalty (veh)	0	0	1			8	24	0			

Network Summary

Network wide Queuing Penalty: 171

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	96	177	181	125	518	543	175	66
Average Queue (ft)	52	84	80	33	294	318	49	33
95th Queue (ft)	83	145	129	98	458	481	152	63
Link Distance (ft)		494	494		512	512		283
Upstream Blk Time (%)					0	1		
Queuing Penalty (veh)					1	5		
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)	3	5		1	31	27		
Queuing Penalty (veh)	17	5		5	9	14		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	174	29	94	118
Average Queue (ft)	88	2	8	57
95th Queue (ft)	157	12	43	106
Link Distance (ft)		483	483	257
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	75			
Storage Blk Time (%)	26			
Queuing Penalty (veh)	134			

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	344	372	310	224	199	398	398	265	107	242	218
Average Queue (ft)	138	132	147	18	14	298	309	83	53	165	156
95th Queue (ft)	251	267	273	84	74	420	431	232	99	242	232
Link Distance (ft)		483	483			383	383		237	203	203
Upstream Blk Time (%)						2	3			7	4
Queuing Penalty (veh)						0	0			0	0
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)	3	0	4			42	20				
Queuing Penalty (veh)	10	1	1			9	28				

Network Summary

Network wide Queuing Penalty: 240

Intersection: 100: Timberlake Rd & Site Access 1

Movement	NB
Directions Served	R
Maximum Queue (ft)	78
Average Queue (ft)	31
95th Queue (ft)	63
Link Distance (ft)	229
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	UL	T	T	R	LR	LR
Maximum Queue (ft)	90	223	253	125	522	560	175	378	138
Average Queue (ft)	50	105	107	121	376	380	40	378	56
95th Queue (ft)	79	188	187	140	555	566	139	378	113
Link Distance (ft)		253	253		493	493		363	284
Upstream Blk Time (%)			0		7	7		88	
Queuing Penalty (veh)			1		62	57		0	
Storage Bay Dist (ft)	75			75			125		
Storage Blk Time (%)	3	8		68	22	25			
Queuing Penalty (veh)	17	9		489	48	12			

Intersection: 300: Timberlake Rd & Bojangle's/TGI Fridays Access

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	LT	TR	LR	LR
Maximum Queue (ft)	174	22	484	488	240	249
Average Queue (ft)	79	3	206	144	217	171
95th Queue (ft)	152	15	457	439	228	269
Link Distance (ft)		493	480	480	206	197
Upstream Blk Time (%)			2	2	99	59
Queuing Penalty (veh)			14	15	0	0
Storage Bay Dist (ft)	75					
Storage Blk Time (%)	18					
Queuing Penalty (veh)	102					

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	267	288	301	199	199	345	374	250	109	216	219
Average Queue (ft)	149	121	137	14	32	327	329	95	54	159	185
95th Queue (ft)	242	208	226	74	94	335	349	248	100	258	248
Link Distance (ft)		480	480			311	311		253	201	
Upstream Blk Time (%)						47	41			9	13
Queuing Penalty (veh)						0	0			0	0
Storage Bay Dist (ft)	250			150	100			200			200
Storage Blk Time (%)	1	1	4		0	57	49			9	13
Queuing Penalty (veh)	7	2	1		0	22	69			42	36

Network Summary

Network wide Queuing Penalty: 1006

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	93	119	140	53	245	278	175	64
Average Queue (ft)	36	84	67	19	122	139	31	24
95th Queue (ft)	75	126	115	45	220	245	126	57
Link Distance (ft)		494	494		508	508		283
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)	2	5			10	6		
Queuing Penalty (veh)	8	3			2	2		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	113	22	118
Average Queue (ft)	51	1	44
95th Queue (ft)	95	7	85
Link Distance (ft)		466	246
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	75		
Storage Blk Time (%)	5		
Queuing Penalty (veh)	25		

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	308	182	224	52	27	328	348	54	86	218	151
Average Queue (ft)	102	77	102	8	4	174	179	32	26	98	66
95th Queue (ft)	193	152	176	31	21	261	270	55	56	183	115
Link Distance (ft)		466	466			335	335		256	203	203
Upstream Blk Time (%)						0	0			1	
Queuing Penalty (veh)						0	0			0	
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)	0		0			17	2				
Queuing Penalty (veh)	1		0			1	2				

Network Summary

Network wide Queuing Penalty: 46

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	L	T	T	U	T	T	R	LR
Maximum Queue (ft)	75	162	119	54	244	292	175	68
Average Queue (ft)	28	82	73	21	125	147	18	22
95th Queue (ft)	62	140	117	47	220	247	72	53
Link Distance (ft)		494	494		512	512		283
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	75			75			125	
Storage Blk Time (%)	0	5			11	8		
Queuing Penalty (veh)	1	3			3	3		

Intersection: 300: Timberlake Rd & Bojangles/TGI Fridays Access

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	141	158
Average Queue (ft)	55	44
95th Queue (ft)	112	104
Link Distance (ft)		257
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	75	
Storage Blk Time (%)	8	
Queuing Penalty (veh)	40	

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	289	163	199	28	25	287	330	71	107	156	204
Average Queue (ft)	123	70	82	5	2	170	175	36	34	110	73
95th Queue (ft)	229	139	164	23	14	255	274	63	81	158	158
Link Distance (ft)		483	483			383	383		237	203	203
Upstream Blk Time (%)											0
Queuing Penalty (veh)											0
Storage Bay Dist (ft)	250			175	100			215			
Storage Blk Time (%)	1		0			21	3				
Queuing Penalty (veh)	3		0			1	4				

Network Summary

Network wide Queuing Penalty: 57

Intersection: 100: Timberlake Rd & Site Access 1

Movement	NB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	31
95th Queue (ft)	53
Link Distance (ft)	229
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 200: Timberlake Rd & Candlewood Ct

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	UL	T	T	R	LR	LR
Maximum Queue (ft)	199	263	193	125	510	512	175	413	87
Average Queue (ft)	46	116	107	121	321	292	23	379	32
95th Queue (ft)	120	198	169	133	541	512	94	389	61
Link Distance (ft)		253	253		493	493		363	284
Upstream Blk Time (%)		0			1	1		88	
Queuing Penalty (veh)		1			8	5		0	
Storage Bay Dist (ft)	75			75			125		
Storage Blk Time (%)	0	10		70	14	14			
Queuing Penalty (veh)	2	6		380	30	5			

Intersection: 300: Timberlake Rd & Bojangle's/TGI Fridays Access

Movement	EB	WB	WB	NB	SB
Directions Served	L	LT	TR	LR	LR
Maximum Queue (ft)	136	303	287	240	138
Average Queue (ft)	59	110	52	203	56
95th Queue (ft)	116	244	183	274	106
Link Distance (ft)		480	480	206	197
Upstream Blk Time (%)				76	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)	75				
Storage Blk Time (%)	14				
Queuing Penalty (veh)	77				

Intersection: 400: Timberlake Rd & Old Graves Mill Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	224	211	222	200	45	326	328	250	86	204	175
Average Queue (ft)	145	102	119	16	14	258	254	89	38	117	76
95th Queue (ft)	224	190	211	75	33	381	377	248	80	182	151
Link Distance (ft)		480	480			311	311		253	201	
Upstream Blk Time (%)						4	4			0	
Queuing Penalty (veh)						0	0			0	
Storage Bay Dist (ft)	250			150	100			200			200
Storage Blk Time (%)			3			36	14	0		0	
Queuing Penalty (veh)			1			8	18	0		1	

Network Summary

Network wide Queuing Penalty: 543

Trip Generation

Phase Time Period Trip Generation
Weekday Average Daily Trips

Project : Timberlake Road and Candlewood Court Development
Alternative : Alternative 1 — Open Date : 1/14/2014
Phase : Phase 1 — Analysis Date : 1/14/2014

ITE	Land Use		Enter	Exit	Total
220	APT 1		1044	1043	2087
	324	Dwelling Units			
252	SENIORATTACHED 1		100	100	200
	60	Dwelling Units			
853	CONVMARKETGAS 1		4341	4341	8682
	16	Vehicle Fueling Positions			
934	FASTFOODDT 1		744	744	1488
	3	Gross Floor Area 1000 SF			
934	FASTFOODDT 2		744	744	1488
	3	Gross Floor Area 1000 SF			
932	RESTAURANTHT 1		318	318	636
	5	Gross Floor Area 1000 SF			
912	BANKDRIVEIN 1		279	278	557
	4	Drive-In Lanes			
820	CENTERSHOPPING 1		1193	1193	2386
	20	Gross Leasable Area 1000 SF			

Unadjusted Driveway Volume	8763	8761	17524
Unadjusted Pass-By Trips	0	0	0
Internal Vehicle Trips	0	0	0
Adjusted Driveway Volume	8763	8761	17524
Adjusted Pass-By Trips	0	0	0
Adjusted Total Volume Added to Adjacent Streets	8763	8761	17524

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2013, TRAFFICWARE, LLC

Phase Time Period Trip Generation
Weekday AM Peak Hour of Adjacent Street Traffic

Project : Timberlake Road and Candlewood Court Development
Alternative : Alternative 1 — Open Date : 1/14/2014
Phase : Phase 1 — Analysis Date : 1/14/2014

ITE	Land Use		Enter	Exit	Total
220	APT 1		32	130	162
	324	Dwelling Units			
252	SENIORATTACHED 1		4	8	12
	60	Dwelling Units			
853	CONVMARKETGAS 1		133	132	265
	16	Vehicle Fueling Positions			
934	FASTFOODDT 1		69	67	136
	3	Gross Floor Area 1000 SF			
934	FASTFOODDT 2		69	67	136
	3	Gross Floor Area 1000 SF			
932	RESTAURANTHT 1		30	24	54
	5	Gross Floor Area 1000 SF			
912	BANKDRIVEIN 1		22	15	37
	4	Drive-In Lanes			
820	CENTERSHOPPING 1		36	22	58
	20	Gross Leasable Area 1000 SF			

Unadjusted Driveway Volume	395	465	860
Unadjusted Pass-By Trips	152	149	301
Internal Vehicle Trips	137	137	274
Adjusted Driveway Volume	258	328	586
Adjusted Pass-By Trips	99	105	205
Adjusted Total Volume Added to Adjacent Streets	159	223	381

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2013, TRAFFICWARE, LLC

Phase Time Period Trip Generation
Weekday PM Peak Hour of Adjacent Street Traffic

Project : Timberlake Road and Candlewood Court Development
Alternative : Alternative 1 — Open Date : 1/14/2014
Phase : Phase 1 — Analysis Date : 1/14/2014

ITE	Land Use		Enter	Exit	Total
220	APT 1		127	69	196
	324	Dwelling Units			
252	SENIORATTACHED 1		9	7	16
	60	Dwelling Units			
853	CONVMARKETGAS 1		153	152	305
	16	Vehicle Fueling Positions			
934	FASTFOODDT 1		51	47	98
	3	Gross Floor Area 1000 SF			
934	FASTFOODDT 2		51	47	98
	3	Gross Floor Area 1000 SF			
932	RESTAURANTHT 1		29	20	49
	5	Gross Floor Area 1000 SF			
912	BANKDRIVEIN 1		65	68	133
	4	Drive-In Lanes			
820	CENTERSHOPPING 1		98	106	204
	20	Gross Leasable Area 1000 SF			

Unadjusted Driveway Volume	583	516	1099
Unadjusted Pass-By Trips	229	225	452
Internal Vehicle Trips	319	319	638
Adjusted Driveway Volume	264	197	461
Adjusted Pass-By Trips	104	86	190
Adjusted Total Volume Added to Adjacent Streets	160	111	271

