

Lloyd Farm Carrboro, NC

Prepared for:

Argus Development Group, LLC

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Kimley»Horn

Traffic Impact Analysis for

Lloyd Farm

Carrboro, North Carolina

Prepared for:

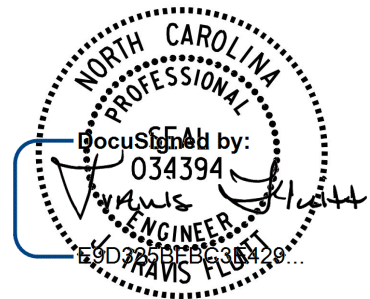
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April 2019



4/1/2019

Executive Summary

Kimley-Horn and Associates, Inc. has performed an update to the Traffic Impact Analysis (previously updated October 2016) for the proposed Lloyd Farm development located north of NC 54 between Old Fayetteville Road and James Street in Carrboro, North Carolina. This revision analyzed the updated development plan and includes new traffic counts.

The majority of this 40+ acre site remains undeveloped, with one single family residence and several barns, as well as an irrigation pond, on the west side of the property. A post office and Duke Power substation, which will remain, adjoin the east side of the site along James Street. As currently proposed, the site will include approximately 220 attached senior living apartments, 52,000 square feet (SF) of general office space, 26,400 SF of general retail space, a 65,000 SF supermarket, and a gas station with 14 fueling positions. The site is will be accessed by the existing right-in/right-out Post Office Driveway on NC 54, the existing full-movement Post Office Driveway on James Street, a full-movement driveway on Old Fayetteville Road, and a directional crossover (left-in/right-in/right-out) driveway on NC 54. The build-out of the project is anticipated for the year 2022.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands. The traffic conditions studied include the existing (2019) traffic, projected (2022) background traffic, and projected (2022) build-out traffic conditions.

As shown in Table ES-1, the proposed development has the potential to generate 6,060 net new daily trips, 336 net new AM peak hour trips, and 494 net new PM peak hour trips on a typical weekday. Daily, AM peak, and PM peak hour site traffic volumes are all lower than volumes generated by the previously-analyzed development plan.

Table ES-1 ITE Traffic Generation (Vehicles)									
Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
252	Senior Adult Housing – Attached	220	d.u.	430	430	15	29	30	25
710	General Office	52,000	s.f.	282	282	65	10	10	51
820	Shopping Center	26,400	s.f.	1,216	1,216	16	9	97	106
850	Supermarket	65,400	s.f.	2,910	2,910	149	99	289	278
945	Gasoline Station w/ Convenience Market	14	f.p.	1,438	1,438	89	86	100	96
Subtotal				6,276	6,276	334	233	526	556
Internal Capture				1,115	1,115	59	59	118	118
Pass-by Capture				1,794	1,794	38	37	149	148
Bik/Ped/Transit Capture (10%)				337	337	24	14	26	29
Net New External Trips				3,030	3,030	213	123	233	261

Capacity analyses were performed using Synchro Version 10.1 software. Table ES-2 summarizes the operation of the study intersections for the AM and PM peak hour traffic conditions.

Table ES-2 Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
NC 54 at Old Fayetteville Road (Signalized)		
Existing (2019) Traffic	C (26.9)	C (30.6)
Projected (2022) Background Traffic	C (30.2)	C (31.7)
Projected (2022) Build-out Traffic – with Improvements	C (34.7)	D (40.9)
NC 54 at Post Office Drive (Unsignalized)		
Existing (2019) Traffic	SB – B (10.5)	SB – C (15.3)
Projected (2022) Background Traffic	SB – B (10.6)	SB – C (15.7)
Projected (2022) Build-out Traffic	SB – B (10.9)	SB – C (15.1)
NC 54 at Main Street/Carrboro Plaza Driveway (Signalized)		
Existing (2019) Traffic	B (17.5)	C (27.5)
Projected (2022) Background Traffic	B (18.4)	C (28.2)
Projected (2022) Build-out Traffic	B (16.8)	C (28.8)
Main Street – James Street (Unsignalized, Two-Way Stop Control)		
Existing (2019) Traffic	NB – C (15.1) SB – B (11.6) EBL – A (7.8) WBL – A (7.9)	NB – C (17.1) SB – B (13.8) EBL – A (8.3) WBL – A (7.8)
Projected (2022) Background Traffic	NB – C (15.4) SB – B (11.8) EBL – A (7.8) WBL – A (7.9)	NB – C (17.6) SB – B (14.0) EBL – A (8.4) WBL – A (7.8)
Projected (2022) Build-out Traffic	NB – C (16.0) SB – B (12.6) EBL – A (7.9) WBL – A (7.9)	NB – C (18.4) SB – C (16.7) EBL – A (8.5) WBL – A (7.9)

Table ES-2 (cont.) Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
James Street – Lorraine Street/Post Office Drive (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.6)	A (7.4)
Projected (2022) Background Traffic	A (7.6)	A (7.4)
Projected (2022) Build-out Traffic	A (7.7)	A (7.5)
James Street – Carol Street (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.7)	A (7.4)
Projected (2022) Background Traffic	A (7.7)	A (7.4)
Projected (2022) Build-out Traffic	A (7.8)	A (7.6)
Carol Street – Lisa Drive (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.2)	A (7.3)
Projected (2022) Background Traffic	A (7.2)	A (7.3)
Projected (2022) Build-out Traffic	A (7.3)	A (7.5)
Carol Street – Old Fayetteville Road (Unsignalized)		
Existing (2019) Traffic	WB – C (17.6) SBL – A (9.1)	WB – C (20.2) SBL – A (8.7)
Projected (2022) Background Traffic	WB – C (18.1) SBL – A (9.2)	WB – C (21.0) SBL – A (8.8)
Projected (2022) Build-out Traffic	WB – C (24.1) SBL – A (9.3)	WB – D (27.6) SBL – A (9.0)
NC 54 – Left-Over Site Drive (Unsignalized)		
Projected (2022) Build-out Traffic	SB – B (10.8) EBL – A (9.3)	SB – C (18.0) EBL – B (14.7)
Old Fayetteville Road – Site Drive (Unsignalized)		
Projected (2022) Build-out Traffic	WB – D (28.8) SBL – A (9.4)	WB – F (87.1) SBL – A (9.3)

The following roadway improvements are recommended to be performed to accommodate existing traffic and the projected Lloyd Farm site traffic based on the capacity analysis presented herein:

NC 54 at Old Fayetteville Road:

- Extend the storage of the existing southbound left-turn lane on Old Fayetteville Road and construct an additional southbound left-turn lane to provide dual left-turn lanes with an average of 325' of storage each on that approach
- Construct an exclusive southbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Modify the existing traffic signal to accommodate the recommended laneage

NC 54 at Site Drive:

- Construct an exclusive eastbound left-turn lane on NC 54 with 200 feet of storage and appropriate tapers
- Construct an exclusive westbound right-turn lane on NC 54 with 100 feet of storage and appropriate tapers

Old Fayetteville Road at Site Drive:

- Construct an exclusive southbound left-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Construct an exclusive northbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Provide separate westbound left and right-turn lanes exiting the Site Driveway

Analysis indicates that with the recommended improvements in place, all of the intersections are expected to operate at an acceptable level-of-service (LOS) in the build-out traffic condition with the exception of the unsignalized intersection of Old Fayetteville Road at the Site Driveway. Synchro indicates the minor street approach (Site Driveway) at that intersection is expected to operate with long delays at project build-out. However, it is typical for stop sign controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay. SimTraffic reports delays of less than 34 seconds on that approach in the PM peak hour and also indicates that no queueing issues are expected at this intersection. A roundabout was previously considered at this location but was rejected by the North Carolina Department of Transportation (NCDOT), and it is unlikely that a traffic signal could be installed at this location due to its proximity to NC 54.

Furthermore, while long queues observed in the existing and background conditions at the intersection of NC 54 at Old Fayetteville Road are expected to continue in the build-out condition, those are not expected to block the proposed site driveways.

Based on discussions with the Town of Carrboro and NCDOT staff, the actual storage length of the southbound right-turn lane at the intersection of NC 54 at Old Fayetteville Road will be

determined based on and subject to existing ROW availability. It is intended that no additional ROW will be obtained to accommodate this improvement.

While this site is expected to add traffic through the adjacent neighborhood, analysis shows that the impact to traffic operations within the neighborhood will be negligible. The bicycle and pedestrian connections being made to James Street and Carol Street will also provide access to the site via modes other than passenger vehicles.

The recommended roadway laneage is shown on **Figure ES-1**.

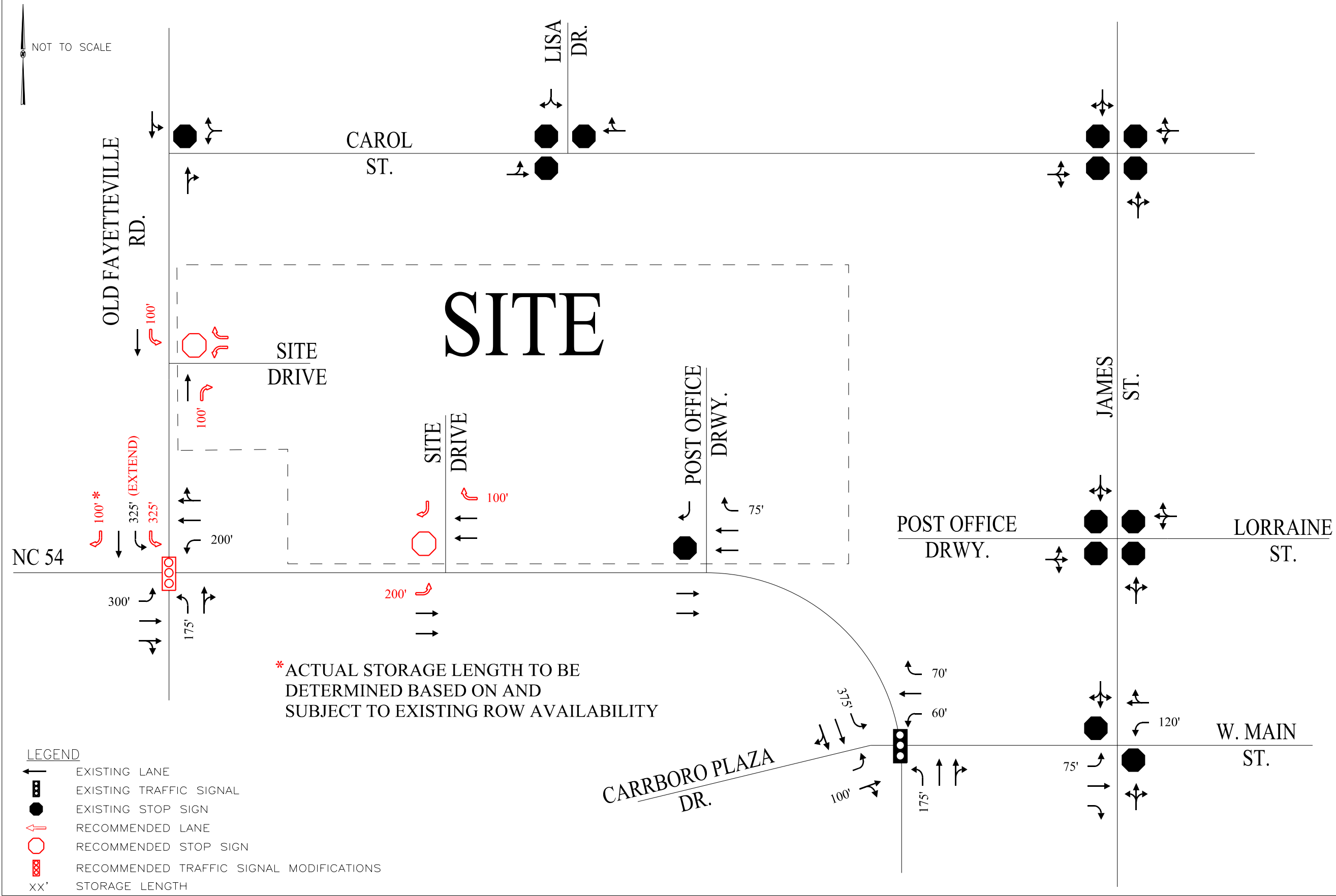


Table of Contents

	<u>Page No.</u>
1.0 INTRODUCTION.....	1
2.0 INVENTORY	2
2.1 STUDY AREA	2
2.2 EXISTING CONDITIONS	2
3.0 TRAFFIC GENERATION.....	7
4.0 SITE TRAFFIC DISTRIBUTION	9
5.0 PROJECTED TRAFFIC VOLUMES.....	11
5.1 EXISTING TRAFFIC	11
5.2 HISTORIC GROWTH TRAFFIC.....	11
5.3 APPROVED DEVELOPMENT TRAFFIC.....	12
5.4 SITE TRAFFIC	12
5.5 PROJECTED (2022) TRAFFIC.....	12
6.0 CAPACITY ANALYSIS.....	16
6.1 NC 54 AT OLD FAYETTEVILLE ROAD.....	19
6.2 NC 54 AT POST OFFICE DRIVE.....	20
6.3 NC 54 AT MAIN STREET/CARRBORO PLAZA DRIVEWAY.....	21
6.4 MAIN STREET AT JAMES STREET.....	22
6.5 JAMES STREET AT LORRAINE STREET/POST OFFICE DRIVE	23
6.6 JAMES STREET AT CAROL STREET	24
6.7 CAROL STREET AT LISA DRIVE.....	25
6.8 OLD FAYETTEVILLE ROAD AT CAROL STREET.....	26
6.9 NC 54 AT SITE DRIVE.....	27
6.10 OLD FAYETTEVILLE ROAD AT SITE DRIVE.....	28
7.0 RECOMMENDATIONS.....	29

Appendices

- A. NCDOT SCOPING DOCUMENT
- B. TRIP GENERATION
- C. TRAFFIC COUNT DATA
- D. INTERSECTION SPREADSHEETS
- E. SYNCHRO OUTPUT: EXISTING (2019)
- F. SYNCHRO OUTPUT: BACKGROUND (2022)
- G. SYNCHRO & SIMTRAFFIC OUTPUT: BUILD-OUT (2022)
- H. SIGNAL PLANS

List of Tables

<u>Table No.</u>	<u>Title</u>	<u>Page No.</u>
3.1	ITE Traffic Generation	7
6.0-A	Level-of-Service Control Delay Thresholds.....	16
6.0-B	Level-of-Service Summary	17
6.1	NC 54 at Old Fayetteville Road	19
6.2	NC 54 at Post Office Drive	20
6.3	NC 54 at Main Street/Carrboro Plaza Driveway	21
6.4	Main Street at James Street	22
6.5	James Street at Lorraine Street/Post Office Drive	23
6.6	James Street at Carol Street.....	24
6.7	Carol Street at Lisa Drive/Site Drive	25
6.8	Carol Street at Old Fayetteville Road.....	26
6.9	NC 54 at Site Drive	27
6.10	Old Fayetteville Road at Site Drive.....	28

List of Figures

<u>Figure No.</u>	<u>Title</u>	<u>Page No.</u>
1	Site Location.....	4
2	Site Plan	5
3	Existing Roadway Laneage	6
4	Site Traffic Distribution and Percent Assignment	10
5	Existing (2019) Peak Hour Traffic Volumes	13
6	Projected (2022) Build-Out AM Peak Hour Traffic Volumes	14
7	Projected (2022) Build-Out PM Peak Hour Traffic Volumes	15
8	Recommended Roadway Laneage.....	31

1.0 Introduction

Kimley-Horn and Associates, Inc. has performed an update to the Traffic Impact Analysis (previously updated October 2016) for the proposed Lloyd Farm development located north of NC 54 between Old Fayetteville Road and James Street in Carrboro, North Carolina. This revision analyzed the updated development plan and includes new traffic counts.

The majority of this 40+ acre site remains undeveloped, with one single family residence and several barns, as well as an irrigation pond, on the west side of the property. A post office and Duke Power substation, which will remain, adjoin the east side of the site along James Street. As currently proposed, the site will include approximately 220 attached senior living apartments, 52,000 square feet (SF) of general office space, 26,400 SF of general retail space, a 65,000 SF supermarket, and a gas station with 14 fueling positions. The site is will be accessed by the existing right-in/right-out Post Office Driveway on NC 54, the existing full-movement Post Office Driveway on James Street, a full-movement driveway on Old Fayetteville Road, and a directional crossover (left-in/right-in/right-out) driveway on NC 54. The build-out of the project is anticipated for the year 2022.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands. The traffic conditions studied include the existing (2019) traffic, projected (2022) background traffic, and projected (2022) build-out traffic conditions.

Town of Carrboro and NCDOT staff were consulted to obtain background information and to ascertain the elements to be covered in this Traffic Impact Analysis (TIA).

2.0 Inventory

2.1 Study Area

The study area for this TIA consists of the following intersections:

- NC 54 at Old Fayetteville Road
- NC 54 at Post Office Drive
- NC 54 at Main Street/Carrboro Plaza Drive
- Main Street at James Street
- James Street at Lorraine Street/Post Office Drive
- James Street at Carol Street
- Carol Street at Lisa Drive
- Carol Street at Old Fayetteville Road
- NC 54 at Site Drive
- Old Fayetteville Road at Site Drive

This study area was determined based upon discussions with the Town of Carrboro and NCDOT and is consistent with previous analyses. **Figure 1** shows the site location, and **Figure 2** shows the conceptual site plan.

2.2 Existing Conditions

The surrounding land uses are residential to the north and east, commercial to the south across NC 54, and undeveloped to the west. Roadways in the study area include NC 54, Old Fayetteville Road, Main Street, James Street, Lorraine Street, Carol Street, and Lisa Drive. The existing roadway laneage is shown in **Figure 3**.

NC 54 is a four-lane divided east-west arterial with a posted speed of 45 mph in the vicinity of the site. East of Old Fayetteville Road, the estimated 2019 average daily traffic (ADT) volume is approximately 18,400 vehicles per day (vpd). West of Old Fayetteville Road, NC 54 transitions to a two-lane undivided roadway with a posted speed limit of 55 mph.

Old Fayetteville Road is a two-lane roadway with a posted speed of 35 mph and an estimated 2019 ADT volume of approximately 10,800 vehicles per day (vpd) in the vicinity of the site.

Main Street (SR-1010) is a two-lane, east-west roadway with a posted speed of 35 mph. West of James Street, the estimated 2019 ADT volume is approximately 6,400 vpd.

James Street is a two-lane, north-south roadway with a posted speed limit of 25 mph in the vicinity of the site. Based on pneumatic tube counts performed in January 2019, the 2019 ADT volume is approximately 1,200 vpd north of Lorraine Street.

Lorraine Street is a two-lane, east-west roadway with a posted speed of 25 mph. Based on pneumatic tube counts performed in January 2019, the 2019 ADT volume is less than 1,000 vpd east of James Street.

Carol Street is a two-lane, east-west roadway with a posted speed of 25 mph. Based on pneumatic tube counts performed in January 2019, the 2019 ADT volume is less than 1,000 vpd east of Lisa Drive.

Lisa Drive is a two-lane, north-south roadway with a posted speed of 25 mph. The estimated 2019 ADT volume is less than 1,000 vpd.



DEVELOPMENT SUMMARY

DEVELOPER:

CARRBORO RETAIL, LLC C/O ARGUS DEVELOPMENT GROUP, LLC

SITE AREA:

- 1) 35.4 ACRES TO BE REZONED B-4-CZ TO ACHIEVE PROPOSED DEVELOPMENT PLAN
- 2) 4.6 ACRES TO BE DEDICATED TO THE TOWN; NOT INCLUDED IN THE REZONING AND PROPOSED DEVELOPMENT PLAN

ZONING:

EXISTING: B-4 & R-10

PROPOSED: B-4-CZ

COMMERCIAL USES

ANCHOR: GROCERY STORE	± 64,280 SF
MEZZANINE	± 2,754 SF
MINORS: RETAIL / OFFICE / RESTAURANT	± 26,400 SF
OUTPARCELS: OFFICE / RETAIL / ENERGY CENTER	± 21,908 SF
TOTAL	± 145,322 SF

RESIDENTIAL USES

SENIOR LIVING	± 220 UNITS
---------------	-------------

COMMERCIAL PARKING

GROCERY / MAIN RETAIL AREA	± 370 SPACES
OUTPARCELS	± 202 SPACES

NOTES

1. THE USES ILLUSTRATED ON THE OUTPARCEL LOTS ARE SPECULATIVE IN NATURE AND THESE LOTS COULD BE DEVELOPED WITH OTHER USES PERMISSIBLE IN THE B-4-CZ ZONING DISTRICT.
2. THE USES REFERENCED ON BUILDINGS ON THE CONCEPT PLAN ARE SPECULATIVE AND FOR ILLUSTRATIVE PURPOSES. SO LONG AS ORDINANCE REQUIREMENTS ARE MET FOR A USE, THE FOLLOWING USES ALLOWED AT THE TIME OF APPROVAL UNDER THE B-4 ZONING CLASSIFICATION IN THE TABLE OF PERMISSIBLE USES CONTAINED IN ARTICLE X OF CARRBORO'S LAND USE ORDINANCE ARE ALLOWED (USES INCLUDES ALL SUBCATEGORIES IF OVERALL LAND USE CATEGORY LISTED):
 - 1.232 Two-Family Residences - Duplex - No bedroom limit
 - 1.242 Two-Family Residences - No bedroom limit
 - 1.322 Multi-Family Residences - No bedroom limit
 - 1.332 Multi-Family Residences - Multi-Family Apartments - No bedroom limit
 - 2.00 Sales and Rental of Goods, Merchandise and Equipment
 - 3.00 Office, Clerical, Research and Services Not Primarily Related to Goods or Merchandise
 - 5.320 Educational, Cultural, Religious, Philanthropic, Social, Fraternal Uses - Located within any permissible structure
 - 6.121 Recreation, Amusement, Entertainment - Movie Theatres - Seating Capacity of not more than 300
 - 8.000 Restaurants (including food delivery services), Bars, Night Clubs
 - 9.000 Motor Vehicle-Related Sales and Service Operations
 - 12.000 Services and Enterprises Related to Animals
 - 16.200 Dry Cleaner, Laundromat - Without drive-in windows
 - 19.000 Open Air Markets and Horticultural Sales
 - 22.220 Day Care - Child Day Care Facility
 - 22.300 Day Care - Senior Citizens Day Care, Class A
 - 22.400 Day Care - Senior Citizens Day Care, Class B

USES ADDED AS PERMISSIBLE IN THE B-4 ZONING DISTRICT AFTER THE DATE OF APPROVAL MAY BE ALSO ALLOWED SO LONG AS ALL LUO STANDARDS CAN BE MET.



Attachment D

FIGURE

2

PROPOSED SITE PLAN

LLOYD FARM - 2019 UPDATE
CARRBORO, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

CLINE
DESIGN

LLOYD FARM
CARRBORO, NORTH CAROLINA

09.21.2018

017150

ILLUSTRATIVE MASTER PLAN

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3.0 Traffic Generation

The traffic generation potential of the proposed development was determined using the traffic generation rates published in *Trip Generation* (Institute of Transportation Engineers, 10th Edition, 2017.) For the Shopping Center land use (LUC 820), the AM average rate was used due to the large y-intercept in the regression equation given the small sample size. This methodology was reviewed and approved during scoping with the Town and NCDOT. Table 3.1 summarizes the estimated traffic generation potential of the site during a typical weekday.

Table 3.1									
ITE Traffic Generation (Vehicles)									
Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
252	Senior Adult Housing – Attached	220	d.u.	430	430	15	29	30	25
710	General Office	52,000	s.f.	282	282	65	10	10	51
820	Shopping Center	26,400	s.f.	1,216	1,216	16	9	97	106
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Subtotal				6,276	6,276	334	233	526	556
Internal Capture				1,115	1,115	59	59	118	118
Pass-by Capture				1,794	1,794	38	37	149	148
Bik/Ped/Transit Capture (10%)				337	337	24	14	26	29
Net New External Trips				3,030	3,030	213	123	233	261

Table 3.1 shows that the proposed development has the potential to generate 6,060 net new daily trips, 336 net new AM peak hour trips, and 494 net new PM peak hour trips on a typical weekday.

Internally captured trips are trips that begin and end on the project site and do not access the external roadway network. Institute of Transportation Engineers (ITE) internal capture methodology was used for trip generation calculations for the proposed development plan. Furthermore, as traffic counts performed at similar grocery fuel centers show internal capture rates between the grocery store and fuel center of 30% in the AM peak hour and 39% in the PM peak hour, additional internal capture was applied to the Shopping Center and Gasoline Station uses. In total, calculations indicate that the internal capture between uses will be approximately 21% in the AM peak hour and 22% in the PM peak hour. An average of the AM and PM rates was used for the daily capture.

Pass-by trips are trips already on the roadway network that will make a trip to the site as they pass by on the adjacent street. ITE indicates that approximately 13% of the AM peak hour traffic and 27% of the PM peak hour traffic will be pass-by traffic. Pass-by trips were assigned based on existing traffic patterns.

Additionally, a 10% reduction was applied to the vehicular trip generation of the proposed land uses due to the high use of transit, pedestrian, and bicycle modes in this area. This reduction was added to reflect the heavy pedestrian and bicycle activity in Carrboro, and the pedestrian and bicycle connections provided as part of the development will assist in reducing the vehicle trips to/from the site. It should be noted that, based on discussions with the Town of Carrboro, a varied multimodal reduction was considered for this analysis that would have applied a higher percent reduction to the grocery and general retail uses and a lower percent reduction for the gas station and residential uses. While that may ultimately be realized when the site is built-out, that approach would have yielded a higher overall reduction (and therefore a lower volume of analyzed trips), so a flat 10% reduction was applied to be conservative.

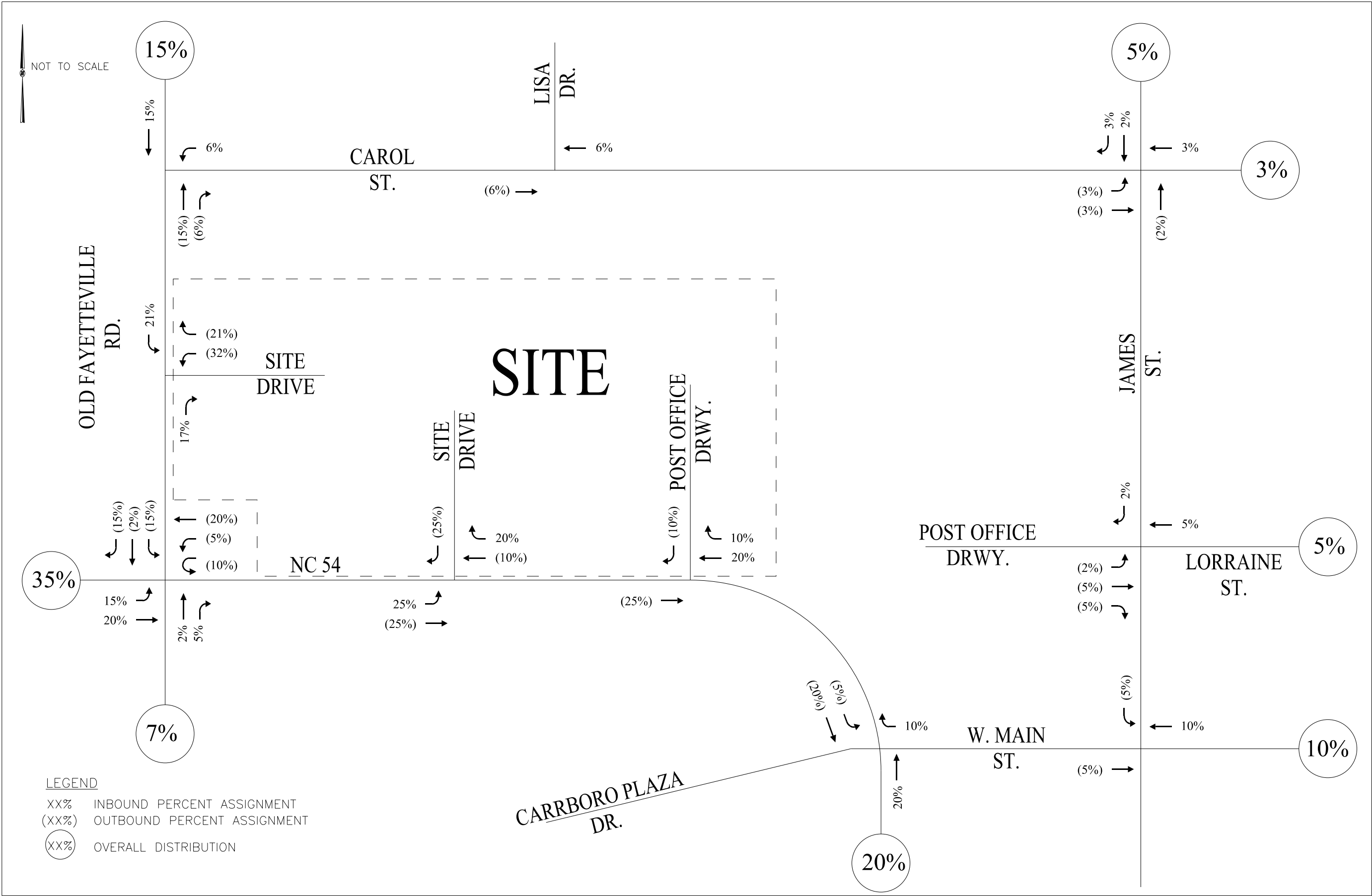
Detailed trip generation calculations are included in the Appendix of this report.

4.0 Site Traffic Distribution

The proposed generated trips were assigned to the surrounding roadway network. The directional distribution and assignment were based on a review of existing traffic counts and area origins and destinations as follows:

- 35% to/from the west via NC 54
- 20% to/from the southeast via NC 54
- 15% to/from the north via Old Fayetteville Road
- 10% to/from the east via Main Street
- 7% to/from the south via Old Fayetteville Road
- 5% to/from the north via James Street
- 5% to/from the east via Lorraine Street
- 3% to/from the east via Carol Street

The site traffic distribution was confirmed with the Town of Carrboro and NCDOT. The site traffic distribution and percent assignment are shown on **Figure 4**.



5.0 Projected Traffic Volumes

5.1 Existing Traffic

AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movement counts were performed by Traffic Survey Services at the following intersections:

▪ NC 54 – Old Fayetteville Road	January 15, 2019
▪ NC 54 – Post Office Drive	January 15, 2019
▪ NC 54 – Main Street/Carrboro Plaza Drive	January 15, 2019
▪ Main Street – James Street	January 15, 2019
▪ James Street – Lorraine Street/Post Office Drive	January 15, 2019
▪ James Street – Carol Street	January 15, 2019
▪ Carol Street – Lisa Drive	January 15, 2019
▪ Carol Street – Old Fayetteville Road	January 15, 2019

Additionally, 24-hour pneumatic tube counts were performed on January 15, 2019 and January 24, 2019 to determine existing daily segmental volumes at the following locations:

- James Street north of Lorraine Street
- Lorraine Street east of James Street
- Carol Street East of Lisa Drive

The existing AM and PM peak hour traffic volumes at the study intersection are shown on **Figure 5** and the traffic count data is included in the Appendix.

The Town of Carrboro noted that AM peak hour school traffic from McDougle Middle School, which is located north of the site on Old Fayetteville Road, is currently being routed onto James Street to access NC 54 as left-turns are now prohibited existing the school in that peak. Turning movement counts collected in January 2019 indicate a significantly higher volume of southbound through traffic on James Street than in a previous count (with other intersection movements remaining generally consistent) so the analyzed counts are expected to have accounted for the impact of the modified traffic patterns at the school.

5.2 Historic Growth Traffic

Historic growth traffic is the increase in traffic due to usage increases and non-specific growth throughout the area. A comparison of the traffic counts from 2012 versus the new 2019 volumes indicate that the average growth in traffic in this area has been less than 1% over the past 7 years. Therefore, existing traffic volumes were grown at an annual growth rate of 1% to the 2022 horizon year.

5.3 *Approved Development Traffic*

Approved development traffic is generated by approved, but not yet constructed, projects in the vicinity of the proposed project. No approved developments were identified for inclusion in this analysis as background traffic.

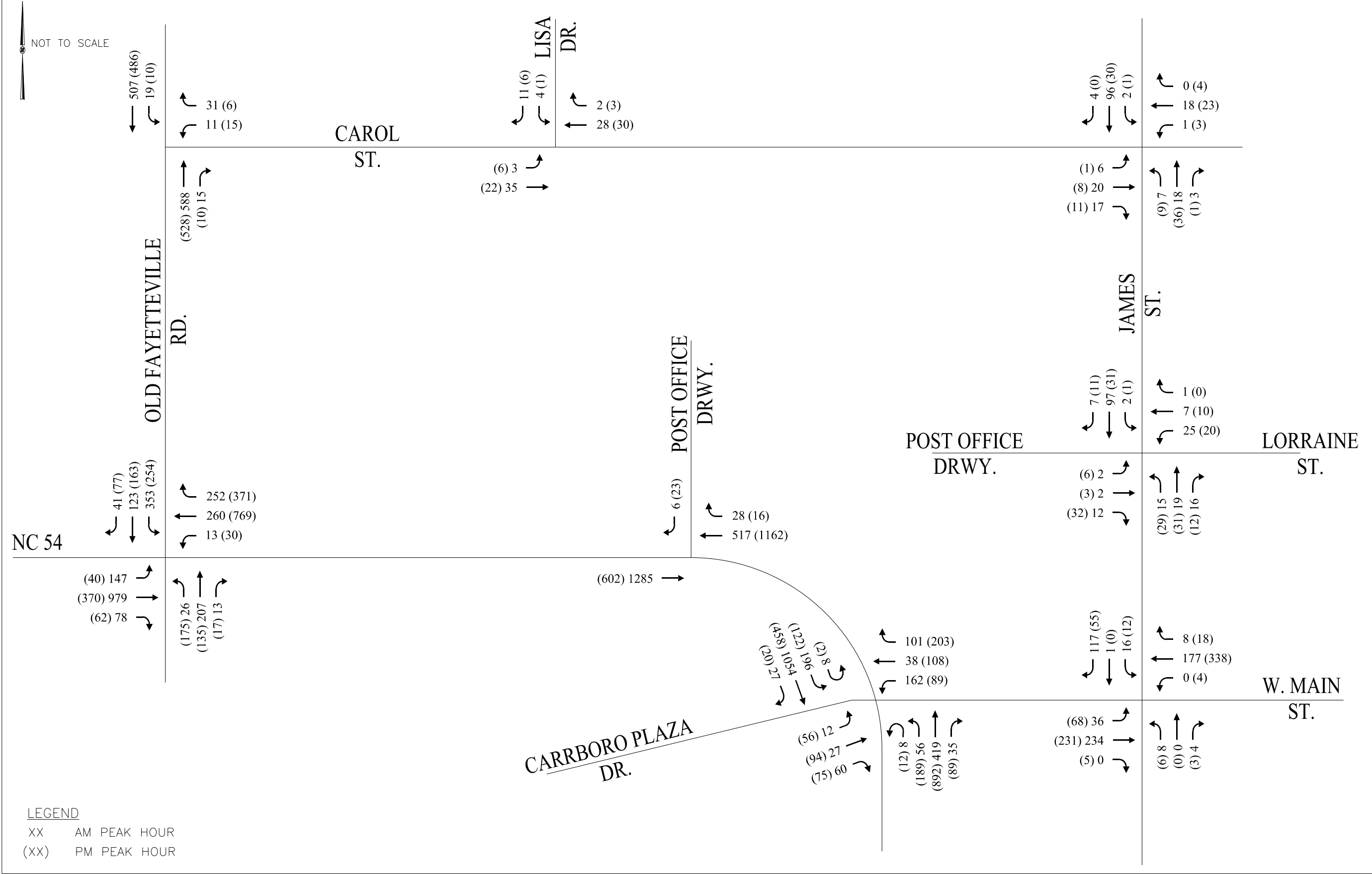
Total AM and PM peak hour background traffic volumes, which include existing and historic growth traffic, are shown on **Figures 6** and **7**, respectively.

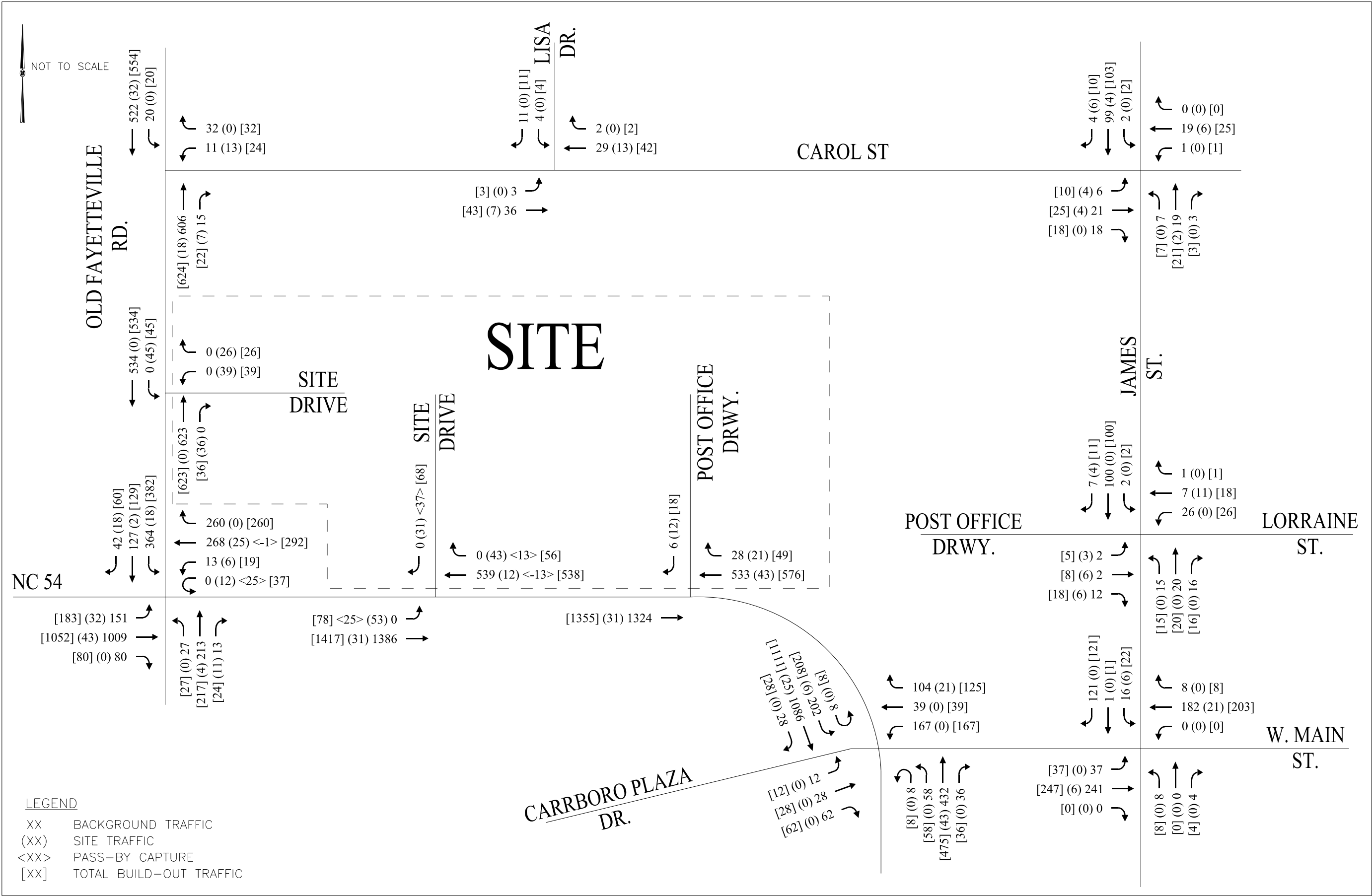
5.4 *Site Traffic*

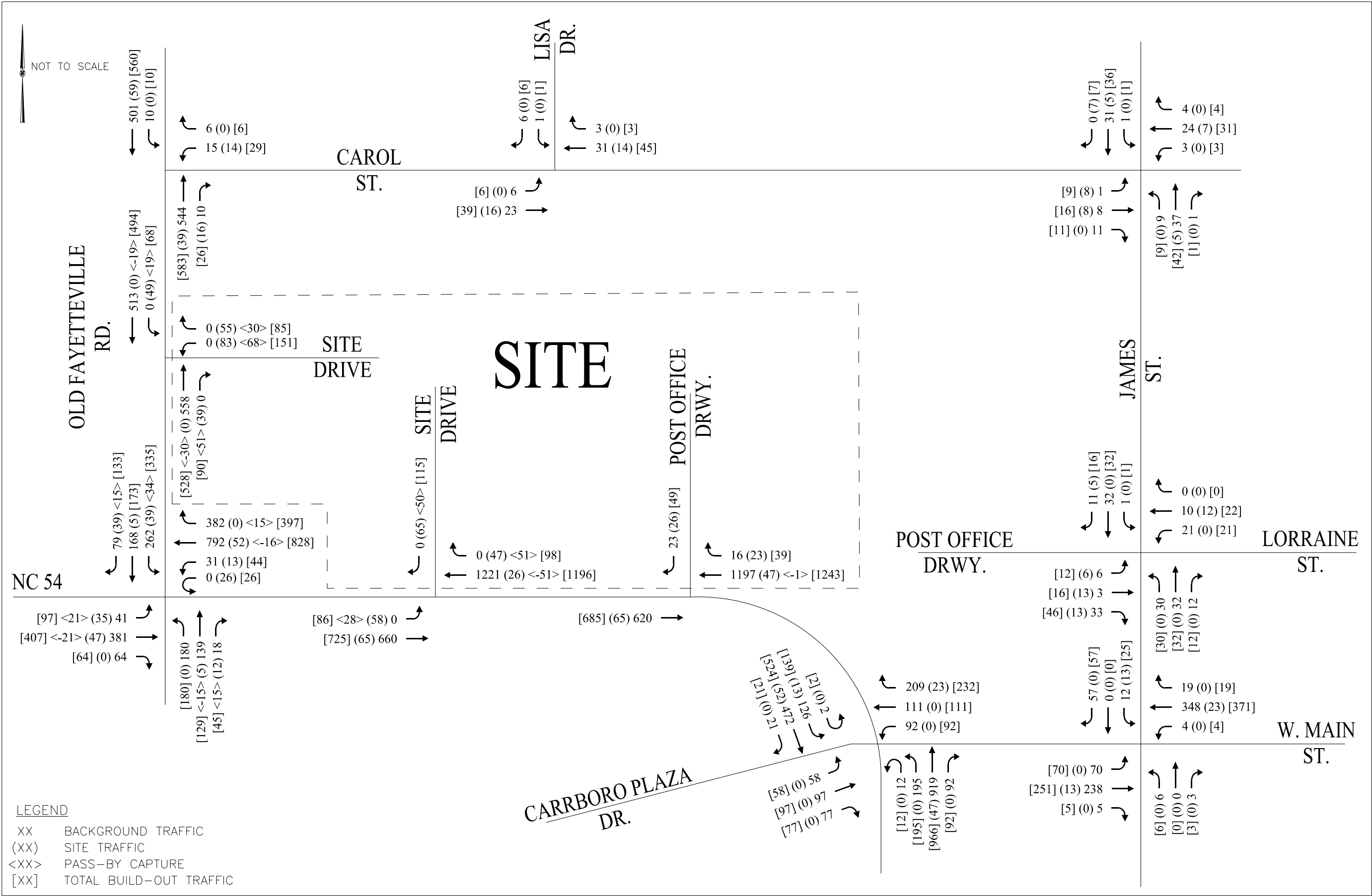
The proposed site traffic was generated and assigned to the adjacent roadway network according to the distribution discussed previously in Section 4.0. The site traffic volumes for the AM and PM peak hours are shown on **Figures 6** and **7**, respectively.

5.5 *Projected (2022) Traffic*

To estimate the projected future (2022) build-out peak hour traffic volumes, site-generated traffic volumes were added to the existing traffic volumes. **Figures 6** and **7** show the projected build-out traffic volumes for the AM and PM peak hours, respectively.







6.0 Capacity Analysis

Capacity analyses (see Appendix) were performed for the weekday AM and PM peak hours for the existing traffic and projected (2022) background build-out traffic conditions for using Synchro/SimTraffic Version 10.1 software to determine the operating characteristics of the surrounding road network and the impacts of the proposed project.

Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within an established time duration. Capacity is combined with Level-of-Service (LOS) to describe the operating characteristics of a road segment or intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A representing the shortest average delays and F representing the longest average delays. LOS D is the typically accepted standard for signalized intersections in urbanized areas. For signalized and all-way stop-controlled intersections, LOS is defined for the overall intersection operation.

For unsignalized intersections, only the movements that must yield right-of-way experience control delay. Therefore, LOS criteria for the overall intersection is not reported by Synchro Version 10.1 or computable using methodology published in the *Highway Capacity Manual*. Accordingly, minor street approach delays are reported herein for unsignalized conditions. For descriptive purposes, results between LOS A and LOS C for the side street approach are assumed to represent short delays. Results between LOS D and LOS E for the side street approach are assumed to represent moderate delays, and LOS F for the side street approach is assumed to represent long delays. It is typical for stop sign controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay.

Table 6.0-A lists the LOS control delay thresholds published in the *Highway Capacity Manual* for signalized and unsignalized intersections, as well as the unsignalized operational descriptions assumed herein.

Table 6.0-A		
Level-of-Service Control Delay Thresholds		
Level-of-Service	Signalized Intersections – Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections – Average Control Delay [sec/veh]
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

Existing signal timings were not modified from the original traffic study. Existing peak hour factors (PHF's) were used for all conditions except at new intersections, where a PHF of 0.90 was used.

Capacity analyses were performed for the existing traffic, projected (2022) background traffic, and projected (2022) build-out traffic conditions for the following intersections:

- NC 54 at Old Fayetteville Road
- NC 54 at Post Office Drive
- NC 54 at Main Street/Carrboro Plaza Drive
- Main Street at James Street
- James Street at Lorraine Street/Post Office Drive
- James Street at Carol Street
- Carol Street at Lisa Drive
- Carol Street at Old Fayetteville Road
- NC 54 at Site Drive
- Old Fayetteville Road at Site Drive

Table 6.0-B summarizes the operation for the study intersections for the AM and PM peak hour traffic conditions listed above. All capacity analyses are included in the Appendix and are briefly summarized in the following sub-sections.

Table 6.0-B Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
NC 54 at Old Fayetteville Road (Signalized)		
Existing (2019) Traffic	C (26.9)	C (30.6)
Projected (2022) Background Traffic	C (30.2)	C (31.7)
Projected (2022) Build-out Traffic – with Improvements	C (34.7)	D (40.9)
NC 54 at Post Office Drive (Unsignalized)		
Existing (2019) Traffic	SB – B (10.5)	SB – C (15.3)
Projected (2022) Background Traffic	SB – B (10.6)	SB – C (15.7)
Projected (2022) Build-out Traffic	SB – B (10.9)	SB – C (15.1)
NC 54 at Main Street/Carrboro Plaza Driveway (Signalized)		
Existing (2019) Traffic	B (17.5)	C (27.5)
Projected (2022) Background Traffic	B (18.4)	C (28.2)
Projected (2022) Build-out Traffic	B (16.8)	C (28.8)

Table 6.0-B (cont.) Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Main Street – James Street (Unsignalized, Two-Way Stop Control)		
Existing (2019) Traffic	NB – C (15.1) SB – B (11.6) EBL – A (7.8) WBL – A (7.9)	NB – C (17.1) SB – B (13.8) EBL – A (8.3) WBL – A (7.8)
Projected (2022) Background Traffic	NB – C (15.4) SB – B (11.8) EBL – A (7.8) WBL – A (7.9)	NB – C (17.6) SB – B (14.0) EBL – A (8.4) WBL – A (7.8)
Projected (2022) Build-out Traffic	NB – C (16.0) SB – B (12.6) EBL – A (7.9) WBL – A (7.9)	NB – C (18.4) SB – C (16.7) EBL – A (8.5) WBL – A (7.9)
James Street – Lorraine Street/Post Office Drive (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.6)	A (7.4)
Projected (2022) Background Traffic	A (7.6)	A (7.4)
Projected (2022) Build-out Traffic	A (7.7)	A (7.5)
James Street – Carol Street (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.7)	A (7.4)
Projected (2022) Background Traffic	A (7.7)	A (7.4)
Projected (2022) Build-out Traffic	A (7.8)	A (7.6)
Carol Street – Lisa Drive (Unsignalized, All-Way Stop Control)		
Existing (2019) Traffic	A (7.2)	A (7.3)
Projected (2022) Background Traffic	A (7.2)	A (7.3)
Projected (2022) Build-out Traffic	A (7.3)	A (7.5)
Carol Street – Old Fayetteville Road (Unsignalized)		
Existing (2019) Traffic	WB – C (17.6) SBL – A (9.1)	WB – C (20.2) SBL – A (8.7)
Projected (2022) Background Traffic	WB – C (18.1) SBL – A (9.2)	WB – C (21.0) SBL – A (8.8)
Projected (2022) Build-out Traffic	WB – C (24.1) SBL – A (9.3)	WB – D (27.6) SBL – A (9.0)
NC 54 – Left-Over Site Drive (Unsignalized)		
Projected (2022) Build-out Traffic	SB – B (10.8) EBL – A (9.3)	SB – C (18.0) EBL – B (14.7)
Old Fayetteville Road – Site Drive (Unsignalized)		
Projected (2022) Build-out Traffic	WB – D (28.8) SBL – A (9.4)	WB – F (87.1) SBL – A (9.3)

6.1 NC 54 at Old Fayetteville Road

Analysis indicates that this signalized intersection currently operates at LOS C during the AM and PM peak hours. In the projected (2022) background traffic condition, the intersection is expected to continue to operate at LOS C in both the AM and PM peak hours. The following roadway improvements are recommended to accommodate projected Lloyd Farm site traffic:

- Extend the storage of the existing southbound left-turn lane on Old Fayetteville Road and construct an additional southbound left-turn lane to provide dual left-turn lanes with an average of 325' of storage each on that approach
- Construct an exclusive southbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Modify the existing traffic signal to accommodate the recommended laneage

Based on discussions with the Town of Carrboro and NCDOT staff, the actual storage length of the southbound right-turn lane at the intersection of NC 54 at Old Fayetteville Road will be determined based on and subject to existing ROW availability. It is intended that no additional ROW will be obtained to accommodate this improvement.

With the recommended improvements in place, the intersection is expected to operate at LOS C in the AM peak hour and LOS D in the PM peak hour. While long queues observed in the existing and background conditions are expected to continue in the build-out condition, SimTraffic indicates that queues from this intersection are not expected to block the site driveways.