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2013, TRAFFICWARE, LLC

Phase Time Period Trip Generation
Saturday Peak Hour of Generator

Project : Timberlake Road and Candlewood Court Development
Alternative : Alternative 1 — Open Date : 1/14/2014
Phase : Phase 1 — Analysis Date : 1/14/2014

ITE	Land Use		Enter	Exit	Total
220	APT 1		76	76	152
	324	Dwelling Units			
252	SENIORATTACHED 1		11	8	19
	60	Dwelling Units			
853	CONVMARKETGAS 1		82	78	160
	16	Vehicle Fueling Positions			
934	FASTFOODDT 1		90	87	177
	3	Gross Floor Area 1000 SF			
934	FASTFOODDT 2		90	87	177
	3	Gross Floor Area 1000 SF			
932	RESTAURANTHT 1		37	33	70
	5	Gross Floor Area 1000 SF			
912	BANKDRIVEIN 1		56	59	115
	4	Drive-In Lanes			
820	CENTERSHOPPING 1		160	147	307
	20	Gross Leasable Area 1000 SF			

Unadjusted Driveway Volume	602	575	1177
Unadjusted Pass-By Trips	0	0	0
Internal Vehicle Trips	0	0	0
Adjusted Driveway Volume	602	575	1177
Adjusted Pass-By Trips	0	0	0
Adjusted Total Volume Added to Adjacent Streets	602	575	1177

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2013, TRAFFICWARE, LLC

Traffic Volume Data

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Timberlake Rd & Candlewood Ct (6AM - 9AM)
Site Code : 00000002
Start Date : 11/21/2013
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

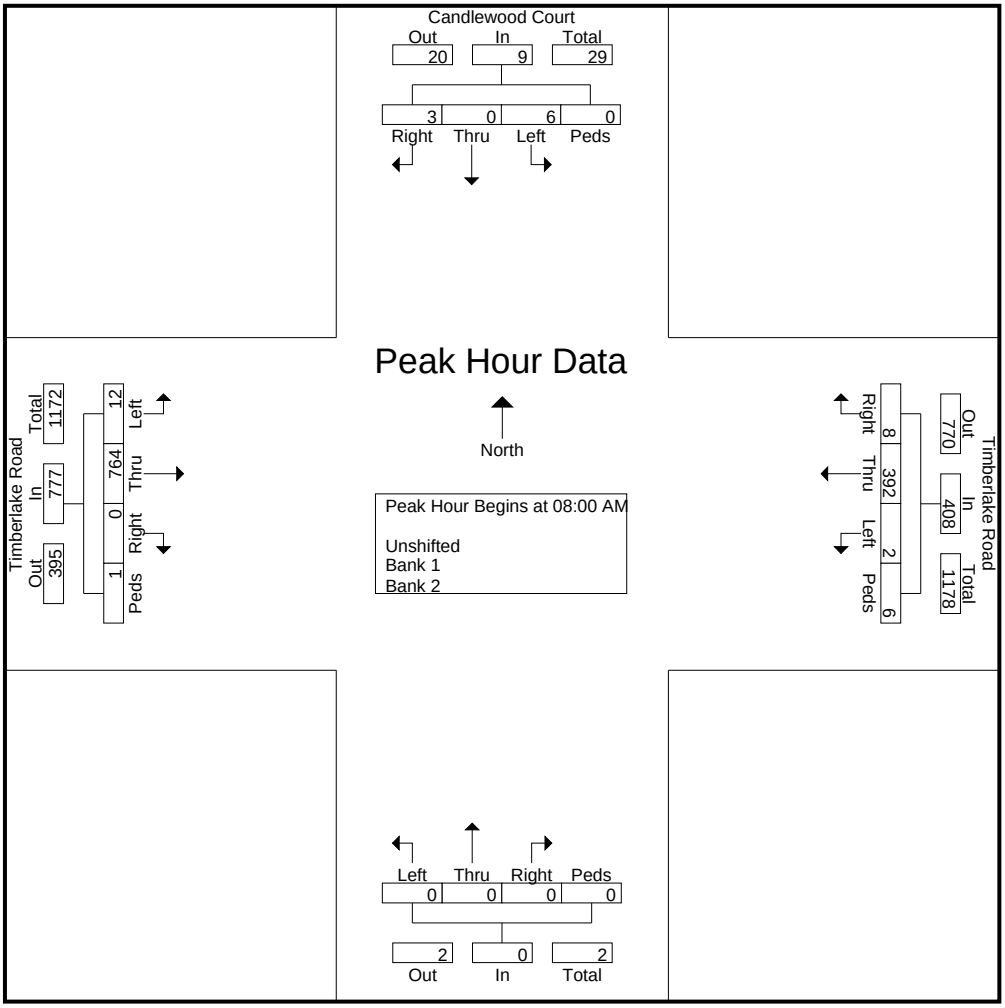
	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	34	0	0	34	48
06:15 AM	0	0	1	0	1	0	17	0	1	18	0	0	0	0	0	0	33	0	1	34	53
06:30 AM	0	0	0	0	0	1	14	0	1	16	0	0	0	0	0	0	27	0	0	27	43
06:45 AM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	36	0	0	36	53
Total	0	0	1	0	1	1	62	0	2	65	0	0	0	0	0	0	130	0	1	131	197
07:00 AM	0	0	0	0	0	0	60	0	1	61	0	0	0	0	0	0	82	0	1	83	144
07:15 AM	0	0	0	0	0	0	42	0	0	42	0	0	0	0	0	0	84	0	0	84	126
07:30 AM	1	0	0	0	1	1	43	2	0	46	0	0	0	0	0	0	95	0	1	96	143
07:45 AM	0	0	1	0	1	0	72	0	4	76	0	0	0	0	0	0	124	0	2	126	203
Total	1	0	1	0	2	1	217	2	5	225	0	0	0	0	0	0	385	0	4	389	616
08:00 AM	3	0	0	0	3	0	96	2	1	99	0	0	0	0	0	3	169	0	0	172	274
08:15 AM	1	0	2	0	3	1	93	1	4	99	0	0	0	0	0	4	192	0	1	197	299
08:30 AM	2	0	1	0	3	1	69	2	0	72	0	0	0	0	0	2	154	0	0	156	231
08:45 AM	0	0	0	0	0	0	134	3	1	138	0	0	0	0	0	3	249	0	0	252	390
Total	6	0	3	0	9	2	392	8	6	408	0	0	0	0	0	12	764	0	1	777	1194
Grand Total	7	0	5	0	12	4	671	10	13	698	0	0	0	0	0	12	1279	0	6	1297	2007
Apprch %	58.3	0	41.7	0		0.6	96.1	1.4	1.9		0	0	0	0		0.9	98.6	0	0.5		
Total %	0.3	0	0.2	0	0.6	0.2	33.4	0.5	0.6	34.8	0	0	0	0	0	0.6	63.7	0	0.3	64.6	
Unshifted	7	0	5	0	12	4	671	10	13	698	0	0	0	0	0	12	1279	0	6	1297	2007
% Unshifted	100	0	100	0	100	100	100	100	100	100	0	0	0	0	0	100	100	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Timberlake Rd & Candlewood Ct (6AM - 9AM)
Site Code : 00000002
Start Date : 11/21/2013
Page No : 2

	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	0	0	3	0	96	2	1	99	0	0	0	0	0	3	169	0	0	172	274
08:15 AM	1	0	2	0	3	1	93	1	4	99	0	0	0	0	0	4	192	0	1	197	299
08:30 AM	2	0	1	0	3	1	69	2	0	72	0	0	0	0	0	2	154	0	0	156	231
08:45 AM	0	0	0	0	0	0	134	3	1	138	0	0	0	0	0	3	249	0	0	252	390
Total Volume	6	0	3	0	9	2	392	8	6	408	0	0	0	0	0	12	764	0	1	777	1194
% App. Total	66.7	0	33.3	0		0.5	96.1	2	1.5		0	0	0	0		1.5	98.3	0	0.1		
PHF	.500	.000	.375	.000	.750	.500	.731	.667	.375	.739	.000	.000	.000	.000	.000	.750	.767	.000	.250	.771	.765



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Timberlake Rd & Candlewood Ct (4PM - 7 PM)
Site Code : 00000003
Start Date : 11/21/2013
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

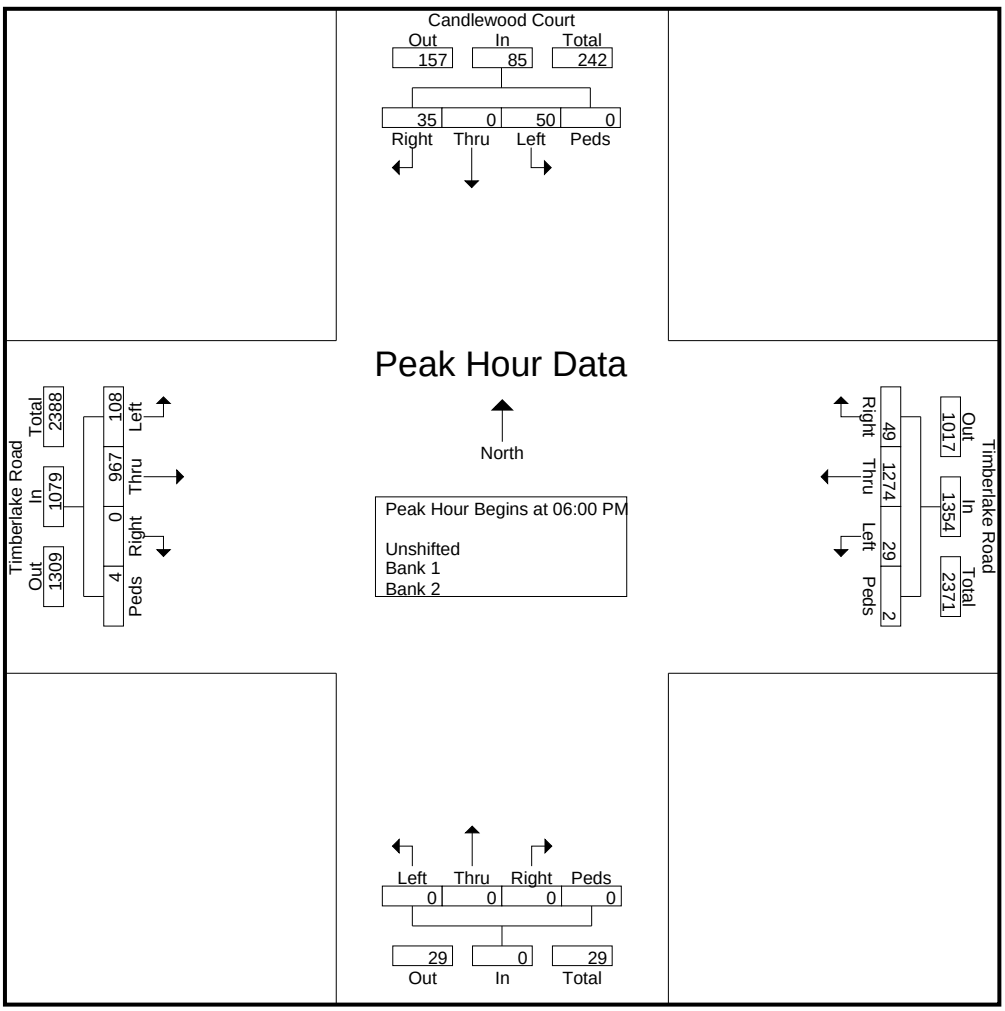
	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	4	0	8	0	12	9	222	4	0	235	0	0	0	0	0	13	199	0	1	213	460
04:15 PM	7	0	6	0	13	2	241	6	3	252	0	0	0	0	0	9	206	0	2	217	482
04:30 PM	7	0	5	0	12	1	242	5	0	248	0	0	0	0	0	10	192	0	1	203	463
04:45 PM	6	0	6	0	12	3	296	8	1	308	0	0	0	0	0	21	245	0	1	267	587
Total	24	0	25	0	49	15	1001	23	4	1043	0	0	0	0	0	53	842	0	5	900	1992
05:00 PM	12	0	9	0	21	5	322	5	3	335	0	0	0	0	0	18	233	0	2	253	609
05:15 PM	5	0	12	0	17	1	217	13	0	231	0	0	0	0	0	13	165	0	1	179	427
05:30 PM	5	0	16	0	21	6	261	6	0	273	0	0	0	0	0	12	220	0	2	234	528
05:45 PM	14	0	10	0	24	2	225	6	0	233	0	0	0	0	0	23	158	0	1	182	439
Total	36	0	47	0	83	14	1025	30	3	1072	0	0	0	0	0	66	776	0	6	848	2003
06:00 PM	16	0	9	0	25	10	310	8	1	329	0	0	0	0	0	27	212	0	0	239	593
06:15 PM	6	0	11	0	17	5	347	12	0	364	0	0	0	0	0	36	222	0	1	259	640
06:30 PM	16	0	8	0	24	6	287	9	1	303	0	0	0	0	0	16	255	0	0	271	598
06:45 PM	12	0	7	0	19	8	330	20	0	358	0	0	0	0	0	29	278	0	3	310	687
Total	50	0	35	0	85	29	1274	49	2	1354	0	0	0	0	0	108	967	0	4	1079	2518
Grand Total	110	0	107	0	217	58	3300	102	9	3469	0	0	0	0	0	227	2585	0	15	2827	6513
Apprch %	50.7	0	49.3	0		1.7	95.1	2.9	0.3		0	0	0	0		8	91.4	0	0.5		
Total %	1.7	0	1.6	0	3.3	0.9	50.7	1.6	0.1	53.3	0	0	0	0	0	3.5	39.7	0	0.2	43.4	
Unshifted	110	0	107	0	217	58	3300	102	9	3469	0	0	0	0	0	227	2585	0	15	2827	6513
% Unshifted	100	0	100	0	100	100	100	100	100	100	0	0	0	0	0	100	100	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Timberlake Rd & Candlewood Ct (4PM - 7 PM)
Site Code : 00000003
Start Date : 11/21/2013
Page No : 2