Table 6.1 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.1 Level-of-Service NC 54 at Old Fayetteville Road (Signalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	C (26.9)	C (30.6)
Projected (2022) Background Traffic	C (30.2)	C (31.7)
Projected (2022) Build-out Traffic – with Improvements	C (34.7)	D (40.9)

6.2 NC 54 at Post Office Drive

The unsignalized intersection of NC 54 at Post Office Drive currently operates with short delays on the minor street approach (Post Office Drive) in the AM and PM peak hours. In the year 2022, the intersection is expected to continue to operate with short delays for the minor street approach with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.2 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.2 Level-of-Service NC 54 at Post Office Drive (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	SB – B (10.5)	SB – C (15.3)
Projected (2022) Background Traffic	SB – B (10.6)	SB – C (15.7)
Projected (2022) Build-out Traffic	SB – B (10.9)	SB – C (15.1)

6.3 NC 54 at Main Street/Carrboro Plaza Driveway

Analysis indicates that this signalized intersection currently operates at LOS B in the AM peak hour and at LOS C in the PM peak hour. In the year 2022, the intersection is expected to continue to operate at LOS B in the AM peak hour and at LOS C in the PM peak hour with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.3 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.3 Level-of-Service NC 54 at Main Street/Carrboro Plaza Drive (Signalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	B (17.5)	C (27.5)
Projected (2022) Background Traffic	B (18.4)	C (28.2)
Projected (2022) Build-out Traffic	B (16.8)	C (28.8)

6.4 Main Street at James Street

The unsignalized intersection of Main Street at James Street currently operates with short delays for the minor street approaches (James Street) in the AM and PM peak hours. In the year 2022, the intersection is expected to continue to operate with short delays for the minor street approaches with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.4 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.4 Level-of-Service Main Street at James Street (Unsignalized, Two-Way Stop Control)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	NB – C (15.1) SB – B (11.6) EBL – A (7.8) WBL – A (7.9)	NB – C (17.1) SB – B (13.8) EBL – A (8.3) WBL – A (7.8)
Projected (2022) Background Traffic	NB – C (15.4) SB – B (11.8) EBL – A (7.8) WBL – A (7.9)	NB – C (17.6) SB – B (14.0) EBL – A (8.4) WBL – A (7.8)
Projected (2022) Build-out Traffic	NB – C (16.0) SB – B (12.6) EBL – A (7.9) WBL – A (7.9)	NB – C (18.4) SB – C (16.7) EBL – A (8.5) WBL – A (7.9)

6.5 James Street at Lorraine Street/Post Office Drive

Analysis indicates that the all-way stop intersection of James Street at Lorraine Street/Post Office Drive currently operates at an overall LOS A in the AM and PM peak hours. In the year 2022, the intersection is expected to continue to operate at an overall LOS A in the AM and PM peak hours with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.5 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.5 Level-of-Service James Street at Lorraine Street/Post Office Drive (Unsignalized, All-Way Stop Control)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	A (7.6)	A (7.4)
Projected (2022) Background Traffic	A (7.6)	A (7.4)
Projected (2022) Build-out Traffic	A (7.7)	A (7.5)

6.6 James Street at Carol Street

Analysis indicates that the all-way stop intersection of James Street at Carol Street currently operates at an overall LOS A in the AM and PM peak hours. In the year 2022, the intersection is expected to continue to operate at an overall LOS A in the AM and PM peak hours with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.6 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.6 Level-of-Service James Street at Carol Street (Unsignalized, All-Way Stop Control)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	A (7.7)	A (7.4)
Projected (2022) Background Traffic	A (7.7)	A (7.4)
Projected (2022) Build-out Traffic	A (7.8)	A (7.6)

6.7 Carol Street at Lisa Drive

Analysis indicates that the all-way stop intersection of Carol Street at Lisa Drive currently operates at an overall LOS A in the AM and PM peak hours. In the year 2022, the intersection is expected to continue to operate at an overall LOS A in the AM and PM peak hours with or without the proposed development in place. No roadway improvements are recommended at this intersection.

Table 6.7 summarizes the operation of this intersection for the existing (2019) traffic and the projected (2022) background and build-out traffic conditions.

Table 6.7 Level-of-Service Carol Street at Lisa Drive (Unsignalized, All-Way Stop Control)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	A (7.2)	A (7.3)
Projected (2022) Background Traffic	A (7.2)	A (7.3)
Projected (2022) Build-out Traffic	A (7.3)	A (7.5)

6.8 Old Fayetteville Road at Carol Street

The unsignalized intersection of Old Fayetteville Road at Carol Street currently operates with short delays for the minor street approach (Carol Street) in the AM and PM peak hours. The intersection is expected to continue to operate with short delays in the projected (2022) background traffic condition, and with short to moderate delays on the minor street approach in the projected (2022) build-out traffic condition. No queuing issues are expected at this intersection, and no roadway improvements are recommended at this intersection.

Table 6.8 summarizes the operation of this unsignalized intersection for the existing traffic, projected (2019) background traffic, and projected (2019) build-out traffic condition.

Table 6.8 Level-of-Service Old Fayetteville Road at Carol Street (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2019) Traffic	WB – C (17.6) SBL – A (9.1)	WB – C (20.2) SBL – A (8.7)
Projected (2022) Background Traffic	WB – C (18.1) SBL – A (9.2)	WB – C (21.0) SBL – A (8.8)
Projected (2022) Build-out Traffic	WB – C (24.1) SBL – A (9.3)	WB – D (27.6) SBL – A (9.0)

6.9 NC 54 at Site Drive

A site driveway is proposed on NC 54 approximately 800 feet east of Old Fayetteville Road. The following roadway improvements are recommended to be performed to accommodate existing traffic and the projected Lloyd Farm site traffic:

- Construct an exclusive eastbound left-turn lane on NC 54 with 200 feet of storage and appropriate tapers
- Construct an exclusive westbound right-turn lane on NC 54 with 100 feet of storage and appropriate tapers

Analysis indicates that, with the recommended improvements in place, the intersection is expected to operate with short delays on the minor street approach (Site Drive) in both the AM and PM peak hours. SimTraffic simulations indicate that maximum queues on the eastbound left-turn movement are not expected to exceed 120 feet.

Table 6.9 summarizes the operation of this intersection for the projected (2022) build-out traffic condition.

Table 6.9 Level-of-Service NC 54 at Site Drive (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Projected (2022) Build-out Traffic	SB – B (10.8) EBL – A (9.3)	SB – C (18.0) EBL – B (14.7)

6.10 Old Fayetteville Road at Site Drive

A full-movement site driveway is proposed on Old Fayetteville Road approximately 700 feet north of NC 54. The following roadway improvements are recommended at this intersection:

- Construct an exclusive southbound left-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Construct an exclusive northbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Provide separate westbound left and right-turn lanes exiting the Site Driveway

Synchro analyses indicate that, with the recommended improvements in place, the intersection is expected to operate with moderate delays on the minor street approach (Site Drive) in the AM peak hour and with long delays on the minor street approach in the PM peak hour. Long delays at unsignalized approaches to major roadways are common, and it should be noted that the projected delays and queues are significantly shorter than those reported in the original TIA from April 2013. Furthermore, SimTraffic simulations indicate that average approach delays exiting the site will be less than 34 seconds in the PM peak hour and that no queueing issues are expected at this intersection. A roundabout was previously considered at this location but was rejected by the NCDOT, and it is unlikely that a traffic signal could be installed at this location due to its proximity to NC 54.

Table 6.10 summarizes the operation of this intersection for the projected (2022) build-out traffic condition.

Table 6.10 Level-of-Service Old Fayetteville Road at Site Drive (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Projected (2022) Build-out Traffic	WB – D (28.8) SBL – A (9.4)	WB – F (87.1) SBL – A (9.3)

7.0 Recommendations

The following roadway improvements are recommended to be performed to accommodate existing traffic and the projected Lloyd Farm site traffic based on the capacity analysis presented herein:

NC 54 at Old Fayetteville Road:

- Extend the storage of the existing southbound left-turn lane on Old Fayetteville Road and construct an additional southbound left-turn lane to provide dual left-turn lanes with an average of 325' of storage each on that approach
- Construct an exclusive southbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Modify the existing traffic signal to accommodate the recommended laneage

NC 54 at Site Drive:

- Construct an exclusive eastbound left-turn lane on NC 54 with 200 feet of storage and appropriate tapers
- Construct an exclusive westbound right-turn lane on NC 54 with 100 feet of storage and appropriate tapers

Old Fayetteville Road at Site Drive:

- Construct an exclusive southbound left-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Construct an exclusive northbound right-turn lane on Old Fayetteville Road with 100 feet of storage and appropriate tapers
- Provide separate westbound left and right-turn lanes exiting the Site Driveway

Analysis indicates that with the recommended improvements in place, all of the intersections are expected to operate at an acceptable level-of-service (LOS) in the build-out traffic condition with the exception of the unsignalized intersection of Old Fayetteville Road at the Site Driveway. Synchro indicates the minor street approach (Site Driveway) at that intersection is expected to operate with long delays at project build-out. However, it is typical for stop sign controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay. SimTraffic reports delays of less than 34 seconds on that approach in the PM peak hour and also indicates that no queueing issues are expected at this intersection. A roundabout was previously considered at this location but was rejected by NCDOT, and it is unlikely that a traffic signal could be installed at this location due to its proximity to NC 54.

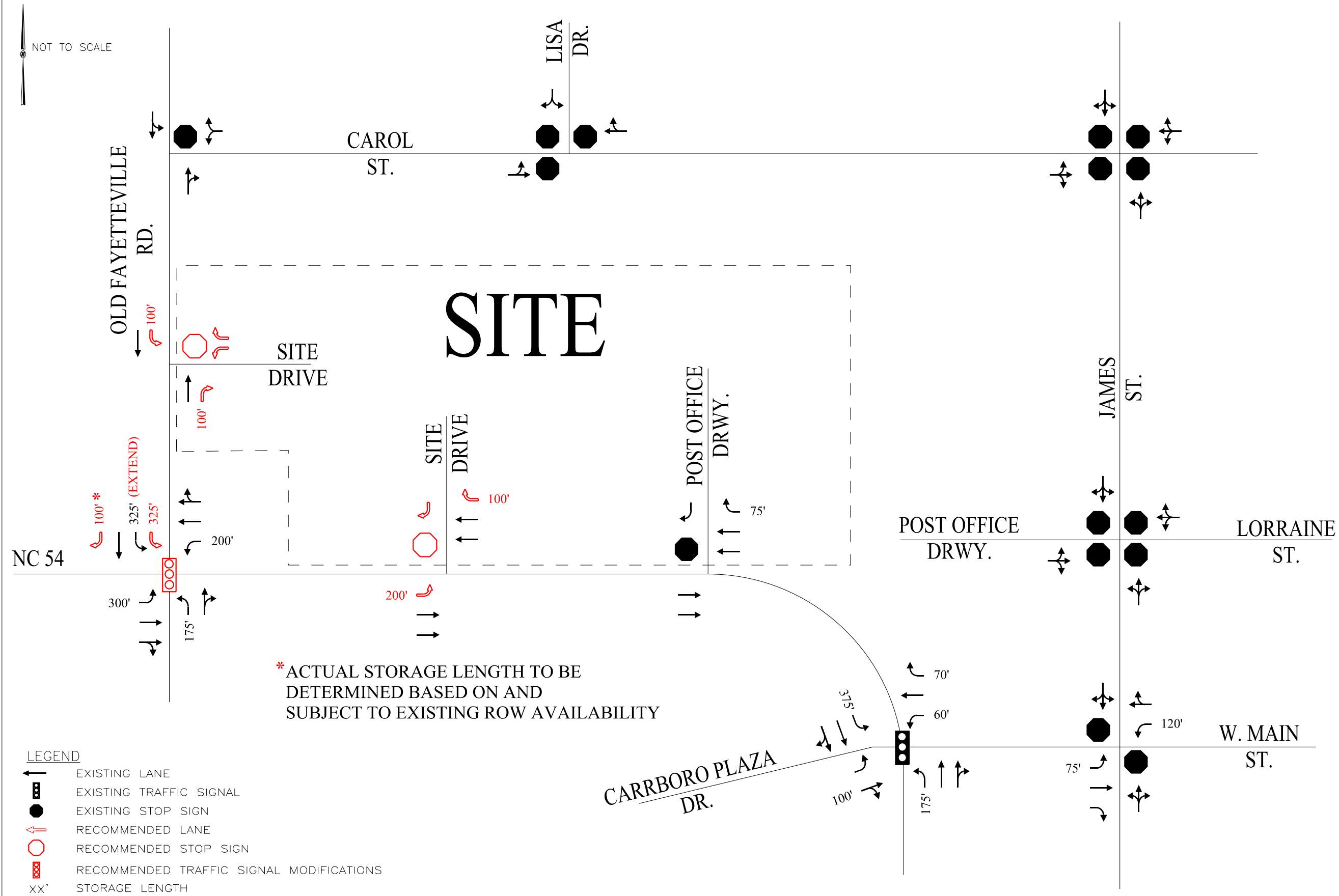
Furthermore, while long queues observed in the existing and background conditions at the intersection of NC 54 at Old Fayetteville Road are expected to continue in the build-out condition, those are not expected to block the proposed site driveways.

Based on discussions with the Town of Carrboro and NCDOT staff, the actual storage length of the southbound right-turn lane at the intersection of NC 54 at Old Fayetteville Road will be determined

based on and subject to existing ROW availability. It is intended that no additional ROW will be obtained to accommodate this improvement.

While this site is expected to add traffic through the adjacent neighborhood, analysis shows that the impact to traffic operations within the neighborhood will be negligible. The bicycle and pedestrian connections being made to James Street and Carol Street will also provide access to the site via modes other than passenger vehicles.

The recommended roadway laneage is shown on **Figure 8**.



Appendix

Appendix A:
NCDOT Scoping Document



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



Project Name: Lloyd Farm

TIA Scoping Date: 12/6/18

☒ TIA Need Screening Forms are Attached. Project Reference #: _____ Decision Date: 11/15/18

☒ Site Plan and Access :

☒ Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.

Refer to NCDOT's Policy on Street and Driveway Access to North Carolina Highways pages 14 and 15 for site plan requirements.

☒ Identify site access.

New Access	On Road	Access Type		Driveway Spacing		
	Road Name	Permitted Movements	Traffic Control	Distance (ft)	Direction	Nearest Intersection / Access
Access A	Old Fayetteville Rd	Conventional Full-Mvmt	2-Way Stop	690	North	NC 54
Access B	NC 54	RtO w/ Left-Over	2-Way Stop	925	East	Old Fayetteville Rd
Access C						
Access D						
Access E						
Access F						
Access G						
Access H						

Existing Access	Existing Intersection of		Access Modification	Proposed Interconnectivity (If Applicable)		
	Road A	Road B		Connector #	Road Connected	Adjacent Development
Access 1	NC 54	Post Office Dwy	N/A	Connector 1		
Access 2				Connector 2		
Access 3				Connector 3		
Access 4				Connector 4		

☐ Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).



Proposed K-12 School Site

- ☐ NCDOT MSTA School Traffic Calculator for Select School Type shall be used.
- ☐ Peak Hour Factors (PHFs) shall be adjusted/weighted for new school trips (0.5 PHF by default).
- ☐ Internal school circulation analysis is required, and should be submitted in advance or concurrent with the TIA submittal.
- ☐ Clarify traffic operation plans (e.g. traffic circulation pattern, pedestrian access, drop-off/pick-up zone location and configuration, queue storage area and, if applicable, staggered start times).



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



☒ Trip Generation

The TIA Consultant shall prepare trip generation estimates following the current NCDOT Congestion Management Capacity Analysis Guidelines, and submit the calculation sheets and supporting information to the District Engineer for approval prior to capacity analysis.

ITE LUC	Proposed Land Use	Size Unit		Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
220	Sr. Adult Housing	220	d.u.	860	Adj. Street	15	29	44	30	25	55	ITE Equation
710	General Office	52000	s.f.	564	Adj. Street	65	10	75	10	51	61	ITE Equation
820	Shopping Center	26400	s.f.	2432	Adj. Street	16	9	25	97	106	203	ITE Equation
850	Supermarket	65000	s.f.	5820	Adj. Street	149	99	248	289	278	567	ITE Equation
945	Gas Station w/ CM	14	f.p.	2876	Adj. Street	89	86	175	100	96	196	ITE Equation
Unadjusted Site Trips				12552		334	233	567	526	556	1082	
Internal Capture Trips (Attach Calculation Sheets)				2230		59	59	118	118	118	236	NCHRP 684
Internal Capture % of Unadjusted Site Trips				18 %		21 %			22 %			
LUC	Proposed Land Use	Any Internal Trips?		Pass-By % of External Trips								
820	Shopping Center	Yes - Adjust External Trips		34 %		0 %			34 %			ITE Rate
850	Supermarket	Yes - Adjust External Trips		36 %		0 %			36 %			ITE Rate
945	Gas Statlon	Yes - Adjust External Trips		59 %		62 %			56 %			ITE Rate
				%		%			%			
				%		%			%			
Pass-By Trips (Attach Calculation Sheets)				3588		38	37	75	149	148	297	
Adjacent Street Volumes				28400		2460			2316			Local Data**
Non-Pass-By Primary Trips				6060		213	123	336	233	261	494	
Diverted Trips, if Applicable and Justifiable												Please Select

**Explain local or other data sources, if used:

Adjacent Street Volumes - ADT from 2017 NCDOT count data, peak hours from 2016 turning movement count at NC 54 at Old Fayetteville Road.

Internal capture between supermarket and gas station obtained from local count data. See attached memo.

☐ Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

ITE LUC	Existing Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
					Please Select							Please Select
Total Existing Site Trips												X



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



☒ Trip Distribution

- ☒ Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).
- ☐ Trip distribution diagrams will be submitted separately, along with supporting information, to the District Engineer for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

Same distribution as prior TIA.

If required by the District Engineer, the following additional diagrams shall also be submitted:

- ☐ Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)
- ☐ Inter-Development Trips (if "internal" trips cross public streets)
- ☐ Pass-By Trips
- ☐ Diverted Trips
- ☐ Each Analysis Period

☐ Mode Split

- ☒ Provide Data Source and Justification

10% bike/ped/transit capture to be applied per prior TIAs

Mode Period	Auto	BPT	
AM Peak	90 %	10 %	%
PM Peak	90 %	10 %	%
Daily	90 %	10 %	%
	%	%	%

- ☒ Identify proper infrastructure and accommodation for other modes of travel.

Site will have sidewalk connectivity along NC 54 and Old Fayetteville Road plus pedestrian connections to Carol Street and James Street. There are bike lanes on Old Fayetteville Road, and there are 2 bus routes that will run through or adjacent to the site.

☒ Analysis Peak Periods:

- ☒ Weekday AM Peak _____
- ☒ Weekday PM Peak _____
- ☐ Weekday Midday Peak _____
- ☐ Weekday PM School Peak _____
- ☐ Weekend _____ Peak _____
- ☐ Other _____



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



☒ Study Area Intersections and Data Collection

The study area shall include the site access intersections (both new and existing) identified under "Site Plan and Access" on page 1, as well as the following external and, if applicable, internal intersections.

External Intersection	Intersection of		Traffic Control	Intersection Turning Movement Counts			Notes
	Road A	Road B		New / Existing	Date of Counts	Growth Adjustment	
#1	NC 54	Old Fayetteville	Signal	Require New Counts			
#2	NC 54	Post Office Dwy	2-Way Stop	Require New Counts			
#3	NC 54	Main St	Signal	Require New Counts			
#4	Main St	James St	2-Way Stop	Require New Counts			
#5	Old Fayetteville	Carol St	2-Way Stop	Require New Counts			
#6	Carol St	Lisa Dr	All-Way Stop	Require New Counts			
#7	Carol St	James St	All-Way Stop	Require New Counts			
#8	James St	Lorraine St	All-Way Stop	Require New Counts			
#9							
#10							
#11							
#12							

Internal Intersection	Intersection of		Access Type		Intersection Spacing		
	Road A	Road B	Traffic Control	Permitted Movements	Distance (ft)	Direction	Nearest Intersection
#101			Please Select	Please Select		Please Select	
#102							
#103							
#104							
#105							

The following data will be collected:

- ☒ New traffic turning movement counts in ☒ 15-min intervals ☐ 5-min intervals (near schools)
Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.

☐ To account for the impact of existing and/or proposed school traffic, PHFs will be adjusted for:

intersections numbered: _____

and access points numbered: _____

☐ Traffic Forecast Data for TIP: _____

☒ Roadway/Intersection Configuration & Traffic Control

☒ Traffic Signal Phasing & Timing Data

☐ Crash Data: _____ Period: _____

☒ Other:

48-hour volume and speed counts will be performed on James St., Carol St., and Lorraine St.



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



☒ **Future Year Conditions**

☒ Project Build-Out Year: 2022

☒ Future Analysis Year(s): 2022

- ☐ Identify below any funded/committed future transportation improvements, as well as any approved but incomplete developments near the site.

Funded STIP / Local CIP Project	Project Description		Year Complete
Nearby Approved Development	Location	Future Land Use (exclude any completed phases)	Committed Improvements

☒ Annual Growth Factor: 1 %

Justification/Data Source: Will confirm growth rate by comparing new counts to prior TMCs.

☐ **Local Comprehensive Transportation Plan Compliance**

- ☐ Identify Applicable Local Transportation Planning Documents

☐ Identify Applicable Roadways inside the Study Area

Road Name	Classification	Speed Limit	Proposed Cross-Section	Proposed Right-of-Way	Compliance Requirements	Affect Study Intersection #



NCDOT TIA Scoping Checklist

TIA Need
Screening

TIA
Scoping

TIA
Submittal



☒ Study Method

The traffic analysis shall follow the current *NCDOT Congestion Management Capacity Analysis Guidelines, Policy on Street and Driveway Access to North Carolina Highways*, and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

1. Existing Conditions
2. Future No-Build Conditions (existing + background growth + approved developments + committed or funded improvements)
3. Future Build Conditions (future no-build + site trips)
4. Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development's impacts) and, if applicable:

☐ 5. TIP Design Year Analysis _____

☐ 6. Alternative Access Scenario (without proposed control-of-access or median break / modification)

The following additional analysis/outputs should be provided as warranted:

- ☐ Signal Warrant Analysis for accesses/intersections _____
- ☐ Multi-Modal Level of Service Analysis
- ☐ School Loading Zone Traffic Simulation
- ☐ Phasing Analysis (scope separately as needed)
- ☐ Safety/Crash Analysis
- ☐ Control-of-Access Modification Justification
- ☐ Median Break / Modification Justification
- ☐ Other _____

☒ Submittals

In addition to the hardcopies required below, the TIA Consultant shall provide the District Engineer and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

☐ Div. Traffic Engr ☐ Regional Traffic Engr ☐ Congestion Management ☐ Other _____

Submittals	NCDOT		Local Government	
	Electronic	Hardcopy	Electronic	Hardcopy
Trip Generation & Distribution	Required		Not Required	
Draft TIA Report	Required		Not Required	
Final Sealed TIA Report	Required		Required	

☐ Additional Comments (municipal TIA requirements, approved variations from NCDOT guidelines)



NCDOT TIA Scoping Checklist

TIA Need Screening	TIA Scoping	TIA Submittal
-----------------------	----------------	------------------



Agreement by All Parties

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the District Engineer in writing. If approved by NCDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

This agreement shall become effective on the date approved by NCDOT, and shall expire ____ months after the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

APPLICANT

Ted Barnes
Signature

For Carbonate Water LLC

Ted Barnes
Print Name

1/24/19
Date

TIA CONSULTANT

Travis Fluitt
Signature

Travis Fluitt, Kimley-Horn
Print Name

1/24/2019
Date

LOCAL GOVERNMENT REPRESENTATIVE (If Applicable)

Signature

Print Name

Date

Email concurrence may be used in lieu of the signature.

NCDOT DISTRICT REPRESENTATIVE

Reviewed and approved by the NCDOT Division 7 District 1 on 2/5/19

C. N. Gwinn Jr.
Signature

District Engineer

C. N. Gwinn Jr.
Print Name

Email concurrence may be used in lieu of the signature.

Appendix B:

Trip Generation

Lloyd Farm
Table 1 - Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
252 Senior Adult Housing - Attached	220	d.u.	860	430	430	44	15	29	55	30	25
710 General Office Building	52,000	s.f.	564	282	282	75	65	10	61	10	51
820 Shopping Center ¹	26,400	s.f.	2,432	1,216	1,216	25	16	9	203	97	106
850 Supermarket	65,000	s.f.	5,820	2,910	2,910	248	149	99	567	289	278
945 Gasoline/Service Station with Convenience Market	14	f.p.	2,876	1,438	1,438	175	89	86	196	100	96
Subtotal			12,552	6,276	6,276	567	334	233	1,082	526	556
<i>Internal Capture</i>											
252 Senior Adult Housing - Attached			212	107	105	1	0	1	27	15	12
710 General Office Building			134	62	72	7	4	3	15	4	11
820 Shopping Center			68	35	33	0	0	0	8	4	4
850 Supermarket ²			950	477	473	56	28	28	100	52	49
945 Gasoline/Service Station with Convenience Market ²			866	434	432	54	27	27	86	44	43
Internal Capture Total	AM	PM									
	20.81%	21.86%	2,230	1,115	1,115	118	59	59	236	118	118
Total External Trips			10,322	5,161	5,161	449	275	174	846	408	438
<i>Pass-By Traffic (ITE)</i>											
820 Shopping Center	<u>AM</u>	<u>PM</u>									
	0%	34%	803	401	401	0	0	0	67	32	35
850 Supermarket	0%	36%	1,724	862	862	0	0	0	168	85	83
945 Gasoline/Service Station with Convenience Market ²	62%	56%	1,062	531	531	75	38	37	62	32	30
	AM	PM									
<i>Subtotal</i>	27.45%		3,589	1,794	1,795	75	38	37	297	149	148
<i>Adjacent Street Traffic</i>							2,388	2,388		2,226	2,226
<i>10% Adjacent Street Traffic</i>			4,452	2,226	2,226	478	239	239	445	223	223
Pass-By Total:	13.23%	27.45%	3,588	1,794	1,794	75	38	37	297	149	148
Net New External Trips			6,734	3,367	3,367	374	237	137	549	259	290
Bike/Ped/Transit Capture	10.00%		674	337	337	38	24	14	55	26	29
Total Net New External Trips - Proposed Plan			6,060	3,030	3,030	336	213	123	494	233	261
Total Net New External Trips from 10/16 TIA			6,256	3,128	3,128	380	218	162	616	311	305
Difference in Trips (Proposed Plan vs. TIA)			-196	-98	-98	-44	-5	-39	-122	-78	-44

¹ For the Shopping Center land use, the AM average rate was used due the large y-intercept in the regression equation given the small size of the space.

² Traffic counts performed at similar grocery fuel centers shows internal capture rates between the grocery store and fuel center of 30% in the AM peak hour and 39% in the PM peak hour. Therefore, additional internal capture was applied to the Shopping Center and Gasoline Station uses. An average of the AM and PM rates was used for the daily capture.

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook* , 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY

GROSS TRIP GENERATION

INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	282	282	65	10	10	51
	Retail	5,564	5,564	254	194	486	480
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	430	430	15	29	30	25
	Hotel	0	0	0	0	0	0
		6,276	6,276	334	233	526	556

INTERNAL TRIPS

OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	62	72	4	3	4	11
	Retail	160	152	3	3	21	17
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	107	105	0	1	15	12
	Hotel	0	0	0	0	0	0
		329	329	7	7	40	40
	% Reduction	5.2%		2.5%		7.4%	

EXTERNAL TRIPS

OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	220	210	61	7	6	40
	Retail	5,404	5,412	251	191	465	463
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	323	325	15	28	15	13
	Hotel	0	0	0	0	0	0
		5,947	5,947	327	226	486	516

Lloyd Farm

Table 2 - Grocery to Gas Station Internal Capture

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
945 Gasoline/Service Station with Convenience Market	14	f.p.	2,876	1,438	1,438	175	89	86	196	100	96
<i>Internal Capture</i>	<u>AM</u>	<u>PM</u>									
Gasoline/Service Station with Convenience Market ¹	30%	39%	786	393	393	52	26	26	77	39	39
Total External Trips			2,112	1,056	1,056	123	63	60	119	61	57

¹ Traffic counts performed at similar grocery fuel centers shows internal capture rates between the grocery store and fuel center of 30% in the AM peak hour and 39% in the PM peak hour. Therefore, additional internal capture was applied to the Shopping Center and Gasoline Station uses. An average of the AM and PM rates was used for the daily capture.



MEMORANDUM

To: Whomever It May Concern

From: Steve Blakley, PE
Brady Finklea, PE
Kimley-Horn

Date: September 27, 2018

Subject: ***Harris Teeter Fuel Services Trip Generation
Local Data Collection Summary***

The purpose for this memorandum is to summarize the projected number of new site trips that would be generated by the addition of a customer-incentive-based fuel center on site of a Harris Teeter grocery store. Due to the incentives tied between the grocery store and fuel center, the internal capture rate between these two uses is higher than the standard Institute of Transportation Engineers' (ITE) internal capture rates typically applied between two general retail uses. Therefore, the projected number of new site trips, and thus the overall traffic impact, is less than the trip generation potential provided by the standard ITE rates.

This memorandum documents the local data collected at existing Harris Teeter fuel centers to determine an alternate internal capture rate that better reflects the trip behavior of these uses.

DATA COLLECTION

Local data was collected for the AM and PM peak hours in Myrtle Beach, South Carolina and Murrell's Inlet, South Carolina in July 2015 at existing Kroger (Harris Teeter is a division) grocery stores with operating fuel centers. The Myrtle Beach fuel center included 12 fueling positions while the Murrell's Inlet site included 10 fueling positions.

Based on the data collected at both sites, 30% of the fuel customers during the AM peak hour and 39% during the PM also entered the grocery store during the same trip. As expected, the internal capture rates collected between these two uses are higher than the standard ITE internal capture rates of 0% during the AM peak hour and 20% for the PM peak hour.

TRIP GENERATION COMPARISON

ITE does not provide data for AM peak-hour internal capture rates. A PM peak-hour internal capture rate of 20% is recommended by ITE between two general retail uses. Based on the local data collected, an AM peak-hour internal capture rate of 30% and PM peak-hour internal capture rate of 39% could be expected between the Harris Teeter and associated fuel center. The increase in rates seems reasonable based on the incentives that tie the two uses together.

The tables below show a comparison of the trip generation calculations between the internal capture rate methods. Table 1 shows the trip generation expected when using the local data collected for internal capture, while Table 2 shows the trip generation expected by using the standard ITE method for calculating internal capture. It should be noted that the local data was not collected for the full day; only the peak hours were collected to capture the typical periods in which traffic impacts are measured. The daily internal capture shown in Table 1 used the average internal capture percentage between the AM and PM peak hours (34.5%).

Table 1 - Trip Generation with LOCALLY-COLLECTED Internal Capture								
Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Gasoline Service Station with Convenience Market	14 FP	2,279	142	71	71	189	95	94
Fuel Center Subtotal		2,279	142	71	71	189	95	94
Internal Capture (30% AM, 39% PM)		786	43	21	21	74	37	37
Pass-By (62% AM, 56% PM)		126	62	31	31	64	32	32
Fuel Center Net New External Trips		1,367	37	19	19	51	26	25

Table 2 - Trip Generation with ITE Internal Capture								
Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Supermarket (Used for Internal Capture Only)	100,000 SF	8,087	340	211	129	779	397	382
Gasoline Service Station with Convenience Market	14 FP	2,279	142	71	71	189	95	94
Fuel Center Subtotal		2,279	142	71	71	189	95	94
Internal Capture (0% AM, 20% PM)		661	0	0	0	38	19	19
Pass-By (62% AM, 56% PM)		172	88	44	44	84	42	42
Fuel Center Net New External Trips		1,446	54	27	27	67	34	33

CONCLUSION

Due to the incentives tied between the grocery store and associated fuel center, the expected internal capture rate between these two uses is shown to be higher than the standard ITE internal capture rates typically applied between two general retail uses. Therefore, the projected number of new site trips, and thus the overall traffic impact, is less than the trip generation potential provided by the standard ITE rates. Specifically, based on Tables 1 and 2, the number of total new site trips is reduced by 31% and 24% during the AM and PM peak hours, respectively.

Should you have any questions or comments please do not hesitate to contact Steve Blakley or Brady Finklea at 704.333.5131.

Appendix C:

Traffic Count Data

Project ID: 19-09020-001

Location: Old Fayetteville Rd & NC-54

City: Carrboro

Day: Tuesday

Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Old Fayetteville Rd Northbound						Old Fayetteville Rd Southbound						NC-54 Eastbound						NC-54 Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	3	18	3	0	0	24	52	6	6	0	0	64	15	213	11	0	0	239	0	57	51	0	0	108	435
7:15 AM	9	55	4	0	0	68	82	23	6	0	0	111	43	270	20	0	0	333	1	61	54	0	0	116	628
7:30 AM	8	65	3	0	0	76	98	28	16	0	0	142	47	259	16	0	0	322	3	73	65	0	0	141	681
7:45 AM	5	43	2	0	0	50	91	43	12	0	0	146	35	230	23	0	0	288	5	73	73	0	0	151	635
Total	25	181	12	0	0	218	323	100	40	0	0	463	140	972	70	0	0	1182	9	264	243	0	0	516	2379
8:00 AM	4	44	4	0	0	52	82	29	7	0	0	118	22	220	19	0	0	261	4	53	60	0	0	117	548
8:15 AM	6	23	4	0	0	33	73	35	10	0	0	118	22	179	16	0	0	217	5	54	46	0	0	105	473
8:30 AM	6	19	6	0	0	31	70	26	14	0	0	110	10	191	10	0	0	211	5	56	68	0	0	129	481
8:45 AM	3	22	7	0	0	32	73	20	7	0	0	100	8	152	12	0	0	172	2	42	37	0	0	81	385
Total	19	108	21	0	0	148	298	110	38	0	0	446	62	742	57	0	0	861	16	205	211	0	0	432	1887
BREAK																									
4:00 PM	41	32	6	0	0	79	52	38	20	0	0	110	10	74	19	0	0	103	14	164	64	0	1	242	534
4:15 PM	41	32	13	0	0	86	49	44	19	0	0	112	12	77	15	0	0	104	11	165	65	0	0	241	543
4:30 PM	36	39	4	0	0	79	64	33	26	0	0	123	7	93	7	0	0	107	6	199	44	0	0	249	558
4:45 PM	39	40	10	0	0	89	45	32	14	0	0	91	9	99	16	0	0	124	7	189	75	1	0	272	576
Total	157	143	33	0	0	333	210	147	79	0	0	436	38	343	57	0	0	438	38	717	248	1	1	1004	2211
5:00 PM	49	31	4	0	0	84	56	33	23	0	0	112	7	76	16	0	0	99	13	179	71	0	4	263	558
5:15 PM	47	30	5	0	0	82	59	43	17	0	0	119	11	99	16	0	0	126	6	246	132	0	3	384	711
5:30 PM	43	33	3	0	0	79	62	38	24	0	0	124	13	97	15	0	0	125	5	183	94	2	1	284	612
5:45 PM	36	41	5	0	0	82	77	49	13	0	0	139	9	98	15	0	0	122	4	161	74	0	0	239	582
Total	175	135	17	0	0	327	254	163	77	0	0	494	40	370	62	0	0	472	28	769	371	2	8	1170	2463
Grand Total	376	567	83	0	0	1026	1085	520	234	0	0	1839	280	2427	246	0	0	2953	91	1955	1073	3	9	3122	8940
Apprch %	36.6	55.3	8.1	0.0	0.0		59.0	28.3	12.7	0.0	0.0		9.5	82.2	8.3	0.0	0.0		2.9	62.6	34.4	0.1	0.3		
Total %	4.2	6.3	0.9	0.0	0.0	11.5	12.1	5.8	2.6	0.0	0.0	20.6	3.1	27.1	2.8	0.0	0.0	33.0	1.0	21.9	12.0	0.0	0.1	34.9	
Cars, PU, Vans	373	536	63	0	0	972	1054	492	219	0	0	1765	264	2380	244	0	0	2888	86	1916	1043	0	9	3048	8673
% Cars, PU, Vans	99.2	94.5	75.9	0.0	0.0	94.7	97.1	94.6	93.6	0.0	0.0	96.0	94.3	98.1	99.2	0.0	0.0	97.8	94.5	98.0	97.2	0.0	100.0	97.6	97.0
Heavy Trucks	3	31	20	0		54	31	28	15	0		74	16	47	2	0		65	5	39	30	0		74	267
%Heavy Trucks	0.8	5.5	24.1	0.0	0.0	5.3	2.9	5.4	6.4	0.0	0.0	4.0	5.7	1.9	0.8	0.0	0.0	2.2	5.5	2.0	2.8	0.0	0.0	2.4	3.0

Project ID: 19-09020-001

Location: Old Fayetteville Rd & NC-54

City: Carrboro

Day: Tuesday

Date: 01/15/2019

PEAK HOURS

AM

	Old Fayetteville Rd Northbound						Old Fayetteville Rd Southbound						NC-54 Eastbound						NC-54 Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																									
Peak Hour for Entire Intersection Begins at 07:15 AM																									
7:15 AM	9	55	4	0	68		82	23	6	0	111		43	270	20	0	333		1	61	54	0	116		628
7:30 AM	8	65	3	0	76		98	28	16	0	142		47	259	16	0	322		3	73	65	0	141		681
7:45 AM	5	43	2	0	50		91	43	12	0	146		35	230	23	0	288		5	73	73	0	151		635
8:00 AM	4	44	4	0	52		82	29	7	0	118		22	220	19	0	261		4	53	60	0	117		548
Total Volume	26	207	13	0	246		353	123	41	0	517		147	979	78	0	1204		13	260	252	0	525		2492
% App. Total	10.6	84.1	5.3	0.0	100		68.3	23.8	7.9	0.0	100		12.2	81.3	6.5	0.0	100		2.5	49.5	48.0	0.0	100		
PHF	0.809						0.885						0.904						0.869						0.915
Cars, PU, Vans	25	195	6	0	226		342	107	37	0	486		142	961	76	0	1179		13	250	242	0	505		2396
% Cars, PU, Vans	96.2	94.2	46.2	0.0	91.9		96.9	87.0	90.2	0.0	94.0		96.6	98.2	97.4	0.0	97.9		100.0	96.2	96.0	0.0	96.2		96.1
Heavy Trucks	1	12	7	0	20		11	16	4	0	31		5	18	2	0	25		0	10	10	0	20		96
%Heavy Trucks	3.8	5.8	53.8	0.0	8.1		3.1	13.0	9.8	0.0	6.0		3.4	1.8	2.6	0.0	2.1		0.0	3.8	4.0	0.0	3.8		3.9

PM

	Old Fayetteville Rd Northbound					Old Fayetteville Rd Southbound					NC-54 Eastbound					NC-54 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	49	31	4	0	84	56	33	23	0	112	7	76	16	0	99	13	179	71	0	263	558
5:15 PM	47	30	5	0	82	59	43	17	0	119	11	99	16	0	126	6	246	132	0	384	711
5:30 PM	43	33	3	0	79	62	38	24	0	124	13	97	15	0	125	5	183	94	2	284	612
5:45 PM	36	41	5	0	82	77	49	13	0	139	9	98	15	0	122	4	161	74	0	239	582
Total Volume	175	135	17	0	327	254	163	77	0	494	40	370	62	0	472	28	769	371	2	1170	2463
% App. Total	53.5	41.3	5.2	0.0	100	51.4	33.0	15.6	0.0	100	8.5	78.4	13.1	0.0	100	2.4	65.7	31.7	0.2	100	
PHF	0.973					0.888					0.937					0.762					0.866
Cars, PU, Vans	174	133	14	0	321	250	161	73	0	484	39	365	62	0	466	23	760	362	2	1147	2418
% Cars, PU, Vans	99.4	98.5	82.4	0.0	98.2	98.4	98.8	94.8	0.0	98.0	97.5	98.6	100.0	0.0	98.7	82.1	98.8	97.6	100.0	98.0	98.2
Heavy Trucks	1	2	3	0	6	4	2	4	0	10	1	5	0	0	6	5	9	9	0	23	45
% Heavy Trucks	0.6	1.5	17.6	0.0	1.8	1.6	1.2	5.2	0.0	2.0	2.5	1.4	0.0	0.0	1.3	17.9	1.2	2.4	0.0	2.0	1.8

Location: Old Fayetteville Rd & NC-54
City: Carrboro

Project ID: 19-09020-001
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		Old Fayetteville Rd		Old Fayetteville Rd		NC-54		NC-54		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG			
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL	
	7:00 AM	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :		EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0
PEAK HR :		07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL : PEAK HR FACTOR :		0	0	0	0	0	0	0	0	0

Project ID: 19-09020-001
Date: 1/15/2019

Bikes

[illegible][illegible]

Project ID: 19-09020-002
Location: Post Office Dwy & NC-54
City: Carrboro

Day: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Post Office Dwy Northbound						Post Office Dwy Southbound						NC-54 Eastbound						NC-54 Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	106	4	0	0	110	112	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	16	0	0	138	138	
7:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	133	7	0	0	140	143	
7:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	150	3	0	0	153	155	
Total	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	511	30	0	0	541	548	
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	112	2	0	0	114	115	
8:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	101	4	0	0	105	108	
8:30 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	118	2	0	0	120	126	
8:45 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	78	3	0	0	81	86	
Total	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	409	11	0	0	420	435	
BREAK																										
4:00 PM	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	0	221	10	0	0	231	244	
4:15 PM	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	227	4	0	0	231	241	
4:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	256	3	0	0	259	267	
4:45 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	251	5	0	0	256	263	
Total	0	0	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0	0	0	955	22	0	0	977	1015	
5:00 PM	0	0	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	0	283	3	0	0	286	295	
5:15 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	356	3	0	0	359	363	
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	272	5	0	0	277	280	
5:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	241	2	0	0	243	245	
Total	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	0	1152	13	0	0	1165	1183	
Grand Total	0	0	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	0	3027	76	0	0	3103	3181	
Apprch %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.6	2.4	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.2	2.4	0.0	0.0	97.5		
Cars, PU, Vans	0	0	0	0	0	0	0	0	75	0	0	75	0	0	0	0	0	0	0	2956	73	0	0	3029	3104	
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.2	0.0	0.0	96.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.7	96.1	0.0	0.0	97.6	97.6	
Heavy Trucks	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	71	3	0	0	74	77	
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.9	0.0	0.0	2.4	2.4	

Project ID: 19-09020-002
Location: Post Office Dwy & NC-54
City: Carrboro

PEAK HOURS

Day: Tuesday
Date: 01/15/2019

AM

	Post Office Dwy Northbound						Post Office Dwy Southbound						NC-54 Eastbound						NC-54 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total			
Peak Hour Analysis from 07:00 AM to 09:00 AM																								
Peak Hour for Entire Intersection Begins at 07:15 AM																								
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	16	0	138	138			
7:30 AM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	133	7	0	140	143			
7:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	150	3	0	153	155			
8:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	112	2	0	114	115			
Total Volume	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	517	28	0	545	551			
% App. Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	94.9	5.1	0.0	100				
PHF	0.500															0.891					0.889			
Cars, PU, Vans	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	499	27	0	526	531			
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	0.0	83.3	0.0	0.0	0.0	0.0	0.0	0.0	96.5	96.4	0.0	96.5	96.4			
Heavy Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	18	1	0	19	20			
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.6	0.0	3.5	3.6			

PM

	Post Office Dwy Northbound					Post Office Dwy Southbound					NC-54 Eastbound					NC-54 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	0	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	251	5	0	256	263
5:00 PM	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	283	3	0	286	295
5:15 PM	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	356	3	0	359	363
5:30 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	272	5	0	277	280
Total Volume	0	0	0	0	0	0	0	23	0	23	0	0	0	0	0	0	1162	16	0	1178	1201
% App. Total	0.0	0.0	0.0	0.0	0	0.0	0.0	100.0	0.0	100	0.0	0.0	0.0	0.0	0	0	98.6	1.4	0.0	100	
PHF						0.639										0.820					0.827
Cars, PU, Vans	0	0	0	0	0	0	0	22	0	22	0	0	0	0	0	0	1143	15	0	1158	1180
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.7	0.0	95.7	0.0	0.0	0.0	0.0	0.0	0	98.4	93.8	0.0	98.3	98.3
Heavy Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	19	1	0	20	21
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0	1.6	6.3	0.0	1.7	1.7

Location: Post Office Dwy & NC-54
City: Carrboro

Project ID: 19-09020-002
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		Post Office Dwy		Post Office Dwy		NC-54		NC-54		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
7:00 AM	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0	
PEAK HR :	07:15 AM - 08:15 AM								TOTAL 0	
PEAK HR VOL :	0	0	0		0		0			
PEAK HR FACTOR :										

Project ID: 19-09020-002
Date: 1/15/2019

Bikes

[illegible][illegible]

Project ID: 19-09020-003

Location: NC-54 & Main St/Carrboro Plaza Dr
City: CarrboroDay: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	NC-54 Northbound						NC-54 Southbound						Main St/Carrboro Plaza Dr Eastbound						Main St/Carrboro Plaza Dr Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	5	96	8	2	0	111	28	240	3	2	0	273	2	3	8	0	0	13	31	6	6	0	0	43	440	
7:15 AM	11	118	8	3	1	140	49	273	8	5	0	335	2	3	11	0	0	16	30	12	14	0	0	56	547	
7:30 AM	8	109	6	2	0	125	53	307	5	3	0	368	1	10	11	0	0	22	43	8	23	0	0	74	589	
7:45 AM	18	116	11	1	0	146	51	221	8	0	0	280	4	8	23	0	0	35	49	5	39	0	0	93	554	
Total	42	439	33	8	1	522	181	1041	24	10	0	1256	9	24	53	0	0	86	153	31	82	0	0	266	2130	
8:00 AM	19	76	10	2	0	107	43	253	6	0	0	302	5	6	15	0	0	26	40	13	25	0	0	78	513	
8:15 AM	15	95	12	0	0	122	46	224	5	2	0	277	2	9	16	0	0	27	36	9	10	0	0	55	481	
8:30 AM	25	95	13	3	0	136	37	196	12	1	1	246	4	12	11	0	0	27	23	11	14	0	0	48	457	
8:45 AM	17	73	11	1	0	102	36	189	5	2	0	232	2	11	7	0	0	20	21	17	10	0	0	48	402	
Total	76	339	46	6	0	467	162	862	28	5	1	1057	13	38	49	0	0	100	120	50	59	0	0	229	1853	
BREAK																										
4:00 PM	58	190	12	4	0	264	29	99	1	0	0	129	12	18	9	0	0	39	22	23	39	0	0	84	516	
4:15 PM	37	169	27	2	0	235	24	94	13	0	0	131	13	27	15	0	0	55	25	29	46	0	0	100	521	
4:30 PM	50	184	22	5	1	261	35	96	2	1	0	134	20	18	17	0	0	55	20	34	62	0	0	116	566	
4:45 PM	57	192	19	3	1	271	26	111	8	0	0	145	14	23	23	0	0	60	23	25	44	0	0	92	568	
Total	202	735	80	14	2	1031	114	400	24	1	0	539	59	86	64	0	0	209	90	111	191	0	0	392	2171	
5:00 PM	46	215	23	3	0	287	28	118	8	0	0	154	10	20	13	0	0	43	22	23	59	0	0	104	588	
5:15 PM	36	301	25	1	3	363	33	133	2	1	1	169	12	33	22	0	0	67	24	26	38	0	1	88	687	
5:30 PM	45	228	30	2	0	305	22	98	5	0	0	125	8	24	15	0	0	47	26	15	35	0	0	76	553	
5:45 PM	44	191	19	3	1	257	23	106	7	0	0	136	16	27	17	0	0	60	22	24	41	0	0	87	540	
Total	171	935	97	9	4	1212	106	455	22	1	1	584	46	104	67	0	0	217	94	88	173	0	1	355	2368	
Grand Total	491	2448	256	37	7	3232	563	2758	98	17	2	3436	127	252	233	0	0	612	457	280	505	0	1	1242	8522	
Apprch %	15.2	75.7	7.9	1.1	0.2		16.4	80.3	2.9	0.5	0.1		20.8	41.2	38.1	0.0	0.0		36.8	22.5	40.7	0.0	0.1			
Total %	5.8	28.7	3.0	0.4	0.1	37.9	6.6	32.4	1.1	0.2	0.0	40.3	1.5	3.0	2.7	0.0	0.0	7.2	5.4	3.3	5.9	0.0	0.0	14.6		
Cars, PU, Vans	483	2386	245	37	7	3151	552	2685	98	2	3	3352	121	249	221	0	591		442	274	499	1	1215		8309	
% Cars, PU, Vans	98.4	97.5	95.7	100.0	100.0	97.5	98.0	97.4	100.0	0.0	100.0	97.6	95.3	98.8	94.8	0.0	0.0	96.6	96.7	97.9	98.8	0.0	100.0	97.8		97.5
Heavy Trucks	8	62	11	0		81	11	73	0	0		84	6	3	12	0	21		15	6	6	0		27		213
%Heavy Trucks	1.6	2.5	4.3	0.0	0.0	2.5	2.0	2.6	0.0	0.0	0.0	2.4	4.7	1.2	5.2	0.0	0.0	3.4	3.3	2.1	1.2	0.0	0.0	2.2		2.5

Project ID: 19-09020-003

Location: NC-54 & Main St/Carrboro Plaza Dr
City: CarrboroDay: Tuesday
Date: 01/15/2019

PEAK HOURS

AM

	NC-54 Northbound					NC-54 Southbound					Main St/Carrboro Plaza Dr Eastbound					Main St/Carrboro Plaza Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	11	118	8	3	140	49	273	8	5	335	2	3	11	0	16	30	12	14	0	56	547
7:30 AM	8	109	6	2	125	53	307	5	3	368	1	10	11	0	22	43	8	23	0	74	589
7:45 AM	18	116	11	1	146	51	221	8	0	280	4	8	23	0	35	49	5	39	0	93	554
8:00 AM	19	76	10	2	107	43	253	6	0	302	5	6	15	0	26	40	13	25	0	78	513
Total Volume	56	419	35	8	518	196	1054	27	8	1285	12	27	60	0	99	162	38	101	0	301	2203
% App. Total	10.8	80.9	6.8	1.5	100	15.3	82.0	2.1	0.6	100	12.1	27.3	60.6	0.0	100	53.8	12.6	33.6	0.0	100	
PHF	0.887					0.873					0.707					0.809					0.935
Cars, PU, Vans	56	408	32	8	504	190	1026	27	8	1251	10	27	56	0	93	160	36	96	0	292	2140
% Cars, PU, Vans	100.0	97.4	91.4	100.0	97.3	96.9	97.3	100.0	100.0	97.4	83.3	100.0	93.3	0.0	93.9	98.8	94.7	95.0	0.0	97.0	97.1
Heavy Trucks	0	11	3	0	14	6	28	0	0	34	2	0	4	0	6	2	2	5	0	9	63
%Heavy Trucks	0.0	2.6	8.6	0.0	2.7	3.1	2.7	0.0	0.0	2.6	16.7	0.0	6.7	0.0	6.1	1.2	5.3	5.0	0.0	3.0	2.9

PM

	NC-54 Northbound					NC-54 Southbound					Main St/Carrboro Plaza Dr Eastbound					Main St/Carrboro Plaza Dr Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	50	184	22	5	261	35	96	2	1	134	20	18	17	0	55	20	34	62	0	116	566
4:45 PM	57	192	19	3	271	26	111	8	0	145	14	23	23	0	60	23	25	44	0	92	568
5:00 PM	46	215	23	3	287	28	118	8	0	154	10	20	13	0	43	22	23	59	0	104	588
5:15 PM	36	301	25	1	363	33	133	2	1	169	12	33	22	0	67	24	26	38	0	88	687
Total Volume	189	892	89	12	1182	122	458	20	2	602	56	94	75	0	225	89	108	203	0	400	2409
% App. Total	16.0	75.5	7.5	1.0	100	20.3	76.1	3.3	0.3	100	24.9	41.8	33.3	0.0	100	22.3	27.0	50.8	0.0	100	
PHF	0.814					0.891					0.840					0.862					0.877
Cars, PU, Vans	188	879	86	12	1165	121	448	20	2	591	56	93	73	0	222	83	105	203	0	391	2369
% Cars, PU, Vans	99.5	98.5	96.6	100.0	98.6	99.2	97.8	100.0	100.0	98.2	100.0	98.9	97.3	0.0	98.7	93.3	97.2	100.0	0.0	97.8	98.3
Heavy Trucks	1	13	3	0	17	1	10	0	0	11	0	1	2	0	3	6	3	0	0	9	40
% Heavy Trucks	0.5	1.5	3.4	0.0	1.4	0.8	2.2	0.0	0.0	1.8	0.0	1.1	2.7	0.0	1.3	6.7	2.8	0.0	0.0	2.3	1.7

Project ID: 19-09020-003
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		NC-54		NC-54		Main St/Carrboro Plaza Dr		Main St/Carrboro Plaza Dr	
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	1	0	1	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	100.00%					
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	0	1
PEAK HR FACTOR :			0.250						0.250

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	3	0	1	0	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES :	EB 1	WB 0	EB 4	WB 2	NB 1	SB 0	NB 0	SB 0	TOTAL 8
APPROACH %'s :	100.00%	0.00%	66.67%	33.33%	100.00%	0.00%			
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	1	0	4	1	1	0	0	0	7
PEAK HR FACTOR :	0.250		0.333	0.250	0.250				0.350
	0.250		0.417		0.250				

Project ID: 19-09020-003
Date: 1/15/2019

Bikes

NS/EW Streets:	NC-54				NC-54				Main St/Carrboro Plaza Dr				Main St/Carrboro Plaza Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1.5 NT	1.5 NR	0 NU	1 SL	1.5 ST	1.5 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0 0.00%	WT 1 100.00%	WR 0 0.00%	WU 0 0.00%	TOTAL 1
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250 0.250	0.000	0.000	0.250