	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:00 PM																					
06:00 PM	16	0	9	0	25	10	310	8	1	329	0	0	0	0	0	27	212	0	0	239	593
06:15 PM	6	0	11	0	17	5	347	12	0	364	0	0	0	0	0	36	222	0	1	259	640
06:30 PM	16	0	8	0	24	6	287	9	1	303	0	0	0	0	0	16	255	0	0	271	598
06:45 PM	12	0	7	0	19	8	330	20	0	358	0	0	0	0	0	29	278	0	3	310	687
Total Volume	50	0	35	0	85	29	1274	49	2	1354	0	0	0	0	0	108	967	0	4	1079	2518
% App. Total	58.8	0	41.2	0		2.1	94.1	3.6	0.1		0	0	0	0		10	89.6	0	0.4		
PHF	.781	.000	.795	.000	.850	.725	.918	.613	.500	.930	.000	.000	.000	.000	.000	.750	.870	.000	.333	.870	.916



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Saturday Timberlake Rd and Candlewood Ct (10AM - 2 PM)
Site Code : 00000001
Start Date : 12/7/2013
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

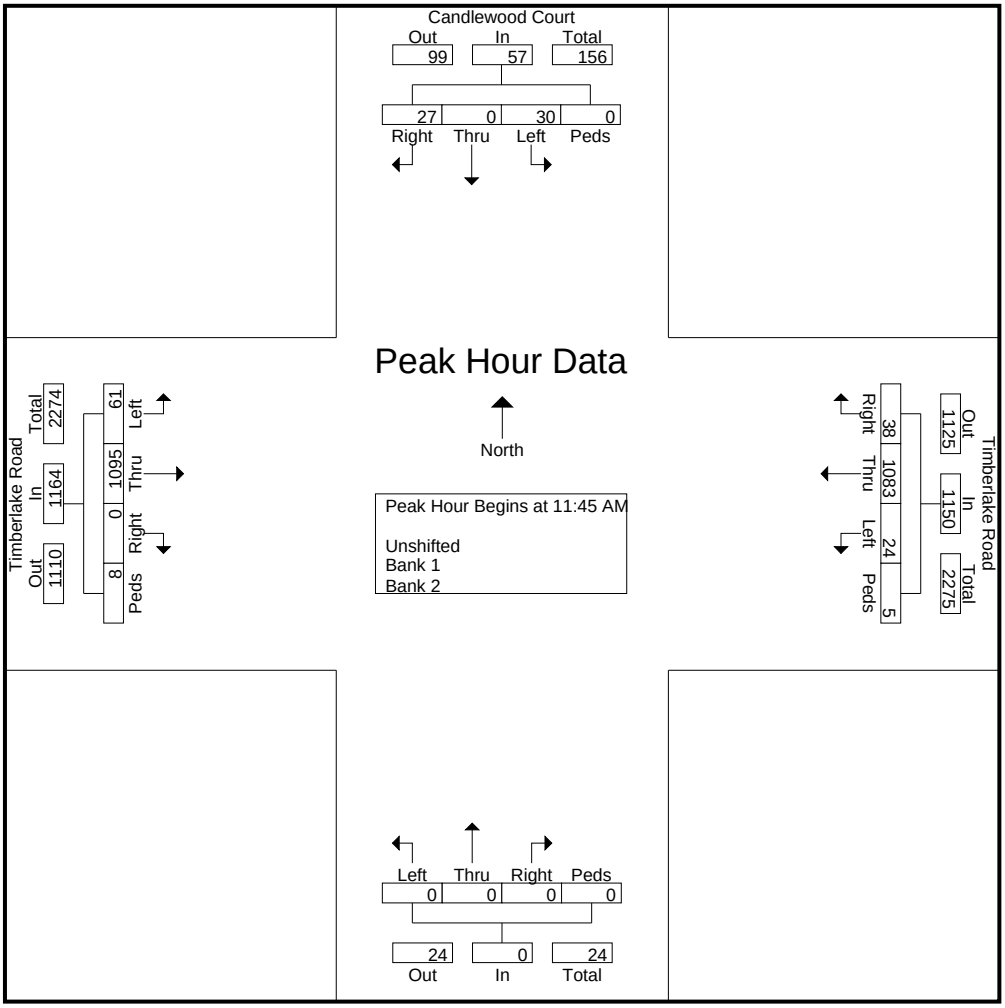
	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
10:00 AM	7	0	4	0	11	3	207	7	2	219	0	0	0	0	0	14	220	0	2	236	466
10:15 AM	12	0	6	0	18	4	188	7	2	201	0	0	0	0	0	10	253	0	2	265	484
10:30 AM	11	0	8	0	19	4	247	2	4	257	0	0	0	0	0	12	284	0	3	299	575
10:45 AM	5	0	4	0	9	4	221	5	0	230	0	0	0	0	0	12	291	0	2	305	544
Total	35	0	22	0	57	15	863	21	8	907	0	0	0	0	0	48	1048	0	9	1105	2069
11:00 AM	10	0	7	0	17	5	232	10	1	248	0	0	0	0	0	14	243	0	1	258	523
11:15 AM	5	0	12	0	17	4	269	7	2	282	0	0	0	0	0	15	274	0	3	292	591
11:30 AM	15	0	8	0	23	4	223	11	1	239	0	0	0	0	0	29	255	0	0	284	546
11:45 AM	9	0	7	0	16	5	269	11	0	285	0	0	0	0	0	22	283	0	1	306	607
Total	39	0	34	0	73	18	993	39	4	1054	0	0	0	0	0	80	1055	0	5	1140	2267
12:00 PM	10	0	5	0	15	9	298	9	0	316	0	0	0	0	0	12	279	0	2	293	624
12:15 PM	5	0	7	0	12	6	274	7	1	288	0	0	0	0	0	14	264	0	4	282	582
12:30 PM	6	0	8	0	14	4	242	11	4	261	0	0	0	0	0	13	269	0	1	283	558
12:45 PM	9	0	7	0	16	5	257	8	2	272	0	0	0	0	0	20	258	0	1	279	567
Total	30	0	27	0	57	24	1071	35	7	1137	0	0	0	0	0	59	1070	0	8	1137	2331
01:00 PM	7	0	4	0	11	2	305	15	0	322	0	0	0	0	0	11	291	0	1	303	636
01:15 PM	7	0	2	0	9	5	271	6	5	287	0	0	0	0	0	16	285	0	0	301	597
01:30 PM	8	0	4	0	12	8	254	6	1	269	0	0	0	0	0	20	238	0	3	261	542
01:45 PM	16	0	15	1	32	15	172	10	2	199	0	0	0	0	0	27	196	0	2	225	456
Total	38	0	25	1	64	30	1002	37	8	1077	0	0	0	0	0	74	1010	0	6	1090	2231
Grand Total	142	0	108	1	251	87	3929	132	27	4175	0	0	0	0	0	261	4183	0	28	4472	8898
Apprch %	56.6	0	43	0.4		2.1	94.1	3.2	0.6		0	0	0	0		5.8	93.5	0	0.6		
Total %	1.6	0	1.2	0	2.8	1	44.2	1.5	0.3	46.9	0	0	0	0	0	2.9	47	0	0.3	50.3	
Unshifted	142	0	108	1	251	87	3929	132	27	4175	0	0	0	0	0	261	4183	0	28	4472	8898
% Unshifted	100	0	100	100	100	100	100	100	100	100	0	0	0	0	0	100	100	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Saturday Timberlake Rd and Candlewood Ct (10AM - 2 PM)
Site Code : 00000001
Start Date : 12/7/2013
Page No : 2

	Candlewood Court Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	9	0	7	0	16	5	269	11	0	285	0	0	0	0	0	22	283	0	1	306	607
12:00 PM	10	0	5	0	15	9	298	9	0	316	0	0	0	0	0	12	279	0	2	293	624
12:15 PM	5	0	7	0	12	6	274	7	1	288	0	0	0	0	0	14	264	0	4	282	582
12:30 PM	6	0	8	0	14	4	242	11	4	261	0	0	0	0	0	13	269	0	1	283	558
Total Volume	30	0	27	0	57	24	1083	38	5	1150	0	0	0	0	0	61	1095	0	8	1164	2371
% App. Total	52.6	0	47.4	0		2.1	94.2	3.3	0.4		0	0	0	0		5.2	94.1	0	0.7		
PHF	.750	.000	.844	.000	.891	.667	.909	.864	.313	.910	.000	.000	.000	.000	.000	.693	.967	.000	.500	.951	.950



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted by: Y. Torres

File Name : Timberlake Rd & Shopping Center Entrance Weekday
Site Code : 00013366
Start Date : 10/9/2014