[illegible]

Project ID: 19-09020-004

Location: James St & Main St
City: CarrboroDay: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	James St Northbound						James St Southbound						Main St Eastbound						Main St Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App.Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	0	0	0	0	0	0	0	0	15	0	3	15	6	33	0	0	0	39	0	30	2	0	3	32	86	
7:15 AM	1	0	0	0	1	1	2	0	14	0	0	16	6	57	0	0	0	63	0	39	2	0	0	41	121	
7:30 AM	3	0	1	0	0	4	6	1	31	0	2	38	6	60	0	0	0	66	0	45	0	0	2	45	153	
7:45 AM	2	0	2	0	0	4	4	0	36	0	0	40	12	67	0	0	0	79	0	56	3	0	0	59	182	
Total	6	0	3	0	1	9	12	1	96	0	5	109	30	217	0	0	0	247	0	170	7	0	5	177	542	
8:00 AM	0	0	0	0	0	0	5	0	31	0	0	36	11	48	0	1	0	60	0	42	2	0	0	44	140	
8:15 AM	3	0	1	0	0	4	1	0	19	0	0	20	6	59	0	0	0	65	0	34	3	0	0	37	126	
8:30 AM	0	0	2	0	1	2	3	0	11	0	0	14	12	42	0	0	0	54	1	34	1	0	0	36	106	
8:45 AM	1	0	1	0	0	2	4	0	14	0	0	18	10	48	0	0	0	58	0	31	3	0	0	34	112	
Total	4	0	4	0	1	8	13	0	75	0	0	88	39	197	0	1	0	237	1	141	9	0	0	151	484	
BREAK																										
4:00 PM	0	0	1	0	3	1	5	0	21	0	0	26	8	48	2	0	1	58	0	68	3	0	0	71	156	
4:15 PM	0	0	3	0	0	3	7	0	13	0	1	20	17	54	2	0	2	73	1	79	6	0	2	86	182	
4:30 PM	3	0	0	0	1	3	3	0	19	0	2	22	15	58	1	0	0	74	1	94	7	0	1	102	201	
4:45 PM	2	0	1	0	0	3	3	0	13	0	0	16	17	58	1	0	0	76	2	83	3	0	0	88	183	
Total	5	0	5	0	4	10	18	0	66	0	3	84	57	218	6	0	3	281	4	324	19	0	3	347	722	
5:00 PM	1	0	1	0	1	2	2	0	6	0	2	8	11	37	1	0	0	49	0	86	4	0	2	90	149	
5:15 PM	0	0	1	0	2	1	4	0	17	0	0	21	25	78	2	0	0	105	1	75	4	0	1	80	207	
5:30 PM	2	0	0	0	1	2	1	0	16	0	0	17	25	46	1	0	1	72	0	62	4	0	0	66	157	
5:45 PM	1	0	0	0	0	1	0	0	9	0	0	9	16	59	2	0	0	77	4	75	4	0	0	83	170	
Total	4	0	2	0	4	6	7	0	48	0	2	55	77	220	6	0	1	303	5	298	16	0	3	319	683	
Grand Total	19	0	14	0	10	33	50	1	285	0	10	336	203	852	12	1	4	1068	10	933	51	0	11	994	2431	
Apprch %	57.6	0.0	42.4	0.0	30.3		14.9	0.3	84.8	0.0	3.0		19.0	79.8	1.1	0.1	0.4		1.0	93.9	5.1	0.0	1.1			
Total %	0.8	0.0	0.6	0.0	0.4	1.4	2.1	0.0	11.7	0.0	0.4	13.8	8.4	35.0	0.5	0.0	0.2	43.9	0.4	38.4	2.1	0.0	0.5	40.9		
Cars, PU, Vans	19	0	14	0	10	33	48	1	281	0	10	330	200	830	12	1	4	1043	10	910	49	0	11	969	2375	
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	100.0	96.0	100.0	98.6	0.0	100.0	98.2	98.5	97.4	100.0	100.0	0.0	97.7	100.0	97.5	96.1	0.0	100.0	97.5	97.7	
Heavy Trucks	0	0	0	0	0	0	2	0	4	0	0	6	3	22	0	0	0	25	0	23	2	0	0	25	56	
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	1.4	0.0	0.0	1.8	1.5	2.6	0.0	0.0	0.0	2.3	0.0	2.5	3.9	0.0	0.0	2.5	2.3	

Project ID: 19-09020-004

Location: James St & Main St
City: Carrboro

PEAK HOURS

Day: Tuesday
Date: 01/15/2019

AM

	James St Northbound						James St Southbound						Main St Eastbound						Main St Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
7:30 AM	3	0	1	0	4		6	1	31	0	38		6	60	0	0	66		0	45	0	0	45		153
7:45 AM	2	0	2	0	4		4	0	36	0	40		12	67	0	0	79		0	56	3	0	59		182
8:00 AM	0	0	0	0	0		5	0	31	0	36		11	48	0	1	60		0	42	2	0	44		140
8:15 AM	3	0	1	0	4		1	0	19	0	20		6	59	0	0	65		0	34	3	0	37		126
Total Volume	8	0	4	0	12		16	1	117	0	134		35	234	0	1	270		0	177	8	0	185		601
% App. Total	66.7	0.0	33.3	0.0	100		11.9	0.7	87.3	0.0	100		13.0	86.7	0.0	0.4	100		0.0	95.7	4.3	0.0	100		
PHF	0.750						0.838						0.854						0.784						0.826
Cars, PU, Vans	8	0	4	0	12		16	1	117	0	134		32	226	0	1	259		0	168	8	0	176		581
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0		100.0	100.0	100.0	0.0	100.0		91.4	96.6	0.0	100.0	95.9		0.0	94.9	100.0	0.0	95.1		96.7
Heavy Trucks	0	0	0	0	0		0	0	0	0	0		3	8	0	0	11		0	9	0	0	9		20
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		8.6	3.4	0.0	0.0	4.1		0.0	5.1	0.0	0.0	4.9		3.3

PM

	James St Northbound						James St Southbound						Main St Eastbound						Main St Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
4:30 PM	3	0	0	0	3		3	0	19	0	22		15	58	1	0	74		1	94	7	0	102		201
4:45 PM	2	0	1	0	3		3	0	13	0	16		17	58	1	0	76		2	83	3	0	88		183
5:00 PM	1	0	1	0	2		2	0	6	0	8		11	37	1	0	49		0	86	4	0	90		149
5:15 PM	0	0	1	0	1		4	0	17	0	21		25	78	2	0	105		1	75	4	0	80		207
Total Volume	6	0	3	0	9		12	0	55	0	67		68	231	5	0	304		4	338	18	0	360		740
% App. Total	66.7	0.0	33.3	0.0	100		17.9	0.0	82.1	0.0	100		22.4	76.0	1.6	0.0	100		1.1	93.9	5.0	0.0	100		
PHF	0.750						0.761						0.724						0.882						0.894
Cars, PU, Vans	6	0	3	0	9		11	0	52	0	63		68	226	5	0	299		4	334	17	0	355		726
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0		91.7	0.0	94.5	0.0	94.0		100.0	97.8	100.0	0.0	98.4		100.0	98.8	94.4	0.0	98.6		98.1
Heavy Trucks	0	0	0	0	0		1	0	3	0	4		0	5	0	0	5		0	4	1	0	5		14
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0		8.3	0.0	5.5	0.0	6.0		0.0	2.2	0.0	0.0	1.6		0.0	1.2	5.6	0.0	1.4		1.9

Project ID: 19-09020-004
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		James St		James St		Main St		Main St		
AM		NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
	7:00 AM	2	1	0	0	1	2	0	0	6
	7:15 AM	0	0	0	1	0	0	0	0	1
	7:30 AM	2	0	0	0	0	2	0	0	4
	7:45 AM	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	1	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :		4	1	0	2	1	4	0	0	12
		80.00%	20.00%	0.00%	100.00%	20.00%	80.00%			
PEAK HR :		07:30 AM - 08:30 AM							TOTAL	
PEAK HR VOL :		2	0	0	0	0	2	0	0	4
PEAK HR FACTOR :		0.250					0.250			0.250
		0.250				0.250				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	2	1	0	0	0	1	4
4:15 PM	0	1	0	0	1	1	1	1	5
4:30 PM	1	1	1	0	0	1	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	1	0	1	1	1	0	0	5
5:15 PM	0	0	2	0	0	1	0	0	3
5:30 PM	0	0	0	1	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 2	WB 3	EB 5	WB 3	NB 2	SB 4	NB 1	SB 3	TOTAL 23
APPROACH %'s :	40.00%	60.00%	62.50%	37.50%	33.33%	66.67%	25.00%	75.00%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	2	2	3	1	1	3	0	0	12
PEAK HR FACTOR :	0.500	0.500	0.375	0.250	0.250	0.750			0.600
	0.500		0.500		0.500				

Location: James St & Main St
City: Carrboro
Control: 2-Way Stop (NB/SB)

Project ID: 19-09020-004
Date: 1/15/2019

Bikes

NS/EW Streets:	James St				James St				Main St				Main St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	3
					100.00%	0.00%	0.00%	0.00%					0.00%	50.00%	50.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM								0	0	0	0	0	1	1	0	2
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0.250	0.250	0.000	0.500
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.500

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	3
					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM								0	0	0	0	0	0	1	0	1
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.250	0.000	0.250
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250

Project ID: 19-09020-005

Location: James St & Lorraine St/Post Office Dwy
City: CarrboroDay: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	James St Northbound						James St Southbound						Lorraine St/Post Office Dwy Eastbound						Lorraine St/Post Office Dwy Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	2	6	0	0	0	8	0	10	1	0	0	11	0	0	2	0	2	2	4	0	0	0	0	4	25	
7:15 AM	3	3	1	0	0	7	0	10	2	0	0	12	1	0	0	0	1	1	5	1	2	0	0	8	28	
7:30 AM	3	5	2	0	0	10	1	31	2	0	0	34	0	1	2	0	1	3	5	4	0	0	0	9	56	
7:45 AM	4	6	4	0	0	14	0	23	0	0	0	23	1	1	4	0	1	6	4	2	1	0	0	7	50	
Total	12	20	7	0	0	39	1	74	5	0	0	80	2	2	8	0	5	12	18	7	3	0	0	28	159	
8:00 AM	2	5	7	0	0	14	1	28	2	0	0	31	1	0	4	0	0	5	10	1	0	0	0	11	61	
8:15 AM	6	3	3	0	0	12	0	15	3	0	0	18	0	0	2	0	0	2	6	0	0	0	0	6	38	
8:30 AM	4	2	4	0	0	10	0	11	3	0	0	14	2	2	4	0	0	8	5	4	0	0	0	9	41	
8:45 AM	5	4	2	0	0	11	0	8	2	0	0	10	0	1	6	0	1	7	0	3	0	0	0	3	31	
Total	17	14	16	0	0	47	1	62	10	0	0	73	3	3	16	0	1	22	21	8	0	0	0	29	171	
BREAK																										
4:00 PM	4	6	1	0	1	11	0	8	2	0	0	10	1	2	9	0	0	12	10	1	0	0	0	11	44	
4:15 PM	11	10	1	1	0	23	0	7	2	0	0	9	1	0	8	0	4	9	3	3	0	0	1	6	47	
4:30 PM	6	9	6	0	0	21	0	10	5	0	2	15	0	1	10	0	1	11	3	2	0	0	0	5	52	
4:45 PM	7	6	4	0	0	17	1	6	2	0	2	9	4	0	5	0	1	9	3	4	0	1	0	8	43	
Total	28	31	12	1	1	72	1	31	11	0	4	43	6	3	32	0	6	41	19	10	0	1	1	30	186	
5:00 PM	4	8	4	0	0	16	0	5	4	0	1	9	2	1	2	0	2	5	3	2	0	0	0	5	35	
5:15 PM	6	17	4	0	0	27	1	10	0	0	1	11	2	1	4	0	2	7	4	1	0	0	0	5	50	
5:30 PM	1	23	7	0	0	31	0	10	2	0	0	12	1	0	4	0	1	5	7	2	0	0	0	9	57	
5:45 PM	2	13	6	0	0	21	1	4	0	0	0	5	0	2	3	0	2	5	1	0	0	0	0	1	32	
Total	13	61	21	0	0	95	2	29	6	0	2	37	5	4	13	0	7	22	15	5	0	0	0	20	174	
Grand Total	70	126	56	1	1	253	5	196	32	0	6	233	16	12	69	0	19	97	73	30	3	1	1	107	690	
Apprch %	27.7	49.8	22.1	0.4	0.4		2.1	84.1	13.7	0.0	2.6		16.5	12.4	71.1	0.0	19.6		68.2	28.0	2.8	0.9	0.9			
Total %	10.1	18.3	8.1	0.1	0.1	36.7	0.7	28.4	4.6	0.0	0.9	33.8	2.3	1.7	10.0	0.0	2.8	14.1	10.6	4.3	0.4	0.1	0.1	15.5		
Cars, PU, Vans	69	124	54	1	1	248	0	193	32		6	225	14	12	69	0	95	95	70	30	3		1	104	672	
% Cars, PU, Vans	98.6	98.4	96.4	100.0	100.0	98.0	0.0	98.5	100.0	0.0	100.0	96.6	87.5	100.0	100.0	0.0	0.0	97.9	95.9	100.0	100.0	0.0	100.0	97.2	97.4	
Heavy Trucks	1	2	2	0	0	5	5	3	0	0	0	8	2	0	0	0	2	2	3	0	0	0	0	3	18	
%Heavy Trucks	1.4	1.6	3.6	0.0	0.0	2.0	100.0	1.5	0.0	0.0	0.0	3.4	12.5	0.0	0.0	0.0	0.0	2.1	4.1	0.0	0.0	0.0	0.0	2.8	2.6	

Project ID: 19-09020-005

Location: James St & Lorraine St/Post Office Dwy
City: CarrboroDay: Tuesday
Date: 01/15/2019

PEAK HOURS

AM

	James St Northbound						James St Southbound						Lorraine St/Post Office Dwy Eastbound						Lorraine St/Post Office Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
7:30 AM	3	5	2	0	10		1	31	2	0	34		0	1	2	0	3		5	4	0	0	9		56
7:45 AM	4	6	4	0	14		0	23	0	0	23		1	1	4	0	6		4	2	1	0	7		50
8:00 AM	2	5	7	0	14		1	28	2	0	31		1	0	4	0	5		10	1	0	0	11		61
8:15 AM	6	3	3	0	12		0	15	3	0	18		0	0	2	0	2		6	0	0	0	6		38
Total Volume	15	19	16	0	50		2	97	7	0	106		2	2	12	0	16		25	7	1	0	33		205
% App. Total	30.0	38.0	32.0	0.0	100		1.9	91.5	6.6	0.0	100		12.5	12.5	75.0	0.0	100		75.8	21.2	3.0	0.0	100		
PHF	0.893						0.779						0.667						0.750						0.840
Cars, PU, Vans	15	19	14	0	48		0	97	7	0	104		1	2	12	0	15		25	7	1	0	33		200
% Cars, PU, Vans	100.0	100.0	87.5	0.0	96.0		0.0	100.0	100.0	0.0	98.1		50.0	100.0	100.0	0.0	93.8		100.0	100.0	100.0	0.0	100.0		97.6
Heavy Trucks	0	0	2	0	2		2	0	0	0	2		1	0	0	0	1		0	0	0	0	0		5
%Heavy Trucks	0.0	0.0	12.5	0.0	4.0		100.0	0.0	0.0	0.0	1.9		50.0	0.0	0.0	0.0	6.3		0.0	0.0	0.0	0.0	0.0		2.4

PM

	James St Northbound						James St Southbound						Lorraine St/Post Office Dwy Eastbound						Lorraine St/Post Office Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
4:00 PM	4	6	1	0	11		0	8	2	0	10		1	2	9	0	12		10	1	0	0	11		44
4:15 PM	11	10	1	1	23		0	7	2	0	9		1	0	8	0	9		3	3	0	0	6		47
4:30 PM	6	9	6	0	21		0	10	5	0	15		0	1	10	0	11		3	2	0	0	5		52
4:45 PM	7	6	4	0	17		1	6	2	0	9		4	0	5	0	9		3	4	0	1	8		43
Total Volume	28	31	12	1	72		1	31	11	0	43		6	3	32	0	41		19	10	0	1	30		186
% App. Total	38.9	43.1	16.7	1.4	100		2.3	72.1	25.6	0.0	100		14.6	7.3	78.0	0.0	100		63.3	33.3	0.0	3.3	100		
PHF	0.783						0.717						0.854						0.682						0.894
Cars, PU, Vans	27	31	12	1	71		0	31	11	0	42		6	3	32	0	41		18	10	0	1	29		183
% Cars, PU, Vans	96.4	100.0	100.0	100.0	98.6		0.0	100.0	100.0	0.0	97.7		100.0	100.0	100.0	0.0	100.0		94.7	100.0	0.0	100.0	96.7		98.4
Heavy Trucks	1	0	0	0	1		1	0	0	0	1		0	0	0	0	0		1	0	0	0	1		3
%Heavy Trucks	3.6	0.0	0.0	0.0	1.4		100.0	0.0	0.0	0.0	2.3		0.0	0.0	0.0	0.0	0.0		5.3	0.0	0.0	0.0	3.3		1.6

Location: James St & Lorraine St/Post Office Dwy
City: Carrboro

Project ID: 19-09020-005
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:	James St		James St		Lorraine St/Post Office Dwy		Lorraine St/Post Office Dwy		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	1	1	2
7:15 AM	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 5	SB 1	TOTAL 6
APPROACH %'s :							83.33%	16.67%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	2	0	2
PEAK HR FACTOR :							0.500	0.500	0.500

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	2	2	5
4:30 PM	2	0	0	0	0	0	1	0	3
4:45 PM	1	1	0	0	0	0	1	0	3
5:00 PM	1	0	0	0	0	0	1	1	3
5:15 PM	0	1	0	0	0	0	1	1	3
5:30 PM	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES :	EB 4	WB 2	EB 0	WB 1	NB 1	SB 0	NB 9	SB 4	TOTAL 21
APPROACH %'s :	66.67%	33.33%	0.00%	100.00%	100.00%	0.00%	69.23%	30.77%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	3	1	0	1	1	0	4	2	12
PEAK HR FACTOR :	0.375	0.250		0.250	0.250		0.500	0.250	0.600
	0.500		0.250		0.250		0.375		

Location: James St & Lorraine St/Post Office Dwy
City: Carrboro
Control: 4-Way Stop

Project ID: 19-09020-005
Date: 1/15/2019

Bikes

NS/EW Streets:	James St				James St				Lorraine St/Post Office Dwy				Lorraine St/Post Office Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375
	0.250				0.250								0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
					0.250												

Project ID: 19-09020-006

Location: James St & Carol St
City: CarrboroDay: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	James St Northbound						James St Southbound						Carol St Eastbound						Carol St Westbound								
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total		
7:00 AM	1	4	1	0	0	6	1	9	2	0	0	12	1	1	2	0	2	4	0	2	0	0	0	2	24		
7:15 AM	4	3	2	0	1	9	0	13	0	0	0	13	3	4	6	0	2	13	0	3	0	0	0	3	38		
7:30 AM	1	5	1	0	0	7	0	27	2	0	0	29	0	3	4	0	2	7	0	3	0	0	0	3	46		
7:45 AM	1	5	0	0	0	6	1	30	2	0	0	33	0	9	3	0	0	12	1	5	0	0	0	6	57		
Total	7	17	4	0	1	28	2	79	6	0	0	87	4	17	15	0	6	36	1	13	0	0	0	14	165		
8:00 AM	1	5	0	0	0	6	1	26	0	0	1	27	3	4	4	0	0	11	0	7	0	0	1	7	51		
8:15 AM	1	2	1	0	0	4	0	10	1	0	0	11	0	4	3	0	2	7	0	2	0	0	0	2	24		
8:30 AM	0	4	0	0	0	4	0	6	0	0	0	6	0	5	2	0	0	7	0	0	0	0	0	0	17		
8:45 AM	2	5	0	0	0	7	0	5	0	0	0	5	0	4	3	0	0	7	1	1	0	0	0	2	21		
Total	4	16	1	0	0	21	1	47	1	0	1	49	3	17	12	0	2	32	1	10	0	0	1	11	113		
BREAK																											
4:00 PM	1	7	1	0	0	9	0	6	0	0	0	6	2	0	2	0	1	4	1	2	0	0	0	3	22		
4:15 PM	2	7	1	0	0	10	0	7	2	0	0	9	1	2	1	0	1	4	0	4	0	0	0	4	27		
4:30 PM	2	6	0	0	2	8	0	10	0	0	0	10	0	2	4	0	2	6	1	14	1	0	0	16	40		
4:45 PM	4	8	0	0	1	12	1	5	0	0	1	6	1	3	2	0	0	6	1	5	3	0	0	9	33		
Total	9	28	2	0	3	39	1	28	2	0	1	31	4	7	9	0	4	20	3	25	4	0	0	32	122		
5:00 PM	1	9	0	0	0	10	0	8	0	0	0	8	0	2	2	0	2	4	0	2	0	0	0	2	24		
5:15 PM	2	13	1	0	1	16	0	7	0	0	0	7	0	1	3	0	1	4	1	2	0	0	1	3	30		
5:30 PM	4	19	0	0	0	23	0	7	1	0	1	8	0	1	3	0	2	4	2	2	0	0	0	4	39		
5:45 PM	0	11	0	0	0	11	0	6	1	0	1	7	1	4	1	0	1	6	0	2	0	0	0	2	26		
Total	7	52	1	0	1	60	0	28	2	0	2	30	1	8	9	0	6	18	3	8	0	0	1	11	119		
Grand Total	27	113	8	0	5	148	4	182	11	0	4	197	12	49	45	0	18	106	8	56	4	0	2	68	519		
Apprch %	18.2	76.4	5.4	0.0	3.4		2.0	92.4	5.6	0.0	2.0		11.3	46.2	42.5	0.0	17.0		11.8	82.4	5.9	0.0	2.9				
Total %	5.2	21.8	1.5	0.0	1.0	28.5	0.8	35.1	2.1	0.0	0.8	38.0	2.3	9.4	8.7	0.0	3.5	20.4	1.5	10.8	0.8	0.0	0.4	13.1			
Cars, PU, Vans	27	110	7	0	5	144	4	180	11		4	195	11	45	39	0		95	8	54	3		2	65	499		
% Cars, PU, Vans	100.0	97.3	87.5	0.0	100.0	97.3	100.0	98.9	100.0	0.0	100.0	99.0	91.7	91.8	86.7	0.0	0.0	89.6	100.0	96.4	75.0	0.0	100.0	95.6	96.1		
Heavy Trucks	0	3	1	0	0	4	0	2	0	0	0	2	1	4	6	0	0	11	0	2	1	0	0	3	20		
%Heavy Trucks	0.0	2.7	12.5	0.0	0.0	2.7	0.0	1.1	0.0	0.0	0.0	1.0	8.3	8.2	13.3	0.0	0.0	10.4	0.0	3.6	25.0	0.0	0.0	4.4	3.9		

Project ID: 19-09020-006

Location: James St & Carol St
City: Carrboro

PEAK HOURS

Day: Tuesday
Date: 01/15/2019

AM

	James St Northbound					James St Southbound					Carol St Eastbound					Carol St Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	4	3	2	0	9	0	13	0	0	13	3	4	6	0	13	0	3	0	0	3	38
7:30 AM	1	5	1	0	7	0	27	2	0	29	0	3	4	0	7	0	3	0	0	3	46
7:45 AM	1	5	0	0	6	1	30	2	0	33	0	9	3	0	12	1	5	0	0	6	57
8:00 AM	1	5	0	0	6	1	26	0	0	27	3	4	4	0	11	0	7	0	0	7	51
Total Volume	7	18	3	0	28	2	96	4	0	102	6	20	17	0	43	1	18	0	0	19	192
% App. Total	25.0	64.3	10.7	0.0	100	2.0	94.1	3.9	0.0	100	14.0	46.5	39.5	0.0	100	5.3	94.7	0.0	0.0	100	
PHF	0.778					0.773					0.827					0.679					0.842
Cars, PU, Vans	7	16	2	0	25	2	96	4	0	102	6	19	15	0	40	1	16	0	0	17	184
% Cars, PU, Vans	100.0	88.9	66.7	0.0	89.3	100.0	100.0	100.0	0.0	100.0	100.0	95.0	88.2	0.0	93.0	100.0	88.9	0.0	0.0	89.5	95.8
Heavy Trucks	0	2	1	0	3	0	0	0	0	0	0	1	2	0	3	0	2	0	0	2	8
%Heavy Trucks	0.0	11.1	33.3	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0	5.0	11.8	0.0	7.0	0.0	11.1	0.0	0.0	10.5	4.2

PM

	James St Northbound					James St Southbound					Carol St Eastbound					Carol St Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	2	6	0	0	8	0	10	0	0	10	0	2	4	0	6	1	14	1	0	16	40
4:45 PM	4	8	0	0	12	1	5	0	0	6	1	3	2	0	6	1	5	3	0	9	33
5:00 PM	1	9	0	0	10	0	8	0	0	8	0	2	2	0	4	0	2	0	0	2	24
5:15 PM	2	13	1	0	16	0	7	0	0	7	0	1	3	0	4	1	2	0	0	3	30
Total Volume	9	36	1	0	46	1	30	0	0	31	1	8	11	0	20	3	23	4	0	30	127
% App. Total	19.6	78.3	2.2	0.0	100	3.2	96.8	0.0	0.0	100	5.0	40.0	55.0	0.0	100	10.0	76.7	13.3	0.0	100	
PHF	0.719					0.775					0.833					0.469					0.794
Cars, PU, Vans	9	36	1	0	46	1	28	0	0	29	1	8	8	0	17	3	23	3	0	29	121
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	93.3	0.0	0.0	93.5	100.0	100.0	72.7	0.0	85.0	100.0	100.0	75.0	0.0	96.7	95.3
Heavy Trucks	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	0	0	1	0	1	6
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	6.5	0.0	0.0	27.3	0.0	15.0	0.0	0.0	25.0	0.0	3.3	4.7

Project ID: 19-09020-006
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		James St		James St		Carol St		Carol St		
AM		NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
	7:00 AM	0	0	0	0	0	0	0	2	2
	7:15 AM	0	0	1	0	0	0	2	0	3
	7:30 AM	0	0	0	0	0	0	0	2	2
	7:45 AM	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	0	2
	8:15 AM	0	0	0	0	0	0	0	2	2
	8:30 AM	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0
		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :		0	1	1	0	1	0	2	6	11
APPROACH %'s :		0.00%	100.00%	100.00%	0.00%	100.00%	0.00%	25.00%	75.00%	
PEAK HR :		07:15 AM - 08:15 AM							TOTAL	
PEAK HR VOL :		0	1	1	0	1	0	2	2	7
PEAK HR FACTOR :		0.250		0.250		0.250		0.250	0.250	0.583
		0.250		0.250		0.250		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	2	0	0	1	1	4
4:45 PM	1	0	1	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	2	2
5:15 PM	0	0	1	0	1	0	1	0	3
5:30 PM	0	1	0	0	0	0	2	0	3
5:45 PM	1	0	0	0	0	0	1	0	2
TOTAL VOLUMES :	EB 2	WB 1	EB 2	WB 2	NB 1	SB 0	NB 7	SB 3	TOTAL 18
APPROACH %'s :	66.67%	33.33%	50.00%	50.00%	100.00%	0.00%	70.00%	30.00%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	1	0	2	2	1	0	2	3	11
PEAK HR FACTOR :	0.250		0.500	0.250	0.250		0.500	0.375	0.688
	0.250		0.500		0.250		0.625		

Location: James St & Carol St
City: Carrboro
Control: 4-Way Stop

Project ID: 19-09020-006
Date: 1/15/2019

Bikes

NS/EW Streets:	James St				James St				Carol St				Carol St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL 1	NT 1	NR 0	NU 0	SL 0	ST 1	SR 1	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 1	WR 0	WU 0	TOTAL 5
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL 3
PEAK HR VOL :	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
PEAK HR FACTOR :	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.750
	0.500												0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL 0	NT 1	NR 0	NU 0	SL 0	ST 1	SR 0	SU 0	EL 0	ET 0	ER 1	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL 2
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250				0.250												

Project ID: 19-09020-007
Location: Lisa Dr & Carol St
City: Carrboro

Day: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Lisa Dr Northbound						Lisa Dr Southbound						Carol St Eastbound						Carol St Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	0	0	0	0	0	0	1	0	2	0	0	3	1	3	0	0	0	4	0	5	0	0	0	5	12	
7:15 AM	0	0	0	0	0	0	2	0	4	0	1	6	1	10	0	0	0	11	0	9	0	0	0	9	26	
7:30 AM	0	0	0	0	0	0	0	0	2	0	1	2	0	9	0	0	1	9	0	5	0	0	0	5	16	
7:45 AM	0	0	0	0	0	0	2	0	4	0	0	6	1	6	0	0	0	7	0	9	0	0	0	9	22	
Total	0	0	0	0	0	0	5	0	12	0	2	17	3	28	0	0	1	31	0	28	0	0	0	28	76	
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	10	0	0	0	11	0	5	2	0	0	7	19	
8:15 AM	0	0	0	0	0	0	2	0	3	0	0	5	0	3	0	0	0	3	0	5	1	0	0	6	14	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	11	0	2	0	0	0	2	13	
8:45 AM	0	0	0	0	0	0	1	0	1	0	0	2	1	4	0	0	0	5	0	1	0	0	0	1	8	
Total	0	0	0	0	0	0	3	0	5	0	0	8	3	27	0	0	0	30	0	13	3	0	0	16	54	
BREAK																										
4:00 PM	0	0	0	0	0	0	0	0	1	0	3	1	0	4	0	0	0	4	0	3	0	0	0	3	8	
4:15 PM	0	0	0	0	0	0	0	0	1	0	1	1	0	5	0	0	0	5	0	7	0	0	0	7	13	
4:30 PM	0	0	0	0	0	0	1	0	3	0	2	4	4	4	0	0	1	8	0	16	0	0	1	16	28	
4:45 PM	0	0	0	0	0	0	0	0	1	0	4	1	2	9	0	0	0	11	0	4	3	0	2	7	19	
Total	0	0	0	0	0	0	1	0	6	0	10	7	6	22	0	0	1	28	0	30	3	0	3	33	68	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	3	0	0	0	3	6	
5:15 PM	0	0	0	0	0	0	2	0	0	0	2	2	0	3	0	0	0	3	0	4	1	0	2	5	10	
5:30 PM	0	0	0	0	0	0	1	0	3	0	1	4	3	1	0	0	0	4	0	3	2	0	1	5	13	
5:45 PM	0	0	0	0	0	0	0	0	6	0	0	6	1	6	0	0	0	7	0	3	0	0	0	3	16	
Total	0	0	0	0	0	0	3	0	9	0	3	12	4	13	0	0	0	17	0	13	3	0	3	16	45	
Grand Total	0	0	0	0	0	0	12	0	32	0	15	44	16	90	0	0	2	106	0	84	9	0	6	93	243	
Apprch %	0.0	0.0	0.0	0.0	0.0	0.0	27.3	0.0	72.7	0.0	34.1	15.1	84.9	0.0	0.0	1.9	0.0	90.3	9.7	0.0	6.5	0.0	2.5	38.3		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	13.2	0.0	6.2	18.1	6.6	37.0	0.0	0.0	0.8	43.6	0.0	34.6	3.7	0.0	2.5	38.3		
Cars, PU, Vans	0	0	0	0	0	0	11	0	31	0	15	42	15	80	0	0	0	95	0	83	8	0	6	91	228	
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	91.7	0.0	96.9	0.0	100.0	95.5	93.8	88.9	0.0	0.0	0.0	89.6	0.0	98.8	88.9	0.0	100.0	97.8	93.8	
Heavy Trucks	0	0	0	0	0	0	1	0	1	0	2	2	1	10	0	0	0	11	0	1	1	0	0	2	15	
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	3.1	0.0	0.0	4.5	6.3	11.1	0.0	0.0	0.0	10.4	0.0	1.2	11.1	0.0	0.0	2.2	6.2	

Project ID: 19-09020-007
Location: Lisa Dr & Carol St
City: Carrboro

PEAK HOURS

Day: Tuesday
Date: 01/15/2019

AM

	Lisa Dr Northbound					Lisa Dr Southbound					Carol St Eastbound					Carol St Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	0	0	0	0	2	0	4	0	6	1	10	0	0	11	0	9	0	0	9	26
7:30 AM	0	0	0	0	0	0	0	2	0	2	0	9	0	0	9	0	5	0	0	5	16
7:45 AM	0	0	0	0	0	2	0	4	0	6	1	6	0	0	7	0	9	0	0	9	22
8:00 AM	0	0	0	0	0	0	0	1	0	1	1	10	0	0	11	0	5	2	0	7	19
Total Volume	0	0	0	0	0	4	0	11	0	15	3	35	0	0	38	0	28	2	0	30	83
% App. Total	0.0	0.0	0.0	0.0	0	26.7	0.0	73.3	0.0	100	7.9	92.1	0.0	0.0	100	0.0	93.3	6.7	0.0	100	
PHF						0.625					0.864					0.833					0.798
Cars, PU, Vans	0	0	0	0	0	4	0	11	0	15	3	32	0	0	35	0	27	1	0	28	78
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	91.4	0.0	0.0	92.1	0.0	96.4	50.0	0.0	93.3	94.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	5
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	7.9	0.0	3.6	50.0	0.0	6.7	6.0

PM

	Lisa Dr Northbound						Lisa Dr Southbound						Carol St Eastbound						Carol St Westbound						
Start Time	Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Left	Thru	Rgt	Uturn	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
4:00 PM	0	0	0	0	0		0	0	1	0	1		0	4	0	0	4		0	3	0	0	3		8
4:15 PM	0	0	0	0	0		0	0	1	0	1		0	5	0	0	5		0	7	0	0	7		13
4:30 PM	0	0	0	0	0		1	0	3	0	4		4	4	0	0	8		0	16	0	0	16		28
4:45 PM	0	0	0	0	0		0	0	1	0	1		2	9	0	0	11		0	4	3	0	7		19
Total Volume	0	0	0	0	0		1	0	6	0	7		6	22	0	0	28		0	30	3	0	33		68
% App. Total	0.0	0.0	0.0	0.0	0		14.3	0.0	85.7	0.0	100		21.4	78.6	0.0	0.0	100		0.0	90.9	9.1	0.0	100		
PHF							0.438						0.636						0.516						0.607
Cars, PU, Vans	0	0	0	0	0		1	0	5	0	6		5	20	0	0	25		0	30	3	0	33		64
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0		100.0	0.0	83.3	0.0	85.7		83.3	90.9	0.0	0.0	89.3		0.0	100.0	100.0	0.0	100.0		94.1
Heavy Trucks	0	0	0	0	0		0	0	1	0	1		1	2	0	0	3		0	0	0	0	0		4
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0		0.0	0.0	16.7	0.0	14.3		16.7	9.1	0.0	0.0	10.7		0.0	0.0	0.0	0.0	0.0		5.9

Location: Lisa Dr & Carol St
City: Carrboro

Project ID: 19-09020-007
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		Lisa Dr		Lisa Dr		Carol St		Carol St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
7:00 AM	0	0	0	0	0	0	0	0	0	
7:15 AM	0	1	0	0	0	0	0	0	1	
7:30 AM	0	1	0	0	0	0	0	1	2	
7:45 AM	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :		EB 0	WB 2	EB 0	WB 0	NB 0	SB 0	NB 0	SB 1	TOTAL 3
APPROACH %'s :		0.00%	100.00%					0.00%	100.00%	
PEAK HR :		07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :		0	2	0	0	0	0	0	1	3
PEAK HR FACTOR :		0.500						0.250		0.375
		0.500						0.250		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	3	0	0	0	0	0	0	0	3
4:15 PM	1	0	0	0	0	0	0	0	1
4:30 PM	1	1	0	0	1	0	1	0	4
4:45 PM	2	2	0	0	2	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	2	0	0	2	0	0	0	4
5:30 PM	1	0	0	0	1	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 8	WB 5	EB 0	WB 0	NB 6	SB 0	NB 1	SB 0	TOTAL 20
APPROACH %'s :	61.54%	38.46%			100.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	7	3	0	0	3	0	1	0	14
PEAK HR FACTOR :	0.583	0.375			0.375		0.250		0.583
	0.625				0.375		0.250		

Project ID: 19-09020-007
Date: 1/15/2019

Bikes

NS/EW Streets:	Lisa Dr				Lisa Dr				Carol St				Carol St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 2	WU 0	TOTAL 2
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:15 AM - 08:15 AM																TOTAL 2
	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	2 0.500	0 0.000	0.500

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 1	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 1	WU 0	TOTAL 2	
PEAK HR :					04:00 PM - 05:00 PM													TOTAL 1 0.250
PEAK HR VOL :					100.00% 0.00% 0.00% 0.00%													
PEAK HR FACTOR :					0.00 0.000 0.000 0.000 0.250 0.000 0.000 0.000 0.000 0.000 0.000 0.000													

Project ID: 19-09020-008

Location: Old Fayetteville Rd & Carol St
City: CarrboroDay: Tuesday
Date: 01/15/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Old Fayetteville Rd Northbound						Old Fayetteville Rd Southbound						Carol St Eastbound						Carol St Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	0	81	2	0	0	83	3	68	0	0	0	71	0	0	0	0	0	0	4	0	3	0	0	7	161	
7:15 AM	0	147	5	0	0	152	5	115	0	0	0	120	0	0	0	0	0	0	1	0	13	0	0	14	286	
7:30 AM	0	169	3	0	0	172	5	139	0	0	0	144	0	0	0	0	0	0	2	0	5	0	0	7	323	
7:45 AM	0	149	3	0	0	152	5	134	0	0	0	139	0	0	0	0	0	0	7	0	7	0	0	14	305	
Total	0	546	13	0	0	559	18	456	0	0	0	474	0	0	0	0	0	0	14	0	28	0	0	42	1075	
8:00 AM	0	123	4	0	0	127	4	119	0	0	2	123	0	0	0	0	0	0	1	0	6	0	0	7	257	
8:15 AM	0	88	2	0	0	90	2	108	0	0	0	110	0	0	0	0	0	0	6	0	2	0	0	8	208	
8:30 AM	0	87	4	0	0	91	4	116	0	0	0	120	0	0	0	0	0	0	0	0	2	0	0	2	213	
8:45 AM	0	69	2	0	0	71	3	95	0	0	0	98	0	0	0	0	0	0	1	0	1	0	0	2	171	
Total	0	367	12	0	0	379	13	438	0	0	2	451	0	0	0	0	0	0	8	0	11	0	0	19	849	
BREAK																										
4:00 PM	0	103	2	0	0	105	3	99	0	0	0	102	0	0	0	0	0	0	3	0	2	0	1	5	212	
4:15 PM	0	106	2	0	2	108	2	100	0	0	0	102	0	0	0	0	0	0	7	0	2	0	1	9	219	
4:30 PM	0	84	5	0	0	89	2	107	0	0	0	109	0	0	0	0	0	0	13	0	4	0	0	17	215	
4:45 PM	0	121	5	0	0	126	6	89	0	0	0	95	0	0	0	0	0	0	3	0	1	0	0	4	225	
Total	0	414	14	0	2	428	13	395	0	0	0	408	0	0	0	0	0	0	26	0	9	0	2	35	871	
5:00 PM	0	111	0	0	0	111	3	117	0	0	0	120	0	0	0	0	0	0	2	0	1	0	4	3	234	
5:15 PM	0	166	1	0	0	167	3	114	0	0	0	117	0	0	0	0	0	0	3	0	1	0	3	4	288	
5:30 PM	0	141	4	0	0	145	1	131	0	0	0	132	0	0	0	0	0	0	5	0	1	0	1	6	283	
5:45 PM	0	110	5	0	0	115	3	124	0	0	0	127	0	0	0	0	0	0	5	0	3	0	1	8	250	
Total	0	528	10	0	0	538	10	486	0	0	0	496	0	0	0	0	0	0	15	0	6	0	9	21	1055	
Grand Total	0	1855	49	0	2	1904	54	1775	0	0	2	1829	0	0	0	0	0	0	63	0	54	0	11	117	3850	
Apprch %	0.0	97.4	2.6	0.0	0.1		3.0	97.0	0.0	0.0	0.1		0.0	0.0	0.0	0.0	0.0		53.8	0.0	46.2	0.0	9.4			
Total %	0.0	48.2	1.3	0.0	0.1	49.5	1.4	46.1	0.0	0.0	0.1	47.5	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.4	0.0	0.3	3.0		
Cars, PU, Vans	0	1778	49	0	2	1827	43	1702	0	0	2	1745	0	0	0	0	0	0	63	0	52		11	115	3687	
% Cars, PU, Vans	0.0	95.8	100.0	0.0	100.0	96.0	79.6	95.9	0.0	0.0	100.0	95.4	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	96.3	0.0	100.0	98.3	95.8	
Heavy Trucks	0	77	0	0		77	11	73	0	0		84	0	0	0	0	0	0	0	0	2	0		2	163	
%Heavy Trucks	0.0	4.2	0.0	0.0	0.0	4.0	20.4	4.1	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	1.7	4.2	

Project ID: 19-09020-008

Location: Old Fayetteville Rd & Carol St
City: Carrboro

PEAK HOURS

Day: Tuesday
Date: 01/15/2019

AM

	Old Fayetteville Rd Northbound					Old Fayetteville Rd Southbound					Carol St Eastbound					Carol St Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	147	5	0	152	5	115	0	0	120	0	0	0	0	0	1	0	13	0	14	286
7:30 AM	0	169	3	0	172	5	139	0	0	144	0	0	0	0	0	2	0	5	0	7	323
7:45 AM	0	149	3	0	152	5	134	0	0	139	0	0	0	0	0	7	0	7	0	14	305
8:00 AM	0	123	4	0	127	4	119	0	0	123	0	0	0	0	0	1	0	6	0	7	257
Total Volume	0	588	15	0	603	19	507	0	0	526	0	0	0	0	0	11	0	31	0	42	1171
% App. Total	0.0	97.5	2.5	0.0	100	3.6	96.4	0.0	0.0	100	0.0	0.0	0.0	0.0	0	26.2	0.0	73.8	0.0	100	
PHF	0.876					0.913										0.750					0.906
Cars, PU, Vans	0	561	15	0	576	16	476	0	0	492	0	0	0	0	0	11	0	30	0	41	1109
% Cars, PU, Vans	0.0	95.4	100.0	0.0	95.5	84.2	93.9	0.0	0.0	93.5	0.0	0.0	0.0	0.0	0.0	100.0	0.0	96.8	0.0	97.6	94.7
Heavy Trucks	0	27	0	0	27	3	31	0	0	34	0	0	0	0	0	0	0	1	0	1	62
%Heavy Trucks	0.0	4.6	0.0	0.0	4.5	15.8	6.1	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	2.4	5.3

PM

	Old Fayetteville Rd Northbound					Old Fayetteville Rd Southbound					Carol St Eastbound					Carol St Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	111	0	0	111	3	117	0	0	120	0	0	0	0	0	2	0	1	0	3	234
5:15 PM	0	166	1	0	167	3	114	0	0	117	0	0	0	0	0	3	0	1	0	4	288
5:30 PM	0	141	4	0	145	1	131	0	0	132	0	0	0	0	0	5	0	1	0	6	283
5:45 PM	0	110	5	0	115	3	124	0	0	127	0	0	0	0	0	5	0	3	0	8	250
Total Volume	0	528	10	0	538	10	486	0	0	496	0	0	0	0	0	15	0	6	0	21	1055
% App. Total	0.0	98.1	1.9	0.0	100	2.0	98.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0	71.4	0.0	28.6	0.0	100	
PHF	0.805					0.939										0.656					0.916
Cars, PU, Vans	0	516	10	0	526	8	476	0	0	484	0	0	0	0	0	15	0	6	0	21	1031
% Cars, PU, Vans	0.0	97.7	100.0	0.0	97.8	80.0	97.9	0.0	0.0	97.6	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	97.7
Heavy Trucks	0	12	0	0	12	2	10	0	0	12	0	0	0	0	0	0	0	0	0	0	24
%Heavy Trucks	0.0	2.3	0.0	0.0	2.2	20.0	2.1	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3

Project ID: 19-09020-008
Date: 1/15/2019

Pedestrians (Crosswalks)

NS/EW Streets:		Old Fayetteville Rd		Old Fayetteville Rd		Carol St		Carol St		
AM		NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
		EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	2	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :		0	2	0	0	0	0	0	0	2
PEAK HR :		07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :		0	2	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.250								0.250

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	2	0	1	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	3	0	0	4
5:15 PM	0	0	0	0	0	3	0	0	3
5:30 PM	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	EB 0	WB 0	EB 2	WB 0	NB 3	SB 8	NB 0	SB 0	TOTAL 13
APPROACH %'s :			100.00%	0.00%	27.27%	72.73%			
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	0		0		1		0		9
PEAK HR FACTOR :					0.250		0.667		0.563

Project ID: 19-09020-008
Date: 1/15/2019

Bikes

[illegible][illegible]

VOLUME

James St N/O Lorraine St

Day: Tuesday
Date: 1/15/2019

City: Carrboro
Project #: NC19_9021_002

DAILY TOTALS					NB	SB						EB	WB	Total
					491	614						0	0	1,105
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0	0	0	0	12:00	4	7	0	0	11			
00:15	0	1	0	0	1	12:15	13	11	0	0	24			
00:30	1	0	0	0	1	12:30	12	9	0	0	21			
00:45	0	1	0	1	0	12:45	6	35	15	42	21			
01:00	0	0	0	0	0	13:00	4	9	0	0	13			
01:15	0	0	0	0	0	13:15	10	12	0	0	22			
01:30	0	0	0	0	0	13:30	4	13	0	0	17			
01:45	0	0	0	0	0	13:45	4	22	10	44	14			
02:00	1	1	0	0	2	14:00	14	7	0	0	21			
02:15	0	0	0	0	0	14:15	7	8	0	0	15			
02:30	0	0	0	0	0	14:30	11	10	0	0	21			
02:45	0	1	0	1	0	14:45	13	45	11	36	24			
03:00	1	0	0	0	1	15:00	10	9	0	0	19			
03:15	0	1	0	0	1	15:15	14	17	0	0	31			
03:30	0	0	0	0	0	15:30	13	11	0	0	24			
03:45	0	1	0	1	0	15:45	10	47	6	43	16			
04:00	0	0	0	0	0	16:00	11	12	0	0	23			
04:15	0	0	0	0	0	16:15	8	10	0	0	18			
04:30	0	1	0	0	1	16:30	8	10	0	0	18			
04:45	0	0	1	0	0	16:45	12	39	10	42	22			
05:00	0	0	0	0	0	17:00	9	11	0	0	20			
05:15	1	4	0	0	5	17:15	17	11	0	0	28			
05:30	1	2	0	0	3	17:30	22	12	0	0	34			
05:45	0	2	3	9	0	17:45	10	58	4	38	14			
06:00	0	3	0	0	3	18:00	17	12	0	0	29			
06:15	2	4	0	0	6	18:15	16	6	0	0	22			
06:30	3	5	0	0	8	18:30	11	9	0	0	20			
06:45	2	7	2	14	4	18:45	6	50	9	36	15			
07:00	3	8	0	0	11	19:00	10	9	0	0	19			
07:15	7	18	0	0	25	19:15	14	4	0	0	18			
07:30	9	32	0	0	41	19:30	3	5	0	0	8			
07:45	4	23	32	90	36	19:45	3	30	3	21	6			
08:00	8	27	0	0	35	20:00	10	2	0	0	12			
08:15	4	19	0	0	23	20:15	5	4	0	0	9			
08:30	2	7	0	0	9	20:30	2	4	0	0	6			
08:45	8	22	12	65	20	20:45	8	25	3	13	11			
09:00	2	13	0	0	15	21:00	4	0	0	0	4			
09:15	1	17	0	0	18	21:15	0	0	0	0	0			
09:30	2	9	0	0	11	21:30	2	2	0	0	4			
09:45	1	6	9	48	10	21:45	3	9	1	3	4			
10:00	3	8	0	0	11	22:00	3	0	0	0	3			
10:15	5	2	0	0	7	22:15	4	1	0	0	5			
10:30	8	13	0	0	21	22:30	0	0	0	0	0			
10:45	5	21	8	31	13	22:45	2	9	0	1	2			
11:00	2	14	0	0	16	23:00	2	0	0	0	2			
11:15	9	3	0	0	12	23:15	6	1	0	0	7			
11:30	7	7	0	0	14	23:30	7	0	0	0	7			
11:45	4	22	8	32	12	23:45	1	16	1	2	2			
TOTALS	106	293			399	TOTALS	385	321			706			
SPLIT %	26.6%	73.4%			36.1%	SPLIT %	54.5%	45.5%			63.9%			

DAILY TOTALS					NB	SB						EB	WB	Total
					491	614						0	0	1,105
AM Peak Hour	11:45	07:30				07:15	PM Peak Hour	17:15	12:45				17:15	
AM Pk Volume	33	110				137	PM Pk Volume	66	49				105	
PK Hr Factor	0.635	0.859				0.835	PK Hr Factor	0.750	0.817				0.772	
7 - 9 Volume	45	155	0	0	200		4 - 6 Volume	97	80	0	0		177	
7 - 9 Peak Hour	07:15	07:30			07:15		4 - 6 Peak Hour	16:45	16:45				16:45	
7 - 9 Pk Volume	28	110	0	0	137		Volume	60	44	0	0		104	
PK Hr Factor	0.778	0.859	0.000	0.000	0.835		PK Hr Factor	0.682	0.917	0.000	0.000		0.765	

VOLUME

James St N/O Lorraine St

Day: Thursday
Date: 1/24/2019

City: Carrboro
Project #: NC19_9021_002

DAILY TOTALS					NB	SB						EB	WB	Total
					522	649						0	0	1,171
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0	0	0	0	12:00	6	13	0	0	19			
00:15	0	1	0	0	1	12:15	13	5	0	0	18			
00:30	0	0	0	0	0	12:30	11	12	0	0	23			
00:45	0	0	1	0	0	12:45	10	40	7	37	17			
01:00	0	0	0	0	0	13:00	9	14	0	0	23			
01:15	1	1	0	0	2	13:15	6	11	0	0	17			
01:30	0	0	0	0	0	13:30	10	12	0	0	22			
01:45	1	2	0	1	0	13:45	8	33	7	44	15			
02:00	0	0	0	0	0	14:00	10	9	0	0	19			
02:15	0	0	0	0	0	14:15	15	15	0	0	30			
02:30	0	0	0	0	0	14:30	10	15	0	0	25			
02:45	0	0	0	0	0	14:45	10	45	18	57	28			
03:00	0	1	0	0	1	15:00	12	11	0	0	23			
03:15	0	0	0	0	0	15:15	13	9	0	0	22			
03:30	0	1	0	0	1	15:30	7	12	0	0	19			
03:45	0	1	3	0	0	15:45	7	39	9	41	16			
04:00	0	0	0	0	0	16:00	10	13	0	0	23			
04:15	0	1	0	0	1	16:15	10	7	0	0	17			
04:30	1	0	0	0	1	16:30	10	12	0	0	22			
04:45	0	1	0	1	0	16:45	15	45	12	44	27			
05:00	0	1	0	0	1	17:00	10	6	0	0	16			
05:15	0	0	0	0	0	17:15	22	11	0	0	33			
05:30	0	3	0	0	3	17:30	19	11	0	0	30			
05:45	0	2	6	0	2	17:45	19	70	12	40	31			
06:00	0	2	0	0	2	18:00	12	15	0	0	27			
06:15	2	2	0	0	4	18:15	5	9	0	0	14			
06:30	1	5	0	0	6	18:30	17	8	0	0	25			
06:45	0	3	10	19	0	18:45	7	41	11	43	18			
07:00	4	4	0	0	8	19:00	6	7	0	0	13			
07:15	5	14	0	0	19	19:15	15	4	0	0	19			
07:30	7	37	0	0	44	19:30	7	5	0	0	12			
07:45	5	21	29	84	0	19:45	5	33	3	19	8			
08:00	5	31	0	0	36	20:00	8	2	0	0	10			
08:15	6	21	0	0	27	20:15	12	1	0	0	13			
08:30	5	12	0	0	17	20:30	6	1	0	0	7			
08:45	1	17	9	73	0	20:45	5	31	1	5	6			
09:00	4	9	0	0	13	21:00	6	3	0	0	9			
09:15	3	15	0	0	18	21:15	3	2	0	0	5			
09:30	6	12	0	0	18	21:30	4	5	0	0	9			
09:45	6	19	3	39	0	21:45	3	16	0	10	3			
10:00	7	6	0	0	13	22:00	3	5	0	0	8			
10:15	2	10	0	0	12	22:15	3	0	0	0	3			
10:30	7	7	0	0	14	22:30	4	2	0	0	6			
10:45	4	20	8	31	0	22:45	2	12	1	8	3			
11:00	12	14	0	0	26	23:00	1	0	0	0	1			
11:15	7	8	0	0	15	23:15	1	1	0	0	2			
11:30	2	9	0	0	11	23:30	3	1	0	0	4			
11:45	6	27	9	40	0	23:45	2	7	1	3	3			
TOTALS	110	298		74	408	TOTALS	412	351			763			
SPLIT %	27.0%	73.0%		18.1%	34.8%	SPLIT %	54.0%	46.0%			65.2%			