Weather: Clear

Page No : 1

Groups Printed- Cars

	Shopping Center Access Southbound					Timberlake Rd Westbound										Timberlake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	0	69	5	0	74	0	0	0	0	0	12	183	0	0	195	271
07:15 AM	4	0	3	0	7	0	132	3	0	135	0	0	0	0	0	10	218	0	0	228	370
07:30 AM	4	0	1	0	5	0	156	8	0	164	0	0	0	0	0	19	270	0	0	289	458
07:45 AM	2	0	1	0	3	0	171	7	0	178	0	0	0	0	0	28	343	0	0	371	552
Total	12	0	5	0	17	0	528	23	0	551	0	0	0	0	0	69	1014	0	0	1083	1651
08:00 AM	1	0	3	0	4	0	167	6	0	173	0	0	0	0	0	19	267	0	1	287	464
08:15 AM	3	0	8	0	11	0	120	7	0	127	0	0	0	0	0	18	277	0	0	295	433
08:30 AM	2	0	9	0	11	0	180	2	0	182	0	0	0	0	0	23	258	0	0	281	474
08:45 AM	2	0	5	0	7	0	216	9	0	225	0	0	0	0	0	21	237	0	0	258	490
Total	8	0	25	0	33	0	683	24	0	707	0	0	0	0	0	81	1039	0	1	1121	1861
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
04:00 PM	1	0	22	0	23	0	329	6	0	335	0	0	0	0	0	24	214	0	0	238	596
04:15 PM	1	0	23	0	24	0	288	4	0	292	0	0	0	0	0	32	247	0	0	279	595
04:30 PM	3	0	12	0	15	0	297	3	0	300	0	0	0	0	0	33	236	0	0	269	584
04:45 PM	1	0	17	0	18	0	343	9	0	352	0	0	0	0	0	34	199	0	0	233	603
Total	6	0	74	0	80	0	1257	22	0	1279	0	0	0	0	0	123	896	0	0	1019	2378
05:00 PM	3	0	21	0	24	0	340	8	0	348	0	0	0	0	0	35	252	0	0	287	659
05:15 PM	0	0	26	0	26	0	396	10	0	406	0	0	0	0	0	32	270	0	0	302	734
05:30 PM	0	0	27	0	27	0	360	7	0	367	0	0	0	0	0	45	268	0	0	313	707
05:45 PM	0	0	21	0	21	0	326	7	0	333	0	0	0	0	0	32	232	0	0	264	618
Total	3	0	95	0	98	0	1422	32	0	1454	0	0	0	0	0	144	1022	0	0	1166	2718
Grand Total	29	0	199	0	228	0	3890	101	0	3991	0	0	0	0	0	417	3972	0	1	4390	8609
Apprch %	12.7	0	87.3	0		0	97.5	2.5	0		0	0	0	0		9.5	90.5	0	0		
Total %	0.3	0	2.3	0	2.6	0	45.2	1.2	0	46.4	0	0	0	0	0	4.8	46.1	0	0	51	

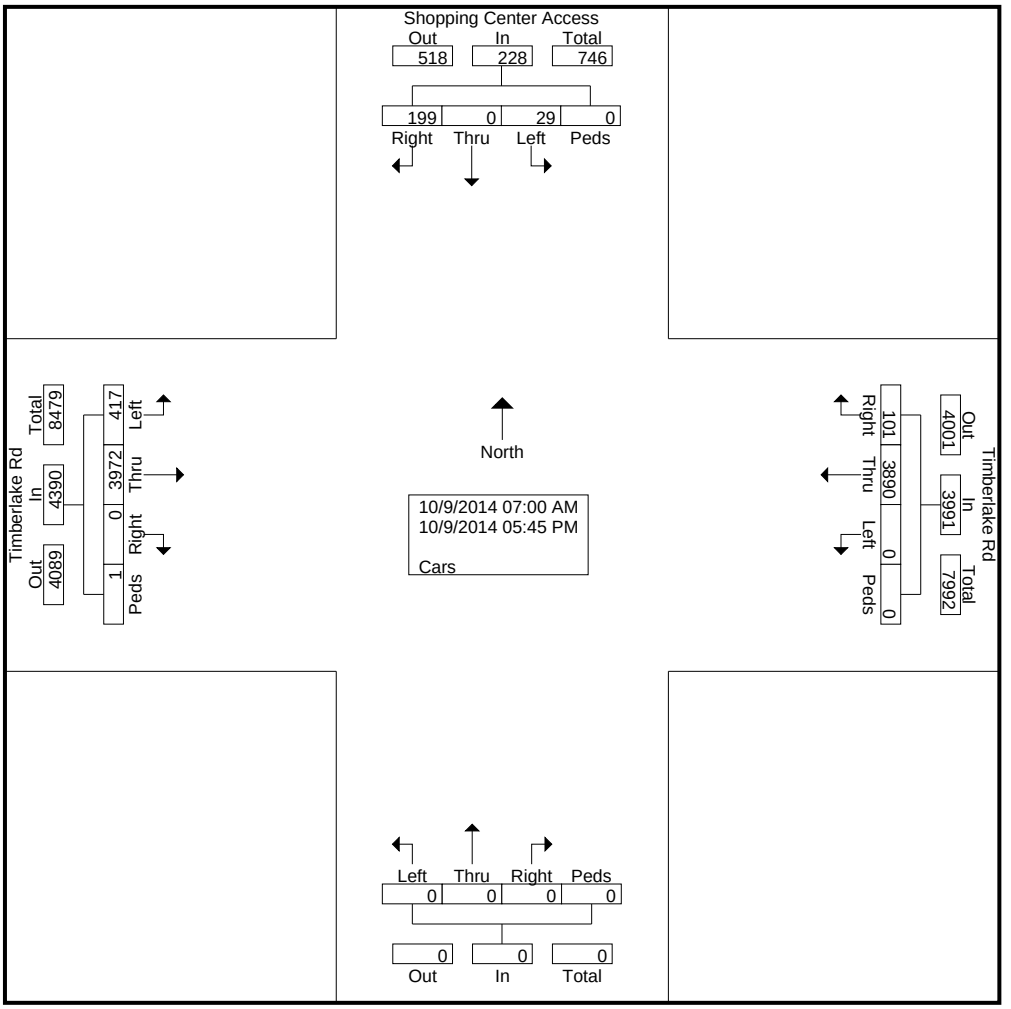
DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted by: Y. Torres

File Name : Timberlake Rd & Shopping Center Entrance Weekday
Site Code : 00013366
Start Date : 10/9/2014
Page No : 2

Weather: Clear



DAVENPORT

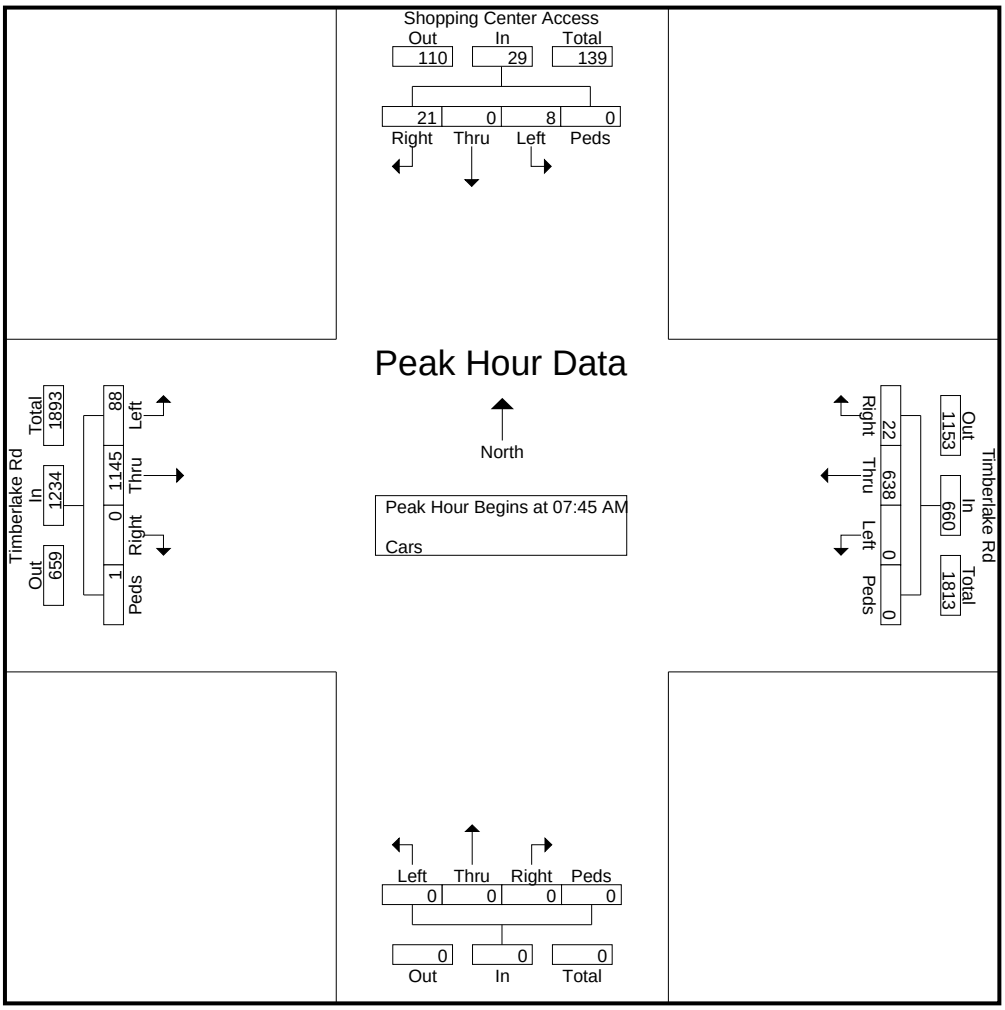
305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted by: Y. Torres

File Name : Timberlake Rd & Shopping Center Entrance Weekday
Site Code : 00013366
Start Date : 10/9/2014
Page No : 3

Weather: Clear

	Shopping Center Access Southbound					Timberlake Rd Westbound					Northbound					Timberlake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	2	0	1	0	3	0	171	7	0	178	0	0	0	0	0	28	343	0	0	371	552
08:00 AM	1	0	3	0	4	0	167	6	0	173	0	0	0	0	0	19	267	0	1	287	464
08:15 AM	3	0	8	0	11	0	120	7	0	127	0	0	0	0	0	18	277	0	0	295	433
08:30 AM	2	0	9	0	11	0	180	2	0	182	0	0	0	0	0	23	258	0	0	281	474
Total Volume	8	0	21	0	29	0	638	22	0	660	0	0	0	0	0	88	1145	0	1	1234	1923
% App. Total	27.6	0	72.4	0		0	96.7	3.3	0		0	0	0	0		7.1	92.8	0	0.1		
PHF	.667	.000	.583	.000	.659	.000	.886	.786	.000	.907	.000	.000	.000	.000	.000	.786	.835	.000	.250	.832	.871



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted By: B. Soblesky
File Name : Timberlake Rd & Shopping Center Entrance Saturday Midday
Site Code : 00000000
Start Date : 1/11/2014
Weather: Clear
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

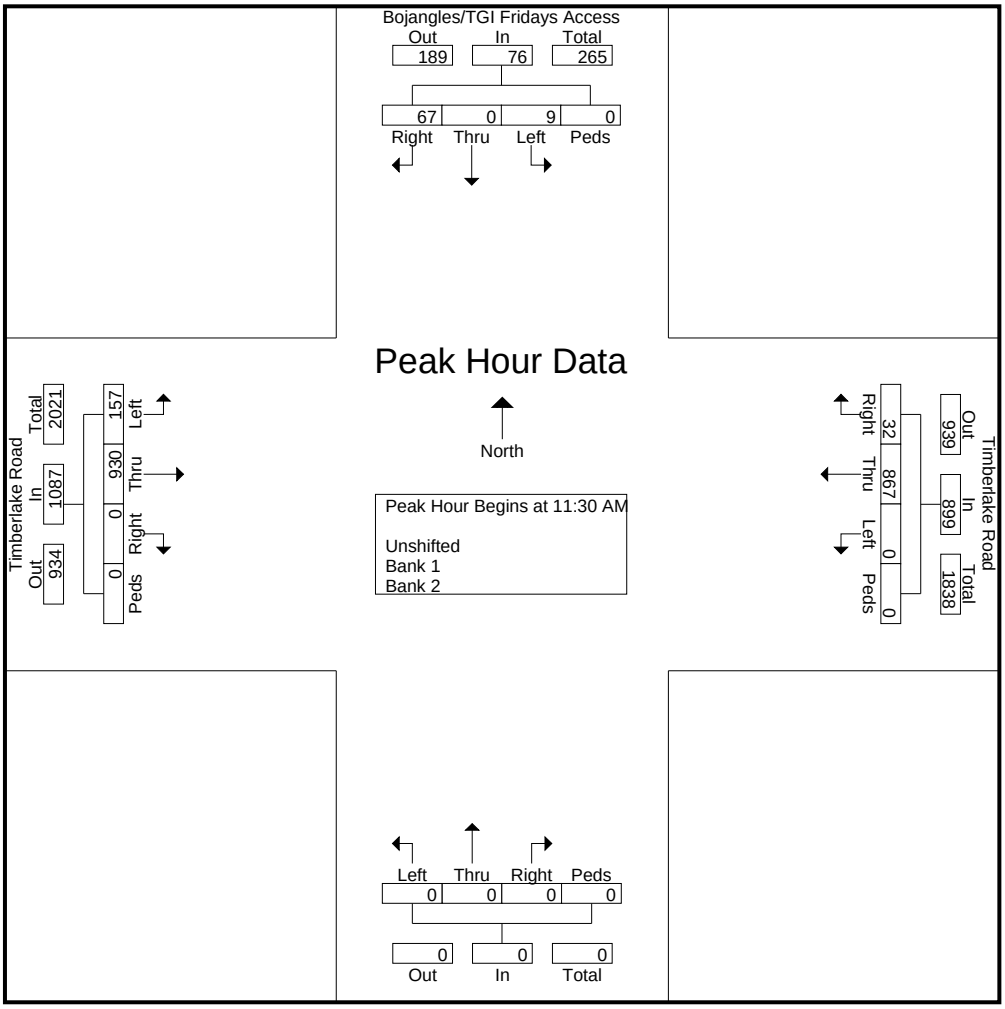
	Bojangles/TGI Fridays Access Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	0	16	0	16	0	183	17	0	200	0	0	0	0	0	32	181	0	0	213	429
11:15 AM	5	0	11	0	16	0	226	9	0	235	0	0	0	0	0	36	216	0	0	252	503
11:30 AM	1	0	18	0	19	0	204	7	0	211	0	0	0	0	0	40	218	0	0	258	488
11:45 AM	0	0	12	0	12	0	228	10	0	238	0	0	0	0	0	37	230	0	0	267	517
Total	6	0	57	0	63	0	841	43	0	884	0	0	0	0	0	145	845	0	0	990	1937
12:00 PM	3	0	17	0	20	0	191	5	0	196	0	0	0	0	0	21	239	0	0	260	476
12:15 PM	5	0	20	0	25	0	244	10	0	254	0	0	0	0	0	59	243	0	0	302	581
12:30 PM	7	0	8	0	15	0	186	7	0	193	0	0	0	0	0	32	176	0	0	208	416
12:45 PM	4	0	24	0	28	0	228	11	0	239	0	0	0	0	0	31	197	0	0	228	495
Total	19	0	69	0	88	0	849	33	0	882	0	0	0	0	0	143	855	0	0	998	1968
Grand Total	25	0	126	0	151	0	1690	76	0	1766	0	0	0	0	0	288	1700	0	0	1988	3905
Apprch %	16.6	0	83.4	0		0	95.7	4.3	0		0	0	0	0		14.5	85.5	0	0		
Total %	0.6	0	3.2	0	3.9	0	43.3	1.9	0	45.2	0	0	0	0	0	7.4	43.5	0	0	50.9	
Unshifted	25	0	126	0	151	0	1673	75	0	1748	0	0	0	0	0	287	1691	0	0	1978	3877
% Unshifted	100	0	100	0	100	0	99	98.7	0	99	0	0	0	0	0	99.7	99.5	0	0	99.5	99.3
Bank 1	0	0	0	0	0	0	17	1	0	18	0	0	0	0	0	1	9	0	0	10	28
% Bank 1	0	0	0	0	0	0	1	1.3	0	1	0	0	0	0	0	0.3	0.5	0	0	0.5	0.7
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : Timberlake Rd & Shopping Center Entrance Saturday Midday
Site Code : 00000000
Start Date : 1/11/2014
Page No : 2

	Bojangles/TGI Fridays Access Southbound					Timberlake Road Westbound					Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	1	0	18	0	19	0	204	7	0	211	0	0	0	0	0	40	218	0	0	258	488
11:45 AM	0	0	12	0	12	0	228	10	0	238	0	0	0	0	0	37	230	0	0	267	517
12:00 PM	3	0	17	0	20	0	191	5	0	196	0	0	0	0	0	21	239	0	0	260	476
12:15 PM	5	0	20	0	25	0	244	10	0	254	0	0	0	0	0	59	243	0	0	302	581
Total Volume	9	0	67	0	76	0	867	32	0	899	0	0	0	0	0	157	930	0	0	1087	2062
% App. Total	11.8	0	88.2	0		0	96.4	3.6	0		0	0	0	0		14.4	85.6	0	0		
PHF	.450	.000	.838	.000	.760	.000	.888	.800	.000	.885	.000	.000	.000	.000	.000	.665	.957	.000	.000	.900	.887



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted By: B. Whitaker

File Name : 13-320 Timberlake Rd at Old Graves Mill Rd AM & PM
Site Code : 13-320
Start Date : 7/16/2013

Weather: Clear

Page No : 1

Groups Printed- Cars - Trucks - Bikes

	Old Graves Mill Road Southbound					Timberlake Road Westbound					Dreaming Creek Road Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	20	0	29	0	49	0	73	15	0	88	5	6	6	0	17	73	107	1	0	181	335
07:15 AM	26	3	36	0	65	2	97	27	0	126	4	10	2	0	16	78	110	1	0	189	396
07:30 AM	30	6	41	0	77	1	83	11	0	95	7	4	2	0	13	89	158	1	0	248	433
07:45 AM	30	7	38	0	75	8	124	28	0	160	6	5	6	0	17	101	192	5	0	298	550
Total	106	16	144	0	266	11	377	81	0	469	22	25	16	0	63	341	567	8	0	916	1714
08:00 AM	17	3	37	0	57	4	116	16	0	136	9	6	3	0	18	84	167	1	1	253	464
08:15 AM	37	4	36	0	77	2	122	15	0	139	2	5	9	0	16	71	171	2	0	244	476
08:30 AM	30	4	52	0	86	4	108	22	0	134	9	6	1	0	16	66	148	2	1	217	453
08:45 AM	26	2	50	0	78	3	143	17	0	163	13	7	3	0	23	69	145	6	0	220	484
Total	110	13	175	0	298	13	489	70	0	572	33	24	16	0	73	290	631	11	2	934	1877
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : 13-320 Timberlake Rd at Old Graves Mill Rd AM & PM
Site Code : 13-320
Start Date : 7/16/2013
Page No : 2

Groups Printed- Cars - Trucks - Bikes

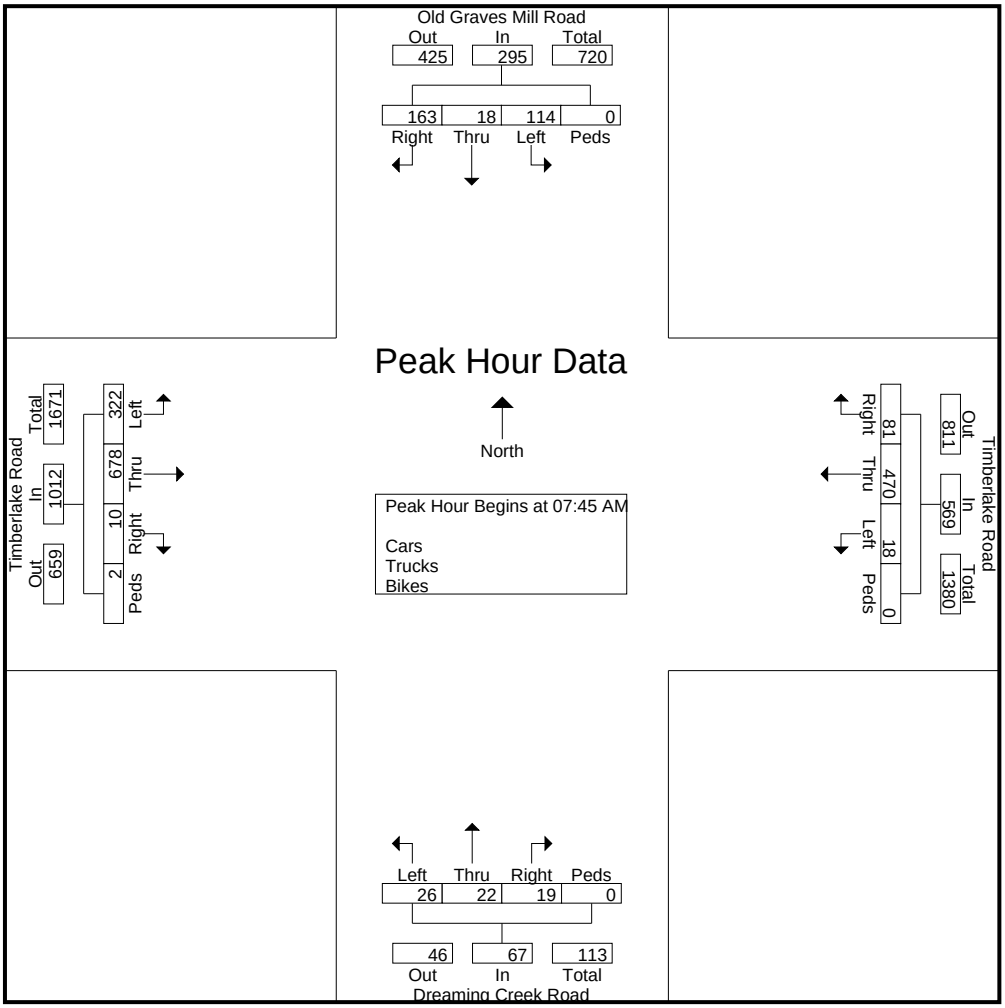
	Old Graves Mill Road Southbound					Timberlake Road Westbound					Dreaming Creek Road Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	36	4	74	0	114	5	186	41	0	232	10	3	8	0	21	51	142	4	0	197	564
04:15 PM	44	12	125	0	181	5	164	22	0	191	4	6	4	0	14	73	171	3	0	247	633
04:30 PM	36	10	100	0	146	1	172	37	0	210	2	8	2	0	12	66	158	4	1	229	597
04:45 PM	56	17	96	0	169	5	214	36	0	255	8	4	2	0	14	57	160	6	0	223	661
Total	172	43	395	0	610	16	736	136	0	888	24	21	16	0	61	247	631	17	1	896	2455
05:00 PM	53	14	117	0	184	8	204	27	0	239	9	12	4	0	25	69	165	6	0	240	688
05:15 PM	53	10	108	0	171	4	215	38	1	258	10	5	2	0	17	66	180	6	0	252	698
05:30 PM	52	16	100	0	168	4	188	38	0	230	7	12	2	0	21	60	159	9	1	229	648
05:45 PM	51	14	87	0	152	4	186	30	0	220	5	11	1	0	17	80	146	6	1	233	622
Total	209	54	412	0	675	20	793	133	1	947	31	40	9	0	80	275	650	27	2	954	2656
Grand Total	597	126	1126	0	1849	60	2395	420	1	2876	110	110	57	0	277	1153	2479	63	5	3700	8702
Apprch %	32.3	6.8	60.9	0		2.1	83.3	14.6	0		39.7	39.7	20.6	0		31.2	67	1.7	0.1		
Total %	6.9	1.4	12.9	0	21.2	0.7	27.5	4.8	0	33	1.3	1.3	0.7	0	3.2	13.2	28.5	0.7	0.1	42.5	
Cars	591	126	1106	0	1823	60	2369	418	0	2847	109	110	57	0	276	1139	2451	63	0	3653	8599
% Cars	99	100	98.2	0	98.6	100	98.9	99.5	0	99	99.1	100	100	0	99.6	98.8	98.9	100	0	98.7	98.8
Trucks	6	0	20	0	26	0	25	2	0	27	1	0	0	0	1	13	27	0	1	41	95
% Trucks	1	0	1.8	0	1.4	0	1	0.5	0	0.9	0.9	0	0	0	0.4	1.1	1.1	0	20	1.1	1.1
Bikes	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	1	1	0	4	6	8
% Bikes	0	0	0	0	0	0	0	0	100	0.1	0	0	0	0	0	0.1	0	0	80	0.2	0.1