DAILY TOTALS					NB	SB						EB	WB	Total
					522	649						0	0	1,171
AM Peak Hour	11:45	07:30					PM Peak Hour	17:15	14:15					17:15
AM Pk Volume	36	118				141	PM Pk Volume	72	59					121
PK Hr Factor	0.692	0.797				0.801	PK Hr Factor	0.818	0.819					0.917
7 - 9 Volume	38	157	0	0	195		4 - 6 Volume	115	84	0	0			199
7 - 9 Peak Hour	07:30	07:30			07:30		4 - 6 Peak Hour	17:00	16:00					17:00
7 - 9 Pk Volume	23	118	0	0	141		4 - 6 Pk Volume	70	44	0	0			110
PK Hr Factor	0.821	0.797	0.000	0.000	0.801		PK Hr Factor	0.795	0.846	0.000	0.000			0.833

VOLUME

James St N/O Lorraine St

Day: Tuesday & Thursday
Date: 1/15/2019 & 1/24/2019

City: Carrboro
Project #: NC19_9021_002

DAILY TOTALS					NB	SB					EB	WB	Total
					527	654					0	0	1,181
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL		
00:00	0	0			0	12:00	5	10			15		
00:15	0	1			1	12:15	13	8			21		
00:30	1	0			1	12:30	12	11			23		
00:45	0	1	0	1	0	12:45	8	38	11	40	19	78	
01:00	0	0			0	13:00	7	12			19		
01:15	1	1			2	13:15	8	12			20		
01:30	0	0			0	13:30	7	13			20		
01:45	1	2	0	1	1	13:45	6	28	9	46	15	74	
02:00	1	1			2	14:00	12	8			20		
02:15	0	0			0	14:15	11	12			23		
02:30	0	0			0	14:30	11	13			24		
02:45	0	1	0	1	0	14:45	12	46	15	48	27	94	
03:00	1	1			2	15:00	11	10			21		
03:15	0	1			1	15:15	14	13			27		
03:30	0	1			1	15:30	10	12			22		
03:45	0	1	1	4	1	15:45	9	44	8	43	17	87	
04:00	0	0			0	16:00	11	13			24		
04:15	0	1			1	16:15	9	9			18		
04:30	1	1			2	16:30	9	11			20		
04:45	0	1	0	2	0	16:45	14	43	11	44	25	87	
05:00	0	1			1	17:00	10	9			19		
05:15	1	2			3	17:15	20	11			31		
05:30	1	3			4	17:30	21	12			33		
05:45	0	2	3	9	3	17:45	15	66	8	40	23	106	
06:00	0	3			3	18:00	15	14			29		
06:15	2	3			5	18:15	11	8			19		
06:30	2	5			7	18:30	14	9			23		
06:45	1	5	6	17	7	18:45	7	47	10	41	17	88	
07:00	4	6			10	19:00	8	8			16		
07:15	6	16			22	19:15	15	4			19		
07:30	8	35			43	19:30	5	5			10		
07:45	5	23	31	88	36	19:45	4	32	3	20	7	52	
08:00	7	29			36	20:00	9	2			11		
08:15	5	20			25	20:15	9	3			12		
08:30	4	10			14	20:30	4	3			7		
08:45	5	21	11	70	16	20:45	7	29	2	10	9	39	
09:00	3	11			14	21:00	5	2			7		
09:15	2	16			18	21:15	2	1			3		
09:30	4	11			15	21:30	3	4			7		
09:45	4	13	6	44	10	21:45	3	13	1	8	4	21	
10:00	5	7			12	22:00	3	3			6		
10:15	4	6			10	22:15	4	1			5		
10:30	8	10			18	22:30	2	1			3		
10:45	5	22	8	31	13	22:45	2	11	1	6	3	17	
11:00	7	14			21	23:00	2	0			2		
11:15	8	6			14	23:15	4	1			5		
11:30	5	8			13	23:30	5	1			6		
11:45	5	25	9	37	14	23:45	2	13	1	3	3	16	
TOTALS	117	305			422	TOTALS	410	349			759		
SPLIT %	27.7%	72.3%			35.7%	SPLIT %	54.0%	46.0%			64.3%		

DAILY TOTALS					NB	SB					EB	WB	Total
					527	654					0	0	1,181
AM Peak Hour	11:45	07:30			07:30	PM Peak Hour	17:15	14:30			17:15		
AM Pk Volume	35	115			140	PM Pk Volume	71	51			116		
Pk Hr Factor	0.673	0.821			0.814	Pk Hr Factor	0.845	0.850			#####		
7 - 9 Volume	44	158	0	0	202	4 - 6 Volume	109	84	0	0	193		
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	17:00	16:00			16:45		
7 - 9 Pk Volume	26	115	0	0	140	4 - 6 Pk Volume	66	44	0	0	108		
Pk Hr Factor	0.813	0.821	0.000	0.000	0.814	Pk Hr Factor	0.786	0.846	0.000	0.000	0.818		

VOLUME
Lorraine St E/O James St

Day: Tuesday
Date: 1/15/2019

City: Carrboro
Project #: NC19_9021_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	314	349	663

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0	0	0	0	12:00	0	0	11	2	13			
00:15	0	0	0	0	0	12:15	0	0	7	7	14			
00:30	0	0	0	0	0	12:30	0	0	5	11	16			
00:45	0	0	0	0	0	12:45	0	0	6	29	6	26	12	55
01:00	0	0	0	0	0	13:00	0	0	7	9	16	10		
01:15	0	0	0	0	0	13:15	0	0	6	4	10			
01:30	0	0	0	0	0	13:30	0	0	5	5	10			
01:45	0	0	0	0	0	13:45	0	0	9	27	2		20	11
02:00	0	0	0	0	0	14:00	0	0	6	6	12	9		
02:15	0	0	0	0	0	14:15	0	0	4	5	9			
02:30	0	0	0	0	0	14:30	0	0	8	10	18			
02:45	0	0	0	0	0	14:45	0	0	11	29	3		24	14
03:00	0	0	0	0	0	15:00	0	0	6	6	12	17		
03:15	0	0	0	0	0	15:15	0	0	12	12	24			
03:30	0	0	1	0	1	15:30	0	0	6	11	17			
03:45	0	0	0	1	0	15:45	0	0	12	36	9		38	21
04:00	0	0	0	0	0	16:00	0	0	9	10	19	8		
04:15	0	0	0	0	0	16:15	0	0	1	7	8			
04:30	0	0	0	0	0	16:30	0	0	3	4	7			
04:45	0	0	0	0	0	16:45	0	0	9	22	8		29	17
05:00	0	0	0	0	0	17:00	0	0	4	5	9	13		
05:15	0	0	0	0	0	17:15	0	0	7	6	13			
05:30	0	0	0	2	2	17:30	0	0	3	8	11			
05:45	0	0	1	1	3	17:45	0	0	10	24	3		22	13
06:00	0	0	0	0	0	18:00	0	0	8	7	15	10		
06:15	0	0	0	1	1	18:15	0	0	3	2	5			
06:30	0	0	0	0	0	18:30	0	0	4	6	10			
06:45	0	0	2	2	4	18:45	0	0	5	20	10		25	15
07:00	0	0	0	3	3	19:00	0	0	3	2	5	2		
07:15	0	0	2	8	10	19:15	0	0	4	1	5			
07:30	0	0	3	5	8	19:30	0	0	0	2	2			
07:45	0	0	4	9	5	19:45	0	0	3	10	5		10	8
08:00	0	0	10	7	17	20:00	0	0	3	5	8	2		
08:15	0	0	3	9	12	20:15	0	0	2	1	3			
08:30	0	0	3	7	10	20:30	0	0	1	1	2			
08:45	0	0	2	18	5	20:45	0	0	4	10	2		9	6
09:00	0	0	6	5	11	21:00	0	0	1	1	2	2		
09:15	0	0	11	6	17	21:15	0	0	2	0	2			
09:30	0	0	2	5	7	21:30	0	0	0	1	1			
09:45	0	0	5	24	8	21:45	0	0	2	5	0		2	2
10:00	0	0	4	6	10	22:00	0	0	0	2	2	2		
10:15	0	0	2	6	8	22:15	0	0	0	2	2			
10:30	0	0	3	6	9	22:30	0	0	1	1	2			
10:45	0	0	9	18	8	22:45	0	0	1	2	1		6	2
11:00	0	0	7	8	15	23:00	0	0	2	0	2	2		
11:15	0	0	5	5	10	23:15	0	0	2	0	2			
11:30	0	0	5	7	12	23:30	0	0	2	0	2			
11:45	0	0	4	21	7	23:45	0	0	0	6	2		2	2
TOTALS	94				136	230	TOTALS	220				213	433	
SPLIT %	40.9%				59.1%	34.7%	SPLIT %	50.8%				49.2%	65.3%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	314	349	663

AM Peak Hour			11:30	07:45	10:45	PM Peak Hour			15:15	15:15	15:15
AM Pk Volume			27	28	54	PM Pk Volume			39	42	81
Pk Hr Factor			0.614	0.778	0.794	Pk Hr Factor			0.813	0.875	0.844
7 - 9 Volume	0	0	27	49	76	4 - 6 Volume	0	0	46	51	97
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	20	28	48	4 - 6 Pk Volume	0	0	24	29	51
Pk Hr Factor	0.000	0.000	0.500	0.778	0.706	Pk Hr Factor	0.000	0.000	0.600	0.725	0.671

VOLUME

Lorraine St E/O James St

Day: Thursday
Date: 1/24/2019

City: Carrboro
Project #: NC19_9021_003

DAILY TOTALS					NB	SB	EB					WB	Total
					0	0	288					338	626
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	0	0	0	0	0	0	12:00	0	0	5	6	11	11
00:15	0	0	0	0	0	0	12:15	0	0	5	7	12	12
00:30	0	0	1	0	1	1	12:30	0	0	7	5	12	12
00:45	0	0	0	1	0	0	12:45	0	0	6	23	10	28
01:00	0	0	0	0	0	0	13:00	0	0	5	6	11	11
01:15	0	0	0	0	0	0	13:15	0	0	3	8	11	11
01:30	0	0	0	0	0	0	13:30	0	0	4	3	7	7
01:45	0	0	0	0	0	0	13:45	0	0	5	17	6	23
02:00	0	0	0	0	0	0	14:00	0	0	4	7	11	11
02:15	0	0	0	0	0	0	14:15	0	0	2	3	5	5
02:30	0	0	1	0	1	1	14:30	0	0	8	5	13	13
02:45	0	0	0	1	0	0	14:45	0	0	14	28	9	24
03:00	0	0	0	0	0	0	15:00	0	0	7	6	13	13
03:15	0	0	0	0	0	0	15:15	0	0	6	5	11	11
03:30	0	0	0	0	0	0	15:30	0	0	9	4	13	13
03:45	0	0	0	0	0	0	15:45	0	0	2	24	1	16
04:00	0	0	0	0	0	0	16:00	0	0	5	10	15	15
04:15	0	0	0	0	0	0	16:15	0	0	2	13	15	15
04:30	0	0	0	0	0	0	16:30	0	0	4	9	13	13
04:45	0	0	1	1	0	1	16:45	0	0	7	18	7	39
05:00	0	0	0	0	0	0	17:00	0	0	8	5	13	13
05:15	0	0	0	0	0	0	17:15	0	0	6	6	12	12
05:30	0	0	0	0	0	0	17:30	0	0	7	2	9	9
05:45	0	0	1	1	2	3	17:45	0	0	5	26	6	19
06:00	0	0	0	0	0	0	18:00	0	0	6	5	11	11
06:15	0	0	2	3	5	5	18:15	0	0	5	2	7	7
06:30	0	0	0	2	2	2	18:30	0	0	3	3	6	6
06:45	0	0	1	3	2	3	18:45	0	0	2	16	6	16
07:00	0	0	1	7	8	8	19:00	0	0	1	8	9	9
07:15	0	0	1	8	9	9	19:15	0	0	3	3	6	6
07:30	0	0	5	9	14	14	19:30	0	0	4	4	8	8
07:45	0	0	3	10	5	8	19:45	0	0	3	11	6	21
08:00	0	0	12	13	25	25	20:00	0	0	1	1	2	2
08:15	0	0	8	9	17	17	20:15	0	0	1	4	5	5
08:30	0	0	4	10	14	14	20:30	0	0	1	1	2	2
08:45	0	0	5	29	1	6	20:45	0	0	5	8	2	8
09:00	0	0	3	6	9	9	21:00	0	0	1	0	1	1
09:15	0	0	4	8	12	12	21:15	0	0	0	0	0	0
09:30	0	0	4	5	9	9	21:30	0	0	4	3	7	7
09:45	0	0	3	14	4	7	21:45	0	0	3	8	1	4
10:00	0	0	5	6	11	11	22:00	0	0	5	2	7	7
10:15	0	0	6	6	12	12	22:15	0	0	2	0	2	2
10:30	0	0	3	6	9	9	22:30	0	0	0	0	0	0
10:45	0	0	3	17	4	7	22:45	0	0	2	9	0	2
11:00	0	0	7	5	12	12	23:00	0	0	0	1	1	1
11:15	0	0	5	3	8	8	23:15	0	0	0	0	0	0
11:30	0	0	2	9	11	11	23:30	0	0	0	0	0	0
11:45	0	0	9	23	4	13	23:45	0	0	0	0	1	1
TOTALS	100				137	237	TOTALS	188				201	389
SPLIT %	42.2%				57.8%	37.9%	SPLIT %	48.3%				51.7%	62.1%

DAILY TOTALS					NB	SB						EB	WB						Total
					0	0						288	338						626
AM Peak Hour			08:00	07:45	07:30	07:30	PM Peak Hour			14:45	16:00	14:30	14:30						14:30
AM Pk Volume			29	37	64	64	PM Pk Volume			36	39	60	60						60
Pk Hr Factor			0.604	0.712	0.640	0.640	Pk Hr Factor			0.643	0.750	0.652	0.652						0.652
7 - 9 Volume	0	0	39	62	101	101	4 - 6 Volume	0	0	44	58	102	102						102
7 - 9 Peak Hour			08:00	07:45	07:30	07:30	4 - 6 Peak Hour			16:45	16:00	16:00	16:00						16:00
7 - 9 Pk Volume	0	0	29	37	64	64	4 - 6 Pk Volume	0	0	28	39	57	57						57
Pk Hr Factor	0.000	0.000	0.604	0.712	0.640	0.640	Pk Hr Factor	0.000	0.000	0.875	0.750	0.950	0.950						0.950

VOLUME

Lorraine St E/O James St

Day: Tuesday & Thursday
Date: 1/15/2019 & 1/24/2019

City: Carrboro
Project #: NC19_9021_003

DAILY TOTALS					NB	SB					EB	WB	Total
					0	0					318	354	672
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00			0	0	0		12:00			8	4	12	
00:15			0	0	0		12:15			6	7	13	
00:30			1	0	1		12:30			6	8	14	
00:45			0	1	0	1	12:45			6	8	14	
						1				26	8	27	53
01:00			0	0	0		13:00			6	8	14	
01:15			0	0	0		13:15			5	6	11	
01:30			0	0	0		13:30			5	4	9	
01:45			0	0	0		13:45			7	23	4	22
						0						11	45
02:00			0	0	0		14:00			5	7	12	
02:15			0	0	0		14:15			3	4	7	
02:30			1	0	1		14:30			8	8	16	
02:45			0	1	0	1	14:45			13	29	6	25
						0						19	54
03:00			0	0	0		15:00			7	6	13	
03:15			0	0	0		15:15			9	9	18	
03:30			1	0	1		15:30			8	8	16	
03:45			0	1	0	0	15:45			7	31	5	28
						1						12	59
04:00			0	0	0		16:00			7	10	17	
04:15			0	0	0		16:15			2	10	12	
04:30			0	0	0		16:30			4	7	11	
04:45			1	1	0	1	16:45			8	21	8	35
						1						16	56
05:00			0	0	0		17:00			6	5	11	
05:15			0	0	0		17:15			7	6	13	
05:30			0	1	1		17:30			5	5	10	
05:45			1	1	3	4	17:45			8	26	5	21
						4						13	47
06:00			0	0	0		18:00			7	6	13	
06:15			1	2	3		18:15			4	2	6	
06:30			0	1	1		18:30			4	5	9	
06:45			2	3	3	6	18:45			4	19	8	21
						5						12	40
07:00			1	5	6		19:00			2	5	7	
07:15			2	8	10		19:15			4	2	6	
07:30			4	7	11		19:30			2	3	5	
07:45			4	11	5	25	19:45			3	11	6	16
						9						9	27
08:00			11	10	21		20:00			2	3	5	
08:15			6	9	15		20:15			2	3	5	
08:30			4	9	13		20:30			1	1	2	
08:45			4	25	3	31	20:45			5	10	2	9
						7						7	19
09:00			5	6	11		21:00			1	1	2	
09:15			8	7	15		21:15			1	0	1	
09:30			3	5	8		21:30			2	2	4	
09:45			4	20	6	24	21:45			3	7	1	4
						10						4	11
10:00			5	6	11		22:00			3	2	5	
10:15			4	6	10		22:15			1	1	2	
10:30			3	6	9		22:30			1	1	2	
10:45			6	18	6	24	22:45			2	7	1	5
						12						3	12
11:00			7	7	14		23:00			1	1	2	
11:15			5	4	9		23:15			1	0	1	
11:30			4	8	12		23:30			1	0	1	
11:45			7	23	6	25	23:45			0	3	1	2
						13						1	5
TOTALS			105	139	244		TOTALS			213	215	428	
SPLIT %			43.0%	57.0%	36.3%		SPLIT %			49.8%	50.2%	63.7%	

DAILY TOTALS					NB	SB					EB	WB	Total
					0	0					318	354	672
AM Peak Hour			11:45	07:45	07:45		PM Peak Hour			14:30	16:00	14:30	
AM Pk Volume			27	33	58		PM Pk Volume			37	35	66	
Pk Hr Factor			0.844	0.825	0.690		Pk Hr Factor			0.712	0.875	0.868	
7 - 9 Volume	0	0	36	56	92		4 - 6 Volume	0	0	47	56	103	
7 - 9 Peak Hour			07:30	07:45	07:45		4 - 6 Peak Hour			16:45	16:00	16:00	
7 - 9 Pk Volume	0	0	25	33	58		4 - 6 Pk Volume	0	0	26	35	56	
Pk Hr Factor	0.000	0.000	0.568	0.825	0.690		Pk Hr Factor	0.000	0.000	0.813	0.875	0.824	

VOLUME

Carol St E/O Lisa Dr

Day: Tuesday
Date: 1/15/2019

City: Carrboro
Project #: NC19_9021_001

DAILY TOTALS					NB	SB	EB					WB	Total
					0	0	240					186	426
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	0	0	0	0	0	0	12:00	0	0	6	4	10	
00:15	0	0	0	0	0	0	12:15	0	0	3	1	4	
00:30	0	0	0	1	1	1	12:30	0	0	0	5	5	
00:45	0	0	0	0	0	1	12:45	0	0	2	11	5	26
01:00	0	0	0	0	0	0	13:00	0	0	2	3	5	
01:15	0	0	0	0	0	0	13:15	0	0	5	3	8	
01:30	0	0	0	0	0	0	13:30	0	0	5	1	6	
01:45	0	0	0	0	0	0	13:45	0	0	6	18	2	27
02:00	0	0	0	0	0	0	14:00	0	0	1	4	5	
02:15	0	0	0	0	0	0	14:15	0	0	4	2	6	
02:30	0	0	0	0	0	0	14:30	0	0	3	6	9	
02:45	0	0	0	0	0	0	14:45	0	0	5	13	7	32
03:00	0	0	0	0	0	0	15:00	0	0	1	2	3	
03:15	0	0	0	0	0	0	15:15	0	0	10	5	15	
03:30	0	0	0	0	0	0	15:30	0	0	8	5	13	
03:45	0	0	0	0	0	0	15:45	0	0	4	23	3	38
04:00	0	0	0	0	0	0	16:00	0	0	4	1	5	
04:15	0	0	0	0	0	0	16:15	0	0	2	3	5	
04:30	0	0	1	0	1	1	16:30	0	0	5	12	17	
04:45	0	0	1	2	1	2	16:45	0	0	7	18	8	42
05:00	0	0	2	0	2	2	17:00	0	0	5	2	7	
05:15	0	0	0	0	0	0	17:15	0	0	5	3	8	
05:30	0	0	2	1	3	3	17:30	0	0	3	5	8	
05:45	0	0	4	8	4	9	17:45	0	0	5	18	2	30
06:00	0	0	0	0	0	0	18:00	0	0	3	9	12	
06:15	0	0	1	1	2	2	18:15	0	0	2	2	4	
06:30	0	0	3	2	5	5	18:30	0	0	3	3	6	
06:45	0	0	3	7	4	11	18:45	0	0	4	12	0	26
07:00	0	0	3	4	7	7	19:00	0	0	0	1	1	
07:15	0	0	10	3	13	13	19:15	0	0	3	7	10	
07:30	0	0	10	6	16	16	19:30	0	0	2	2	4	
07:45	0	0	11	34	16	52	19:45	0	0	1	6	0	16
08:00	0	0	8	5	13	13	20:00	0	0	1	3	4	
08:15	0	0	7	4	11	11	20:15	0	0	0	3	3	
08:30	0	0	4	2	6	6	20:30	0	0	1	0	1	
08:45	0	0	7	26	10	40	20:45	0	0	1	3	2	11
09:00	0	0	1	2	3	3	21:00	0	0	0	0	0	
09:15	0	0	4	1	5	5	21:15	0	0	1	1	2	
09:30	0	0	1	1	2	2	21:30	0	0	1	1	2	
09:45	0	0	4	10	4	14	21:45	0	0	0	2	2	6
10:00	0	0	5	1	6	6	22:00	0	0	0	1	1	
10:15	0	0	2	1	3	3	22:15	0	0	1	0	1	
10:30	0	0	0	0	0	0	22:30	0	0	1	0	1	
10:45	0	0	3	10	5	14	22:45	0	0	0	2	0	3
11:00	0	0	5	0	5	5	23:00	0	0	0	1	1	
11:15	0	0	2	4	6	6	23:15	0	0	0	1	1	
11:30	0	0	3	0	3	3	23:30	0	0	3	1	4	
11:45	0	0	3	13	5	19	23:45	0	0	1	4	0	7
TOTALS	110				52	162	TOTALS	130				134	264
SPLIT %	67.9%				32.1%	38.0%	SPLIT %	49.2%				50.8%	62.0%

DAILY TOTALS				NB	SB	EBWB				Total			
				0	0					240	186	426	
AM Peak Hour	07:15			07:30	07:15	PM Peak Hour			15:15	16:15	16:30		
AM Pk Volume	39			20	58	PM Pk Volume			26	25	47		
Pk Hr Factor	0.886			0.833	0.906	Pk Hr Factor			0.650	0.521	0.691		
7 - 9 Volume	0	0	60	32	92	4 - 6 Volume			0	0	36	36	72
7 - 9 Peak Hour	07:15			07:30	07:15	4 - 6 Peak Hour			16:30	16:15	16:30		
7 - 9 Pk Volume	0	0	39	20	58	4 - 6 Pk Volume			0	0	22	25	47
Pk Hr Factor	0.000	0.000	0.886	0.833	0.906	Pk Hr Factor			0.000	0.000	0.786	0.521	0.691