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : 13-320 Timberlake Rd at Old Graves Mill Rd AM & PM
Site Code : 13-320
Start Date : 7/16/2013
Page No : 4

	Old Graves Mill Road Southbound					Timberlake Road Westbound					Dreaming Creek Road Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	30	7	38	0	75	8	124	28	0	160	6	5	6	0	17	101	192	5	0	298	550
08:00 AM	17	3	37	0	57	4	116	16	0	136	9	6	3	0	18	84	167	1	1	253	464
08:15 AM	37	4	36	0	77	2	122	15	0	139	2	5	9	0	16	71	171	2	0	244	476
08:30 AM	30	4	52	0	86	4	108	22	0	134	9	6	1	0	16	66	148	2	1	217	453
Total Volume	114	18	163	0	295	18	470	81	0	569	26	22	19	0	67	322	678	10	2	1012	1943
% App. Total	38.6		55.3				82.6	14.2			38.8	32.8	28.4			31.8					
PHF	.770	.643	.784	.000	.858	.563	.948	.723	.000	.889	.722	.917	.528	.000	.931	.797	.883	.500	.500	.849	.883

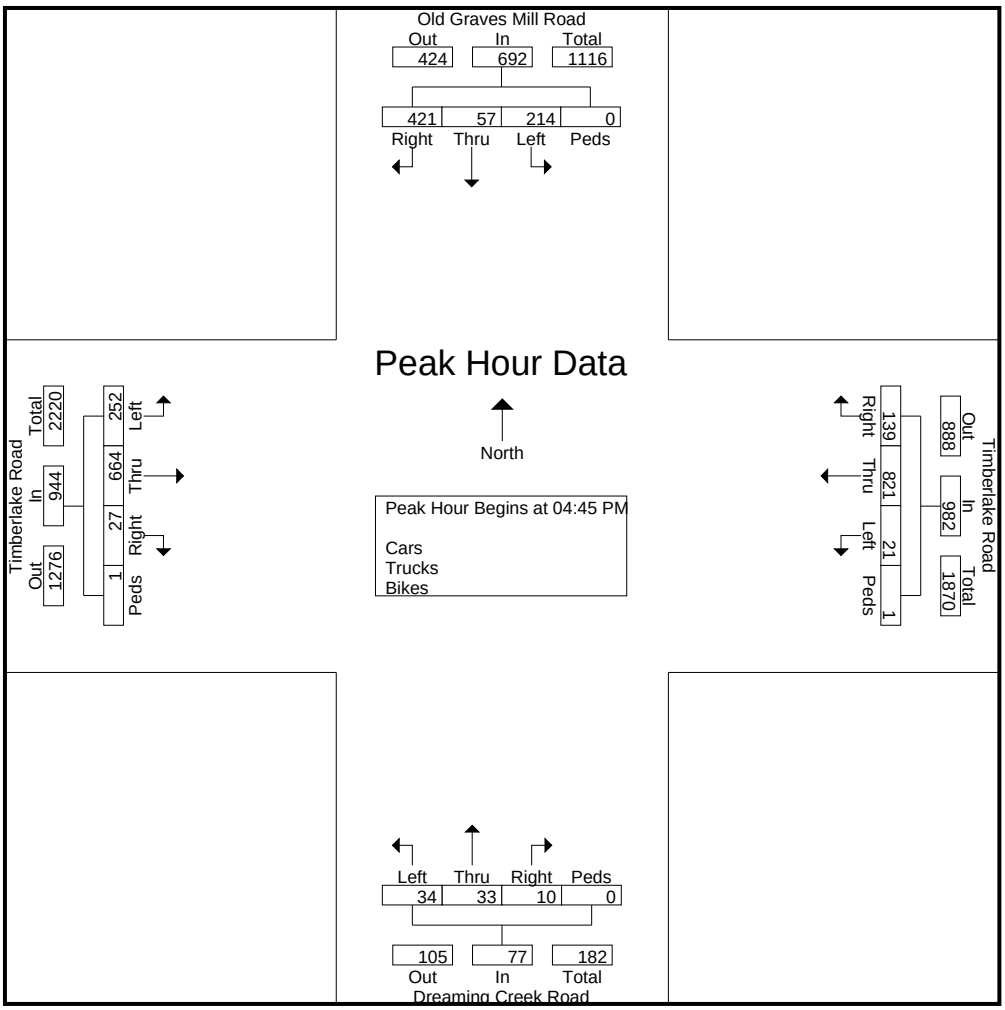


DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : 13-320 Timberlake Rd at Old Graves Mill Rd AM & PM
Site Code : 13-320
Start Date : 7/16/2013
Page No : 5

	Old Graves Mill Road Southbound					Timberlake Road Westbound					Dreaming Creek Road Northbound					Timberlake Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	56	17	96	0	169	5	214	36	0	255	8	4	2	0	14	57	160	6	0	223	661
05:00 PM	53	14	117	0	184	8	204	27	0	239	9	12	4	0	25	69	165	6	0	240	688
05:15 PM	53	10	108	0	171	4	215	38	1	258	10	5	2	0	17	66	180	6	0	252	698
05:30 PM	52	16	100	0	168	4	188	38	0	230	7	12	2	0	21	60	159	9	1	229	648
Total Volume	214	57	421	0	692	21	821	139	1	982	34	33	10	0	77	252	664	27	1	944	2695
% App. Total	30.9		60.8				83.6	14.2			44.2	42.9				26.7	70.3				
PHF	.955	.838	.900	.000	.940	.656	.955	.914	.250	.952	.850	.688	.625	.000	.770	.913	.922	.750	.250	.937	.965



DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

Counted By: C. Elliott

File Name : 13-320 Timberlake & Old Graves Mill Rd Saturday mid-day
Site Code : 13-320
Start Date : 7/13/2013

Weather: Clear

Page No : 1

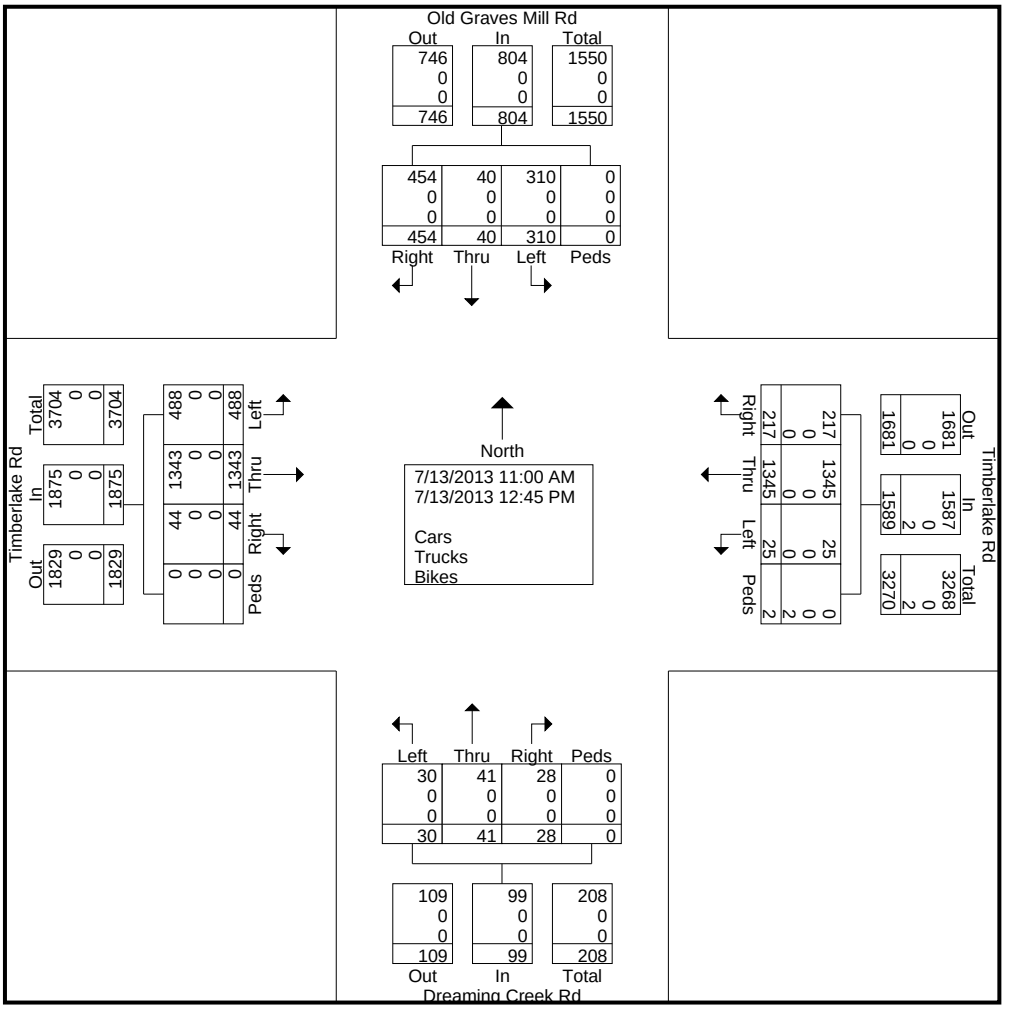
Groups Printed- Cars - Trucks - Bikes

	Old Graves Mill Rd Southbound					Timberlake Rd Westbound					Dreaming Creek Rd Northbound					Timberlake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	34	2	49	0	85	7	172	17	1	197	2	7	4	0	13	52	183	7	0	242	537
11:15 AM	38	5	55	0	98	3	156	21	0	180	2	4	3	0	9	43	165	1	0	209	496
11:30 AM	33	4	55	0	92	2	141	45	0	188	7	5	3	0	15	66	159	6	0	231	526
11:45 AM	46	5	52	0	103	2	184	24	0	210	5	2	4	0	11	80	179	4	0	263	587
Total	151	16	211	0	378	14	653	107	1	775	16	18	14	0	48	241	686	18	0	945	2146
12:00 PM	42	3	73	0	118	1	209	26	0	236	6	1	4	0	11	62	170	8	0	240	605
12:15 PM	44	6	62	0	112	2	146	32	0	180	0	6	2	0	8	56	184	8	0	248	548
12:30 PM	38	10	55	0	103	4	173	26	0	203	3	9	5	0	17	54	139	3	0	196	519
12:45 PM	35	5	53	0	93	4	164	26	1	195	5	7	3	0	15	75	164	7	0	246	549
Total	159	24	243	0	426	11	692	110	1	814	14	23	14	0	51	247	657	26	0	930	2221
Grand Total	310	40	454	0	804	25	1345	217	2	1589	30	41	28	0	99	488	1343	44	0	1875	4367
Apprch %	38.6	5	56.5	0		1.6	84.6	13.7	0.1		30.3	41.4	28.3	0		26	71.6	2.3	0		
Total %	7.1	0.9	10.4	0	18.4	0.6	30.8	5	0	36.4	0.7	0.9	0.6	0	2.3	11.2	30.8	1	0	42.9	
Cars	310	40	454	0	804	25	1345	217	0	1587	30	41	28	0	99	488	1343	44	0	1875	4365
% Cars	100	100	100	0	100	100	100	100	0	99.9	100	100	100	0	100	100	100	100	0	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bikes	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
% Bikes	0	0	0	0	0	0	0	0	100	0.1	0	0	0	0	0	0	0	0	0	0	0

DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : 13-320 Timberlake & Old Graves Mill Rd Saturday mid-day
Site Code : 13-320
Start Date : 7/13/2013
Page No : 2

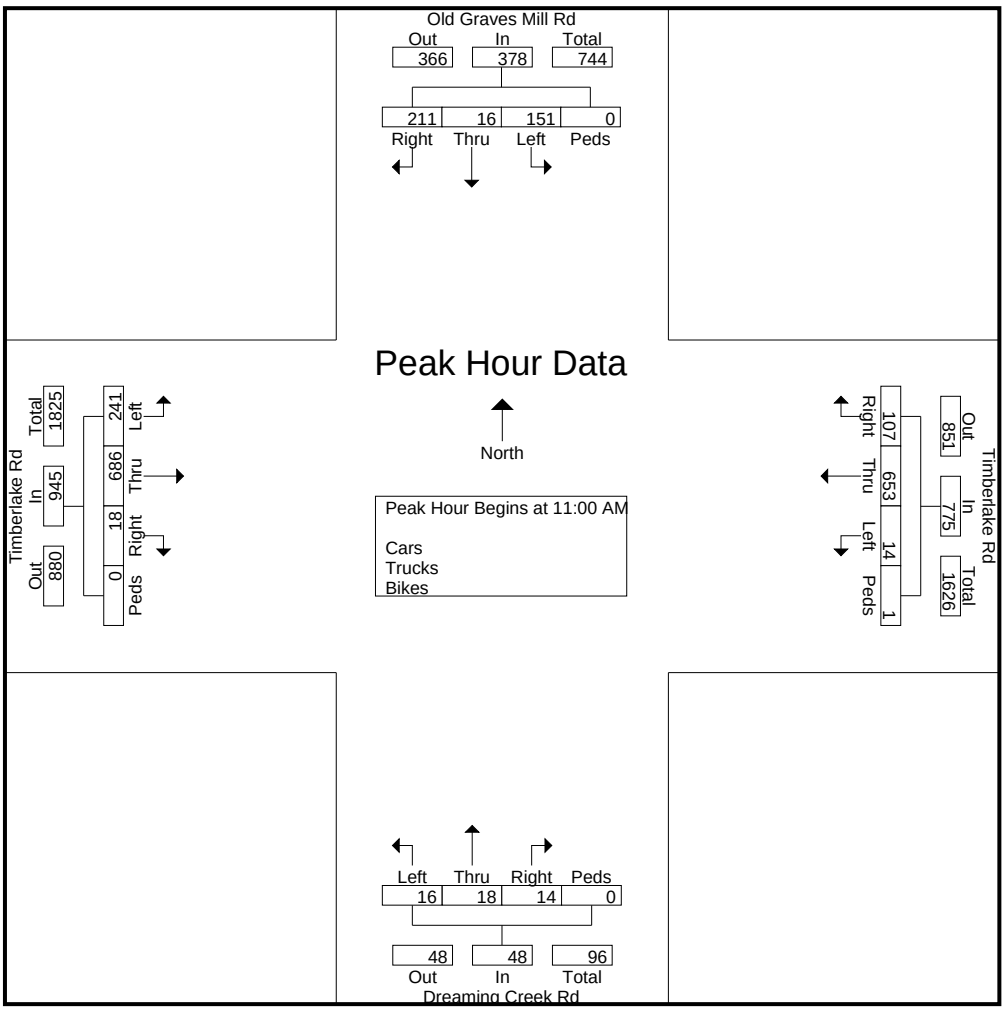


DAVENPORT

305 W. 4th Street. Suite 2A
Winston-Salem, NC 27101
Phone: 336.744.1636

File Name : 13-320 Timberlake & Old Graves Mill Rd Saturday mid-day
Site Code : 13-320
Start Date : 7/13/2013
Page No : 3

	Old Graves Mill Rd Southbound					Timberlake Rd Westbound					Dreaming Creek Rd Northbound					Timberlake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00:00 AM to 11:30:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00:00 AM																					
11:00:00 AM	34	2	49	0	85	7	172	17	1	197	2	7	4	0	13	52	183	7	0	242	537
11:15:00 AM	38	5	55	0	98	3	156	21	0	180	2	4	3	0	9	43	165	1	0	209	496
11:30:00 AM	23	2	33	0	58	1	106	33	0	140	6	5	2	0	13	39	100	5	0	144	355
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	95	9	137	0	241	11	434	71	1	517	10	16	9	0	35	134	448	13	0	595	1388
% App. Total	39.4	3.7	56.8	0		2.1	83.9	13.7	0.2		28.6	45.7	25.7	0		22.5	75.3	2.2	0		
PHF	.625	.450	.623	.000	.615	.393	.631	.538	.250	.656	.417	.571	.563	.000	.673	.644	.612	.464	.000	.615	.646



Supporting Documentation

Screen Name: Phase Timings 1 1 - 8
Controller ID: 0070 Name: Timberlake & Candlewood
Date/Time: Mon Oct 09 11:00:19 2006
File: Standard

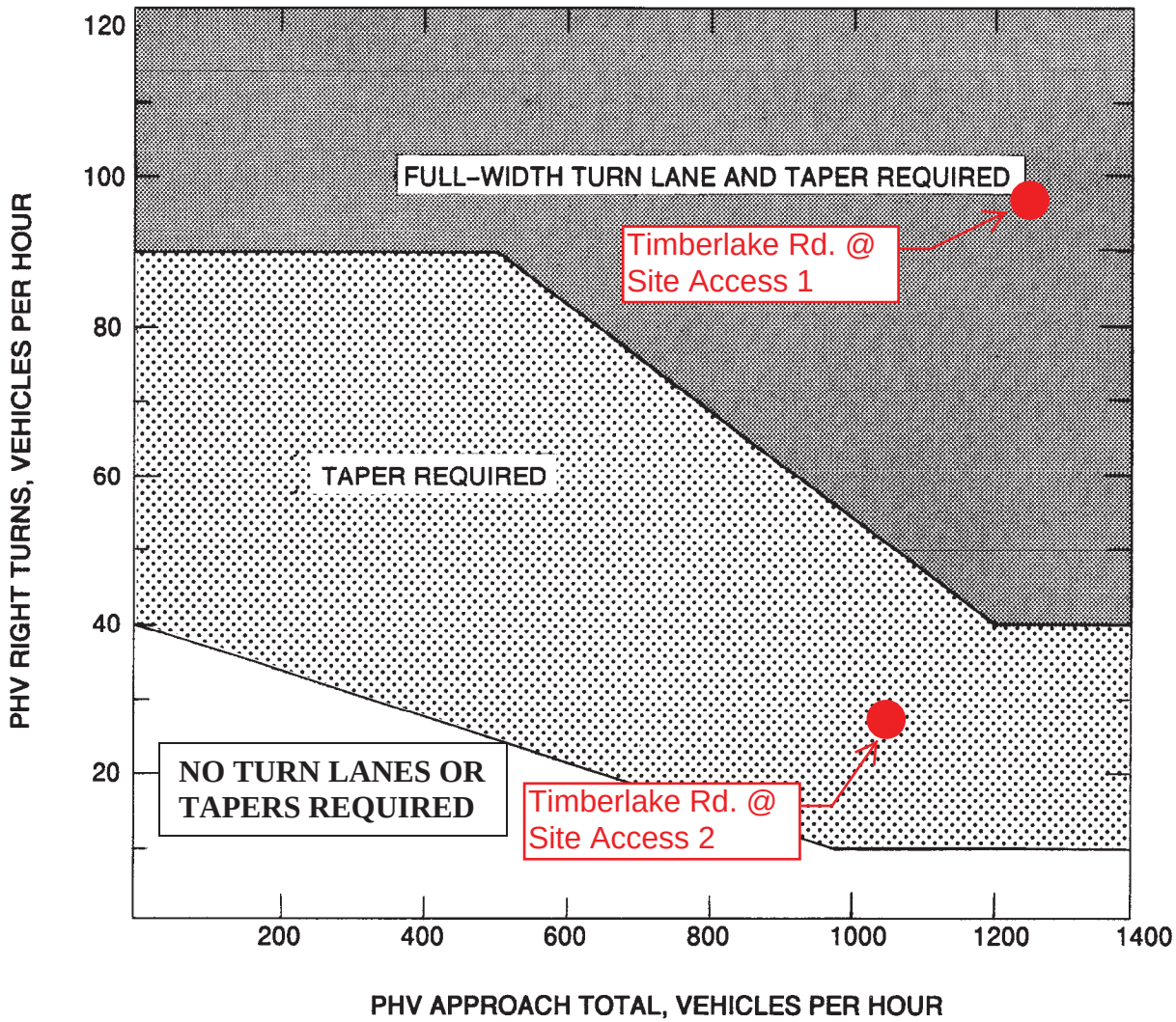
Naztec

	1	2 Timberlake I/B	3	4 Candlewood	5 LT onto Candlewood	6 Timberlake O/B	7	8
Min Green	0	4	0	4	4	4	0	0
Gap Ext	0.	3.5	0.	2.	2.	3.5	0.	0.
Maximum 1	0	60	0	15	10	60	0	0
Maximum 2	0	0	0	0	0	0	0	0
Yellow	0.	4.	0.	~~3.~~ 4	~~3.~~ 3.5	4.	0.	0.
Red	0.	1.	0.	~~0.~~ 1	0.	1.	0.	0.
Walk	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0
Red Revert	0.	2.	0.	2.	2.	2.	0.	0.

Screen Name: Phase Timings 1 1 - 8
Controller ID: 0050 Name: Timberlake & Old Gravesmill
Date/Time: Fri Apr 21 09:52:18 2006
File: Standard

Naztec

	1 LT onto Old Gravesmill	2 Timberlake O/B	3 Dreaming Creek	4 Old Gravesmill	5 LT onto Dreaming Creek	6 Timberlake I/B	7	8
Min Green	4	4	4	4	4	4	0	0
Gap Ext	3.	4.	3.	3.	3.	4.	0.	0.
Maximum 1	22	45	17	40	10	45	0	0
Maximum 2	0	0	0	0	0	0	0	0
Yellow	4.	4.	4.	4.	4.	4.	0.	0.
Red	1.	1.5	1.	1.	1.	1.5	0.	0.
Walk	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0
Red Revert	2.	2.	2.	2.	2.	2.	0.	0.



Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

LEGEND

PHV- - Peak Hour Volume (also Design Hourly Volume equivalent)

Adjustment for Right Turns

If PHV is not known use formula: PHV = ADT x K x D
K = the percent of AADT occurring in the peak hour
D = the percent of traffic in the peak direction of flow
Note: An average of 11% for K x D will suffice.

FIGURE 3- 24 GUIDELINES FOR RIGHT TURN TREATMENT (4-LANE HIGHWAY)

NOT FOR CONSTRUCTION

FOR PERMITTING

DAVENPORT
TRANSPORTATION CONSULTING
HOME OFFICE
336 WEST FOURTH STREET, SUITE 2-J (27101)
PO BOX 4151 WINSTON-SALEM, NC 27-(27-4151)
336.744.1638 www.davenportwfc.com
NCBELS PRVI LICENSE NO. C-2522

PROJECT: 13-366
DATE: 01/14/14
DESIGNED BY: JGT
DRAWN BY: JGT
CHECKED BY: JTW
SCALE: AS NOTED

REVISIONS

NO.	DATE	DESCRIPTION

CLIENT: BELLEAU WOOD DEVELOPMENT, LLC
415 PISGAH CHURCH ROAD, STE 363
GREENSBORO, NC 27404
P: (336) 298-4672

PROJECT: TIMBERLAKE ROAD AND CANDLEWOOD COURT DEVELOPMENT

TITLE: CONCEPT DESIGN

SHEET NO.
EX-01

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED THEREIN, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF OR IMPROPER RELIANCE UPON THIS DOCUMENT BY OTHERS, WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY DAVENPORT TRANSPORTATION CONSULTING (DTC), SHALL BE WITHOUT LIABILITY TO DTC AND SHALL BE A VIOLATION OF THE AGREEMENT BETWEEN DTC AND ITS CLIENT.

LYNCHBURG CITY COUNCIL
Agenda Item Summary

MEETING DATE: **July 8, 2014** AGENDA ITEM NO.: 13

CONSENT: REGULAR: **X** WORK SESSION: CLOSED SESSION: (Confidential)

ACTION: **X** INFORMATION:

ITEM TITLE: **2014 Local Emergency Management Performance Grant**

RECOMMENDATION: Adopt a resolution to amend the FY 2015 City/Federal/State Aid Fund budget and appropriate $46,846 with resources of $23,423 from the Virginia Department of Emergency Management 2014 Local Emergency Management Performance Grant and $23,423 of in-kind matching services to partially fund the Emergency Services Specialist (EOC Watch Officer) position within the Department of Emergency Services.

SUMMARY: The Emergency Management Performance Grant Program for all hazards is authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121, et seq.). Title VI of the Stafford Act authorizes FEMA to make grants for the purpose of providing a system of emergency preparedness for the protection of life and property in the United States from all hazards and to vest responsibility for emergency preparedness jointly in the federal government and the states and their political subdivisions.

These funds, which are distributed to localities by the Virginia Department of Emergency Management, will allow the Department of Emergency Services to partially fund the Emergency Services Specialist (EOC Watch Officer) position to assist in delivery of local emergency management programs and services. These programs and services include creating and overseeing exercises, providing public education programs concerning emergency planning and preparedness, and assisting with maintaining city-wide emergency operations plans and procedures.

The grant period is for one year. The City is not obligated to retain the position after the conclusion of the grant. Grant funds are available annually; the department anticipates applying for renewed funding to continue this program.

The grant requires a 50% local match, which will be satisfied with in-kind services by the existing Emergency Management Coordinator's position salary. No additional local funding is needed.

PRIOR ACTION(S): The Watch Officer position has been previously funded through this grant as a part-time position. Council approved the position going to full time status at its meeting of June 10, 2014.

FISCAL IMPACT: None, the 50% matching funds requirement for this grant ($23,423) will be satisfied with in-kind services by the existing Emergency Management Coordinator's position salary.

CONTACT(S): Melissa D Foster, Deputy Director of Emergency Services, 455-4149; William A. Aldrich, Director of Emergency Services, 455-4285

ATTACHMENT(S): Resolution; VDEM Award Letter

REVIEWED BY: lkp

RESOLUTION

BE IT RESOLVED that the FY 2015 City/Federal/State Aid Fund budget is amended and $46,846 is appropriated with resources of $23,423 from the Virginia Department of Emergency Management 2014 Local Emergency Management Performance Grant and $23,423 of in-kind matching services to partially fund the Emergency Services Specialist (EOC Watch Officer) position within the Department of Emergency Services.

Introduced: Adopted:

Certified: _____
Clerk of Council

095K

COMMONWEALTH of VIRGINIA

Department of Emergency Management

JEFFREY D. STERN
State Coordinator

BRETT A BURDICK
Deputy Coordinator

10501 Trade Court
North Chesterfield, Virginia 23236-3713
(804) 897-6500
(TDD) 674-2417
FAX (804) 897-6506

June 6, 2014

Mr. L. Kimball Payne
City Manager
Lynchburg City
900 Church Street
Lynchburg, VA 24504

RE: FY 2014 Emergency Management Performance Grant

Dear Mr. Payne:

The Virginia Department of Emergency Management (VDEM) is pleased to announce the allocation of the **2014 Emergency Management Performance Grant (EMPG) (CFDA # 97.042)** from the U. S. Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA). Appropriation Authority for this program is *the Department of Homeland Security Appropriations Act, 2014 (Public Law 113-76))*. Your locality has been allocated funding for:

Project Title: 2014 Local Emergency Management Performance Grant (LEMPG)

Federal Grant Allocation: $23,423.00
Recipient's Required Cost Share/Match Amount: $23,423.00
Total Project: $46,846.00

The purpose of the EMPG Program is to make grants to states to assist state and local governments in preparing for all hazards as authorized by the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (42 U.S.C. 5121 et seq.). Title VI of the *Stafford Act* authorizes FEMA to make grants for the purpose of providing a system of emergency preparedness for the protection of life and property in the United States from hazards and to vest responsibility for emergency preparedness jointly in the federal government, states, and their political subdivisions. The federal government, through the EMPG Program, provides necessary

direction, coordination, and guidance, and provides necessary assistance, as authorized in this title so that a comprehensive emergency preparedness system exists for all hazards.

The FY 2014 EMPG Program plays an important role in the implementation of Presidential Policy Directive 8 (PPD-8) by supporting the development and sustainment of core capabilities. Core capabilities are essential for the execution of each of the five mission areas outlined in the National Preparedness Goal (NPG). The development and sustainment of these core capabilities are not exclusive to any single level of government or organization, but rather require the combined effort of the whole community. The FY 2014 EMPG Program supports all core capabilities in the prevention, protection, mitigation, response, and recovery mission areas based on allowable costs. Examples of tangible outcomes from the EMPG Program include building and sustaining emergency management capabilities through:

- Building and sustaining core capabilities identified in the NPG,
- Approved emergency plans,
- Completion of Threat and Hazard Identification Risk Assessment (THIRA),
- Development and maintenance of multi-year Training and Exercise Plans (TEPs),
- Targeted training and verification of personnel capability, and
- Whole Community approach to security and emergency management.

VDEM recognizes the critical role of emergency management at the local level. Strong local emergency management programs keep the Commonwealth safer, and allow state and local government to respond and recover effectively and efficiently when an emergency or disaster occurs. The objective of the LEMPG, then, is to support your locality's efforts to develop and maintain a Comprehensive Emergency Management Program.

Attached to this letter are the Work Elements. These Work Elements describe the items to be completed by your locality during the period of performance and are designed to enhance local capabilities in the areas of planning, training and exercises, situational awareness and capability reporting. Your VDEM regional coordinator can provide technical assistance and advice in completing these Work Elements. Please return the signed Work Elements with your grant application package. A final review report will be disseminated to your locality's emergency management coordinator by your VDEM regional coordinator later this year. The final review report summarizes your locality's compliance with the Work Elements and is due back to the grant management office no later than ***July 15, 2015***.

The obligation period for this program is ***July 1, 2014 to June 30, 2015***. Reimbursements may be requested for items procured during this period consistent with the project intent. As a reminder, organizations that spend more than $500,000 in DHS funds during a fiscal year are subject to an independent audit per OMB circular A-133.

All projects must comply with Environmental and Historic Preservation (EHP) requirements. Sub-recipients must not obligate and/or expend any (federal and/or non-federal matching) funds on any project having the potential to impact environments planning and historical preservation resources without the prior approval of FEMA. A current EHP review

evaluation form must be submitted as part of the VDEM application. For more information, please visit http://www.vaemergency.gov/em-community/grants/ or contact your grant specialist.

All applicants are required to submit a completed VDEM grant package and the electronic grants on-line budget application. In order to complete the on-line budget, please follow these instructions:

Step 1: Please go on-line to the **eGMS Grants System at** https://www.ttegms.com/virginia/login.cfm. After logging in, you will see a welcome screen. Click on Grant Management and then on Budget Application from the drop-down menu. Click the link named 2014 Local Emergency Management Performance Grant (LEMPG) to complete your on-line budget application.

Step 2: The remaining required forms are attached and can also be found on VDEM's website and in the eGMS. Below is a list of the documents that comprise the VDEM grant application package:

- Online Budget (eGMS)
- POC Form
- EHP Evaluation Form
- Grant Assurances Form
- FEMA 20-16C Form
- SF-LLL – Certification Regarding Lobby Form

In FY 2014, the federal share of the cost of an activity carried out using funds made available under the program shall not exceed 50% of the total budget. Cost match (cash or in-kind) requirement, as authorized by the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Public Law 93-288), as amended, 42 U.S.C. 5121-5207, specifically, Title VI, sections 611(j) and 613. Unless otherwise authorized by law, federal funds cannot be matched with other federal funds.

FEMA administers cost matching requirements in accordance with 44 CFR §13.24, which is located at *http://www.access.gpo.gov/nara/cfr/waisidx_07/44cfrv1_07.html*, or 2 CFR §215.23, which is located at *http://www.access.gpo.gov/nara/cfr/waisidx_07/2cfrv1_07.html*. To meet matching requirements, the grantee contributions must be reasonable, allowable, allocable, and necessary under the grant program and must comply with all federal requirements and regulations.

Management and administration (M&A) activities are those defined as directly relating to the management and administration of EMPG Program funds, such as financial management and monitoring. It should be noted that salaries of state and local emergency managers are not typically categorized as M&A, unless the state or local emergency management agency (EMA) chooses to assign personnel to specific M&A activities. The state EMA may use up to 5% for M&A purposes. In addition, local EMAs may retain and use up to 5% from the state for local M&A purposes.

All successful applicants for all DHS grant and cooperative agreements are required to comply with DHS Standard Administrative Terms and Conditions available within Section 6.1.1 of *http://www.dhs.gov/xlibrary/assets/cfo-financial-management-policy-manual.pdf*.. Upon approval of an application, the award will be made in the form of a grant. The date the approval of award is entered in the system is the "award date." Notification of award approval is made through the eGMS Grants System through an automatic e-mail to the sub-grantee point of contact listed in the initial application. Follow the directions in the notification to accept your award documents. The authorized grant official should carefully read the award package for instructions on administering the grant and to learn more about the terms and conditions associated with responsibilities under federal awards.

Sub-grantees are obligated to submit progress reports as a condition of their award acceptance. Subgrantee Quarterly Reports must be submitted to the VDEM Grant Administrator on a quarterly basis through email and later through the eGMS System. The Subgrantee Quarterly Report must be based on the approved EMPG Program Work Plan. The Subgrantee Quarterly Report is available at http://www.vaemergency.gov/em-community/grants/all-grant-forms. Sub-grantees are required to report on progress towards implementing plans described in their application.

Within 30 days after the end of the period of performance sub-grantees must submit a final progress report detailing all accomplishments throughout the period of performance along with the completed Work Elements. After these reports have been reviewed and approved by VDEM's Grant Office and regional coordinators, a close-out notice will be completed to close out the grant. The notice will indicate the period of performance as closed, list any remaining funds that will be deobligated, and address the requirement of maintaining the grant records for five years from the date of the final report. The grantee is responsible for returning any funds that have been drawn down, but remain as unliquidated on grantee financial records.

Please review and sign the required documents and return them to the Grants Management Office by July 7, 2014. If you have any questions regarding this award, please contact Debbie Flannagan at the VDEM Grants Management Office at (804) 897-9767.

Sincerely,

Jeffrey D. Stern

JDS/df

c: Mr. William A. Aldrich, Coordinator, Emergency Management
Mr. Gene Stewart, VDEM Regional Coordinator