VOLUME

Carol St E/O Lisa Dr

Day: Thursday
Date: 1/24/2019

City: Carrboro
Project #: NC19_9021_001

DAILY TOTALS						NB	SB							Total
						0	0							461
						252								
						209								
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00	0	0	0	0	0	12:00	0	0	2	3	5			
00:15	0	0	0	0	0	12:15	0	0	3	4	7			
00:30	0	0	0	1	1	12:30	0	0	4	2	6			
00:45	0	0	0	0	0	12:45	0	0	6	15	8	2	11	26
01:00	0	0	0	1	1	13:00	0	0	8	6	14			
01:15	0	0	0	0	0	13:15	0	0	2	3	5			
01:30	0	0	0	0	0	13:30	0	0	4	2	6			
01:45	0	0	0	0	0	13:45	0	0	3	17	5	2	13	30
02:00	0	0	0	0	0	14:00	0	0	5	6	11			
02:15	0	0	0	0	0	14:15	0	0	3	1	4			
02:30	0	0	0	0	0	14:30	0	0	2	3	5			
02:45	0	0	0	0	0	14:45	0	0	6	16	12	6	16	32
03:00	0	0	0	0	0	15:00	0	0	3	7	10			
03:15	0	0	0	0	0	15:15	0	0	9	2	11			
03:30	0	0	1	0	1	15:30	0	0	6	6	12			
03:45	0	0	0	1	0	15:45	0	0	7	25	9	2	17	42
04:00	0	0	0	0	0	16:00	0	0	4	5	9			
04:15	0	0	0	0	0	16:15	0	0	3	3	6			
04:30	0	0	0	0	0	16:30	0	0	4	13	17			
04:45	0	0	0	0	0	16:45	0	0	5	16	10	5	26	42
05:00	0	0	0	0	0	17:00	0	0	2	4	6			
05:15	0	0	2	0	2	17:15	0	0	7	2	9			
05:30	0	0	3	0	3	17:30	0	0	4	3	7			
05:45	0	0	3	8	3	17:45	0	0	4	17	11	7	16	33
06:00	0	0	0	1	1	18:00	0	0	7	8	15			
06:15	0	0	0	0	0	18:15	0	0	2	3	5			
06:30	0	0	1	1	2	18:30	0	0	2	4	6			
06:45	0	0	3	4	3	18:45	0	0	2	13	3	1	16	29
07:00	0	0	2	2	4	19:00	0	0	2	3	5			
07:15	0	0	10	6	16	19:15	0	0	0	2	2			
07:30	0	0	13	7	20	19:30	0	0	1	1	2			
07:45	0	0	10	35	11	19:45	0	0	1	4	3	2	8	12
08:00	0	0	8	8	16	20:00	0	0	2	1	3			
08:15	0	0	5	8	13	20:15	0	0	0	2	2			
08:30	0	0	6	3	9	20:30	0	0	1	0	1			
08:45	0	0	5	24	2	20:45	0	0	1	4	2	1	4	8
09:00	0	0	6	1	7	21:00	0	0	0	0	0			
09:15	0	0	5	1	6	21:15	0	0	0	1	1			
09:30	0	0	4	0	4	21:30	0	0	0	1	1			
09:45	0	0	4	19	1	21:45	0	0	1	1	1	0	2	3
10:00	0	0	4	0	4	22:00	0	0	2	2	4			
10:15	0	0	5	3	8	22:15	0	0	2	1	3			
10:30	0	0	3	4	7	22:30	0	0	1	1	2			
10:45	0	0	4	16	4	22:45	0	0	0	5	1	5		10
11:00	0	0	1	3	4	23:00	0	0	0	1	1			
11:15	0	0	2	1	3	23:15	0	0	0	0	0			
11:30	0	0	4	1	5	23:30	0	0	0	0	0			
11:45	0	0	5	12	4	23:45	0	0	0	0	1	0		1
TOTALS	119				74	193	TOTALS				133	135	268	
SPLIT %	61.7%				38.3%	41.9%	SPLIT %				49.6%	50.4%	58.1%	

DAILY TOTALS						NB	SB							Total
						0	0							461
						252								
						209								
AM Peak Hour			07:15	07:30	07:15			PM Peak Hour			15:15	16:00	14:45	
AM Pk Volume			41	34	73			PM Pk Volume			26	26	45	
Pk Hr Factor			0.788	0.773	0.869			Pk Hr Factor			0.722	0.500	0.938	
7 - 9 Volume	0	0	59	47	106	4 - 6 Volume	0	0	33	42	75			
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			16:30	16:00	16:00			
7 - 9 Pk Volume	0	0	41	34	73	4 - 6 Pk Volume	0	0	18	26	42			
Pk Hr Factor	0.000	0.000	0.788	0.773	0.869	Pk Hr Factor	0.000	0.000	0.643	0.500	0.618			

VOLUME

Carol St E/O Lisa Dr

Day: Tuesday & Thursday
Date: 1/15/2019 & 1/24/2019

City: Carrboro
Project #: NC19_9021_001

DAILY TOTALS					NB	SB	EB					WB	Total	
					0	0	266					222	488	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL		
00:00			0	0	0		12:00			4	4	8		
00:15			0	0	0		12:15			3	3	6		
00:30			0	1	1		12:30			2	4	6		
00:45			0	0	0	1	12:45			4	13	4	15	
												8	28	
01:00			0	1	1		13:00			5	5	10		
01:15			0	0	0		13:15			4	3	7		
01:30			0	0	0		13:30			5	2	7		
01:45			0	0	0	1	13:45			5	19	2	12	
												7	31	
02:00			0	0	0		14:00			3	5	8		
02:15			0	0	0		14:15			4	2	6		
02:30			0	0	0		14:30			3	5	8		
02:45			0	0	0		14:45			6	16	7	19	
												13	35	
03:00			0	0	0		15:00			2	5	7		
03:15			0	0	0		15:15			10	4	14		
03:30			1	0	1		15:30			7	6	13		
03:45			0	1	0	1	15:45			6	25	3	18	
												9	43	
04:00			0	0	0		16:00			4	3	7		
04:15			0	0	0		16:15			3	3	6		
04:30			1	0	1		16:30			5	13	18		
04:45			1	2	0	2	16:45			6	18	7	26	
												13	44	
05:00			1	0	1		17:00			4	3	7		
05:15			1	0	1		17:15			6	3	9		
05:30			3	1	4		17:30			4	4	8		
05:45			4	9	0	1	17:45			5	19	5	15	
												10	34	
06:00			0	1	1		18:00			5	9	14		
06:15			1	1	2		18:15			2	3	5		
06:30			2	2	4		18:30			3	4	7		
06:45			3	6	1	5	18:45			3	13	1	17	
												4	30	
07:00			3	3	6		19:00			1	2	3		
07:15			10	5	15		19:15			2	5	7		
07:30			12	7	19		19:30			2	2	4		
07:45			11	36	8	23	19:45			1	6	1	10	
												2	16	
08:00			8	7	15		20:00			2	2	4		
08:15			6	6	12		20:15			0	3	3		
08:30			5	3	8		20:30			1	0	1		
08:45			6	25	3	19	20:45			1	4	2	7	
												3	11	
09:00			4	2	6		21:00			0	0	0		
09:15			5	1	6		21:15			1	1	2		
09:30			3	1	4		21:30			1	1	2		
09:45			4	16	1	5	21:45			1	3	1	3	
												2	6	
10:00			5	1	6		22:00			1	2	3		
10:15			4	2	6		22:15			2	1	3		
10:30			2	2	4		22:30			1	1	2		
10:45			4	15	3	8	22:45			0	4	1	5	
												1	9	
11:00			3	2	5		23:00			0	1	1		
11:15			2	3	5		23:15			0	1	1		
11:30			4	1	5		23:30			2	1	3		
11:45			4	13	3	9	23:45			1	3	0	3	
												1	6	
TOTALS	123				72	195	TOTALS	143				150	293	
SPLIT %	63.1%				36.9%	40.0%	SPLIT %	48.8%				51.2%	60.0%	

DAILY TOTALS			NB	SB							EB	WB	Total	
			0	0							266	222	488	
AM Peak Hour			07:15	07:30	07:15	PM Peak Hour				15:15	16:00	14:45		
AM Pk Volume			41	28	68	PM Pk Volume				27	26	47		
Pk Hr Factor			0.854	0.875	0.895	Pk Hr Factor				0.675	0.500	0.839		
7 - 9 Volume	0	0	61	42	103	4 - 6 Volume	0	0		37	41	78		
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour				16:30	16:00	16:30		
7 - 9 Pk Volume	0	0	41	28	68	4 - 6 Pk Volume	0	0		21	26	47		
Pk Hr Factor	0.000	0.000	0.854	0.875	0.895	Pk Hr Factor	0.000	0.000		0.875	0.500	0.653		

Appendix D:

Intersection Spreadsheets

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **Old Fayetteville Rd**
 E/W Street: **NC-54**

AM In AM Out PM In PM Out
 Net New Trips: 213 123 233 261
 Pass-By Trips: 38 37 149 148

Annual Growth Rate: 1.0% Existing Year: 2019
 Growth Factor: 0.030301 Buildout Year: 2022

AM PEAK HOUR AM PHF = 0.92

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			NC-54 Eastbound			NC-54 Westbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
2019 Traffic Count	26	207	13	353	123	41	147	979	78	0	13	260	252
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	26	207	13	353	123	41	147	979	78	0	13	260	252
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	1	6	0	11	4	1	4	30	2	0	0	8	8
2022 Background Traffic	27	213	13	364	127	42	151	1009	80	0	13	268	260
Project Traffic													
Percent Assignment Inbound	0.00%	2.00%	5.00%	0.00%	0.00%	0.00%	15.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	4	11	0	0	0	32	43	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	15.00%	2.00%	15.00%	0.00%	0.00%	0.00%	10.00%	5.00%	20.00%	0.00%
Outbound Project Traffic	0	0	0	18	2	18	0	0	0	12	6	25	0
Total External Site Traffic	0	4	11	18	2	18	32	43	0	12	6	25	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	-13	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	25	0	12	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	25	0	-1	0
Total Project Traffic	0	4	11	18	2	18	32	43	0	37	6	24	0
2022 Buildout Total	27	217	24	382	129	60	183	1052	80	37	19	292	260

PM PEAK HOUR PM PHF = 0.87

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			NC-54 Eastbound			NC-54 Westbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
2019 Traffic Count	175	135	17	254	163	77	40	370	62	0	30	769	371
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	175	135	17	254	163	77	40	370	62	0	30	769	371
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	5	4	1	8	5	2	1	11	2	0	1	23	11
2022 Background Traffic	180	139	18	262	168	79	41	381	64	0	31	792	382
Project Traffic													
Percent Assignment Inbound	0.00%	2.00%	5.00%	0.00%	0.00%	0.00%	15.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	5	12	0	0	0	35	47	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	15.00%	2.00%	15.00%	0.00%	0.00%	0.00%	10.00%	5.00%	20.00%	0.00%
Outbound Project Traffic	0	0	0	39	5	39	0	0	0	26	13	52	0
Total External Site Traffic	0	5	12	39	5	39	35	47	0	26	13	52	0
Pass-By Capture Reduction	0	-30	0	0	-19	0	0	-34	0	0	0	-66	0
Pass-By Capture Assignment	0	15	15	34	19	15	21	13	0	0	0	50	15
Total Pass-By Traffic	0	-15	15	34	0	15	21	-21	0	0	0	-16	15
Total Project Traffic	0	-10	27	73	5	54	56	26	0	26	13	36	15
2022 Buildout Total	180	129	45	335	173	133	97	407	64	26	44	828	397

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **Post Office Drwy**
 E/W Street: **NC-54**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.89

Description	Northbound			Post Office Drwy Southbound			NC-54 Eastbound			NC-54 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	6	0	0	0	0	517	28
Count Balancing	0	0	0	0	0	0	0	1285	0	0	0	0
2019 Existing Traffic	0	0	0	0	0	6	0	1285	0	0	517	28
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.000	0.030	0.030	0.030	0.030	0.030	0.000
2022 Background Growth	0	0	0	0	0	0	0	39	0	0	16	0
2022 Background Traffic	0	0	0	0	0	6	0	1324	0	0	533	28
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	10.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	43	21
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	12	0	31	0	0	0	0
Total External Site Traffic	0	0	0	0	0	12	0	31	0	0	43	21
Pass-By Capture Reduction	0	0	0	0	0	0	0	-25	0	0	-13	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	25	0	0	13	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	12	0	31	0	0	43	21
2022 Buildout Total	0	0	0	0	0	18	0	1355	0	0	576	49

PM PEAK HOUR PM PHF = 0.83

Description	Northbound			Post Office Drwy Southbound			NC-54 Eastbound			NC-54 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	23	0	0	0	0	1162	16
Count Balancing	0	0	0	0	0	0	0	602	0	0	0	0
2019 Existing Traffic	0	0	0	0	0	23	0	602	0	0	1162	16
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.000	0.030	0.030	0.030	0.030	0.030	0.000
2022 Background Growth	0	0	0	0	0	0	0	18	0	0	35	0
2022 Background Traffic	0	0	0	0	0	23	0	620	0	0	1197	16
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	10.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	47	23
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	26	0	65	0	0	0	0
Total External Site Traffic	0	0	0	0	0	26	0	65	0	0	47	23
Pass-By Capture Reduction	0	0	0	0	0	0	0	-34	0	0	-66	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	34	0	0	65	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	-1	0
Total Project Traffic	0	0	0	0	0	26	0	65	0	0	46	23
2022 Buildout Total	0	0	0	0	0	49	0	685	0	0	1243	39

1/15/2019 **INTERSECTION ANALYSIS SHEET**

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **Carrboro Plaza Dr/W Main St**
 E/W Street: **NC-54**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR
AM PHF = 0.94

Description	Carrboro Plaza Dr Northbound			W. Main St Southbound			NC-54 Eastbound				NC-54 Westbound			
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
2019 Traffic Count	12	27	60	162	38	101	8	196	1054	27	8	56	419	35
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	12	27	60	162	38	101	8	196	1054	27	8	56	419	35
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	1	2	5	1	3	0	6	32	1	0	2	13	1
2022 Background Traffic	12	28	62	167	39	104	8	202	1086	28	8	58	432	36
Project Traffic														
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	21	0	0	0	0	0	0	43	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	0	6	25	0	0	0	0	0
Total External Site Traffic	0	0	0	0	0	21	0	6	25	0	0	0	43	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-25	0	0	0	-13	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	25	0	0	0	13	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	21	0	6	25	0	0	0	43	0
2022 Buildout Total	12	28	62	167	39	125	8	208	1111	28	8	58	475	36

PM PEAK HOUR
PM PHF = 0.88

Description	Carrboro Plaza Dr Northbound			W. Main St Southbound			NC-54 Eastbound				NC-54 Westbound			
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
2016 Traffic Count	56	94	75	89	108	203	2	122	458	20	12	189	892	89
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	56	94	75	89	108	203	2	122	458	20	12	189	892	89
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	2	3	2	3	3	6	0	4	14	1	0	6	27	3
2022 Background Traffic	58	97	77	92	111	209	2	126	472	21	12	195	919	92
Project Traffic														
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	23	0	0	0	0	0	0	47	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	0	13	52	0	0	0	0	0
Total External Site Traffic	0	0	0	0	0	23	0	13	52	0	0	0	47	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-34	0	0	0	-66	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	34	0	0	0	66	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	23	0	13	52	0	0	0	47	0
2022 Buildout Total	58	97	77	92	111	232	2	139	524	21	12	195	966	92

INTERSECTION ANALYSIS SHEET

Project:	Lloyd Farm
Location:	Carrboro, NC
Count:	1/15/2019
N/S Street:	James St
E/W Street:	W. Main St

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.83

Description	James St Northbound			James St Southbound			W. Main St Eastbound			W. Main St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	8	0	4	16	1	117	36	234	0	0	177	8
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	8	0	4	16	1	117	36	234	0	0	177	8
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	4	1	7	0	0	5	0
2022 Background Traffic	8	0	4	16	1	121	37	241	0	0	182	8
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	21	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	6	0	0	0	6	0	0	0	0
Total External Site Traffic	0	0	0	6	0	0	0	6	0	0	21	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	6	0	0	0	6	0	0	21	0
2022 Buildout Total	8	0	4	22	1	121	37	247	0	0	203	8

PM PEAK HOUR PM PHF = 0.89

Description	James St Northbound			James St Southbound			W. Main St Eastbound			W. Main St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	6	0	3	12	0	55	68	231	5	4	338	18
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	6	0	3	12	0	55	68	231	5	4	338	18
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	2	2	7	0	0	10	1
2022 Background Traffic	6	0	3	12	0	57	70	238	5	4	348	19
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	23	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	13	0	0	0	13	0	0	0	0
Total External Site Traffic	0	0	0	13	0	0	0	13	0	0	23	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	13	0	0	0	13	0	0	23	0
2022 Buildout Total	6	0	3	25	0	57	70	251	5	4	371	19

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **James St**
 E/W Street: **Lorraine St/Post Office Drive**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.84

Description	James St Northbound			James St Southbound			Post Office Drive Eastbound			Lorraine St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	15	19	16	2	97	7	2	2	12	25	7	1
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	15	19	16	2	97	7	2	2	12	25	7	1
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	1	0	0	3	0	0	0	0	1	0	0
2022 Background Traffic	15	20	16	2	100	7	2	2	12	26	7	1
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	4	0	0	0	0	11	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	5.00%	5.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	3	6	6	0	0	0
Total External Site Traffic	0	0	0	0	0	4	3	6	6	0	11	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	4	3	6	6	0	11	0
2022 Buildout Total	15	20	16	2	100	11	5	8	18	26	18	1

PM PEAK HOUR PM PHF = 0.89

Description	James St Northbound			James St Southbound			Post Office Drive Eastbound			Lorraine St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	29	31	12	1	31	11	6	3	32	20	10	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	29	31	12	1	31	11	6	3	32	20	10	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	1	1	0	0	1	0	0	0	1	1	0	0
2022 Background Traffic	30	32	12	1	32	11	6	3	33	21	10	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	5	0	0	0	0	12	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	5.00%	5.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	6	13	13	0	0	0
Total External Site Traffic	0	0	0	0	0	5	6	13	13	0	12	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	5	6	13	13	0	12	0
2022 Buildout Total	30	32	12	1	32	16	12	16	46	21	22	0

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **James St**
 E/W Street: **Carol St**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.84

Description	James St Northbound			James St Southbound			Carol St Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	7	18	3	2	96	4	6	20	17	1	18	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	7	18	3	2	96	4	6	20	17	1	18	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	1	0	0	3	0	0	1	1	0	1	0
2022 Background Traffic	7	19	3	2	99	4	6	21	18	1	19	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	2.00%	3.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00%
Inbound Project Traffic	0	0	0	0	4	6	0	0	0	0	6	0
Percent Assignment Outbound	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	3.00%	3.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	2	0	0	0	0	4	4	0	0	0	0
Total External Site Traffic	0	2	0	0	4	6	4	4	0	0	6	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	2	0	0	4	6	4	4	0	0	6	0
2022 Buildout Total	7	21	3	2	103	10	10	25	18	1	25	0

PM PEAK HOUR PM PHF = 0.79

Description	James St Northbound			James St Southbound			Carol St Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	9	36	1	1	30	0	1	8	11	3	23	4
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	9	36	1	1	30	0	1	8	11	3	23	4
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	1	0	0	1	0	0	0	0	0	1	0
2022 Background Traffic	9	37	1	1	31	0	1	8	11	3	24	4
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	2.00%	3.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00%
Inbound Project Traffic	0	0	0	0	5	7	0	0	0	0	7	0
Percent Assignment Outbound	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	3.00%	3.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	5	0	0	0	0	8	8	0	0	0	0
Total External Site Traffic	0	5	0	0	5	7	8	8	0	0	7	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	5	0	0	5	7	8	8	0	0	7	0
2022 Buildout Total	9	42	1	1	36	7	9	16	11	3	31	4

INTERSECTION ANALYSIS SHEET

Project:	Lloyd Farm
Location:	Carrboro, NC
Count:	1/15/2019
N/S Street:	Lisa Dr
E/W Street:	Carol St

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.80

Description	- Northbound			Lisa Dr Southbound			Carol St Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	4	0	11	3	35	0	0	28	2
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	0	0	0	4	0	11	3	35	0	0	28	2
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	0	0	1	0	0	1	0
2022 Background Traffic	0	0	0	4	0	11	3	36	0	0	29	2
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	13	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	0	7	0	0	0	0
Total External Site Traffic	0	0	0	0	0	0	0	7	0	0	13	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	7	0	0	13	0
2022 Buildout Total	0	0	0	4	0	11	3	43	0	0	42	2

PM PEAK HOUR PM PHF = 0.61

Description	- Northbound			Lisa Dr Southbound			Carol St Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	1	0	6	6	22	0	0	30	3
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	0	0	0	1	0	6	6	22	0	0	30	3
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	0	0	1	0	0	1	0
2022 Background Traffic	0	0	0	1	0	6	6	23	0	0	31	3
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	14	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	0	0	16	0	0	0	0
Total External Site Traffic	0	0	0	0	0	0	0	16	0	0	14	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	16	0	0	14	0
2022 Buildout Total	0	0	0	1	0	6	6	39	0	0	45	3

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **1/15/2019**
 N/S Street: **Old Fayetteville Rd**
 E/W Street: **Carol St**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.91

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			- Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	588	15	19	507	0	0	0	0	11	0	31
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	0	588	15	19	507	0	0	0	0	11	0	31
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	18	0	1	15	0	0	0	0	0	0	1
2022 Background Traffic	0	606	15	20	522	0	0	0	0	11	0	32
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	32	0	0	0	0	13	0	0
Percent Assignment Outbound	0.00%	15.00%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	18	7	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	18	7	0	32	0	0	0	0	13	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	18	7	0	32	0	0	0	0	13	0	0
2022 Buildout Total	0	624	22	20	554	0	0	0	0	24	0	32

PM PEAK HOUR PM PHF = 0.92

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			- Eastbound			Carol St Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	528	10	10	486	0	0	0	0	15	0	6
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2019 Existing Traffic	0	528	10	10	486	0	0	0	0	15	0	6
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	16	0	0	15	0	0	0	0	0	0	0
2022 Background Traffic	0	544	10	10	501	0	0	0	0	15	0	6
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	59	0	0	0	0	14	0	0
Percent Assignment Outbound	0.00%	15.00%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	39	16	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	39	16	0	59	0	0	0	0	14	0	0
Pass-By Capture Reduction	0	-30	0	0	-19	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	30	0	0	19	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	39	16	0	59	0	0	0	0	14	0	0
2022 Buildout Total	0	583	26	10	560	0	0	0	0	29	0	6

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **Count Balancing**
 N/S Street: **Site Drive**
 E/W Street: **NC-54**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.90

Description	Northbound			Site Drive Southbound			NC-54 Eastbound			NC-54 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	1345	0	0	523	0
2019 Existing Traffic	0	0	0	0	0	0	0	1345	0	0	523	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	0	0	41	0	0	16	0
2022 Background Traffic	0	0	0	0	0	0	0	1386	0	0	539	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	20.00%
Inbound Project Traffic	0	0	0	0	0	0	53	0	0	0	0	43
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	25.00%	0.00%	0.00%	10.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	31	0	31	0	0	12	0
Total External Site Traffic	0	0	0	0	0	31	53	31	0	0	12	43
Pass-By Capture Reduction	0	0	0	0	0	0	0	-25	0	0	-13	0
Pass-By Capture Assignment	0	0	0	0	0	37	25	25	0	0	0	13
Total Pass-By Traffic	0	0	0	0	0	37	25	0	0	0	-13	13
Total Project Traffic	0	0	0	0	0	68	78	31	0	0	-1	56
2022 Buildout Total	0	0	0	0	0	68	78	1417	0	0	538	56

PM PEAK HOUR PM PHF = 0.90

Description	Northbound			Site Drive Southbound			NC-54 Eastbound			NC-54 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	641	0	0	1185	0
2019 Existing Traffic	0	0	0	0	0	0	0	641	0	0	1185	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	0	0	0	0	0	0	19	0	0	36	0
2022 Background Traffic	0	0	0	0	0	0	0	660	0	0	1221	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	20.00%
Inbound Project Traffic	0	0	0	0	0	0	58	0	0	0	0	47
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	25.00%	0.00%	0.00%	10.00%	0.00%
Outbound Project Traffic	0	0	0	0	0	65	0	65	0	0	26	0
Total External Site Traffic	0	0	0	0	0	65	58	65	0	0	26	47
Pass-By Capture Reduction	0	0	0	0	0	0	0	-34	0	0	-66	0
Pass-By Capture Assignment	0	0	0	0	0	50	28	34	0	0	15	51
Total Pass-By Traffic	0	0	0	0	0	50	28	0	0	0	-51	51
Total Project Traffic	0	0	0	0	0	115	86	65	0	0	-25	98
2022 Buildout Total	0	0	0	0	0	115	86	725	0	0	1196	98

INTERSECTION ANALYSIS SHEET

Project: **Lloyd Farm**
 Location: **Carrboro, NC**
 Count: **Count Balancing**
 N/S Street: **Old Fayetteville Rd**
 E/W Street: **Site Drive**

	AM In	AM Out	PM In	PM Out
Net New Trips:	213	123	233	261
Pass-By Trips:	38	37	149	148

Annual Growth Rate:	1.0%	Existing Year:	2019
Growth Factor:	0.030301	Buildout Year:	2022

AM PEAK HOUR AM PHF = 0.90

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			Eastbound			Site Drive Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	605	0	0	518	0	0	0	0	0	0	0
2019 Existing Traffic	0	605	0	0	518	0	0	0	0	0	0	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	18	0	0	16	0	0	0	0	0	0	0
2022 Background Traffic	0	623	0	0	534	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	17.00%	21.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	36	45	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	32.00%	0.00%	21.00%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	39	0	26
Total External Site Traffic	0	0	36	45	0	0	0	0	0	39	0	26
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	36	45	0	0	0	0	0	39	0	26
2022 Buildout Total	0	623	36	45	534	0	0	0	0	39	0	26

PM PEAK HOUR PM PHF = 0.90

Description	Old Fayetteville Rd Northbound			Old Fayetteville Rd Southbound			Eastbound			Site Drive Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2019 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	542	0	0	498	0	0	0	0	0	0	0
2019 Existing Traffic	0	542	0	0	498	0	0	0	0	0	0	0
Growth Factor (1.5% per year)	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
2022 Background Growth	0	16	0	0	15	0	0	0	0	0	0	0
2022 Background Traffic	0	558	0	0	513	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	17.00%	21.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	39	49	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	32.00%	0.00%	21.00%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	83	0	55
Total External Site Traffic	0	0	39	49	0	0	0	0	0	83	0	55
Pass-By Capture Reduction	0	-30	0	0	-19	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	51	19	0	0	0	0	0	68	0	30
Total Pass-By Traffic	0	-30	51	19	-19	0	0	0	0	68	0	30
Total Project Traffic	0	-30	90	68	-19	0	0	0	0	151	0	85
2022 Buildout Total	0	528	90	68	494	0	0	0	0	151	0	85

Appendix E:
Synchro Output:
Existing (2019)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	979	78	13	260	252	26	207	13	353	123	41
Future Volume (vph)	147	979	78	13	260	252	26	207	13	353	123	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	200		0	175		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3500	0	1736	3214	0	1671	1743	0	1703	1724	0
Flt Permitted	0.311			0.110			0.565			0.421		
Satd. Flow (perm)	579	3500	0	201	3214	0	994	1743	0	755	1724	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			241			3			16	
Link Speed (mph)		55			45			35			35	
Link Distance (ft)		691			1399			1622			1084	
Travel Time (s)		8.6			21.2			31.6			21.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	1149	0	14	557	0	28	239	0	384	179	0
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		D,P+P	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6			2			4			8		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	19.0		13.0	19.0		14.0	15.0		15.0	15.0	
Total Split (s)	14.0	32.0		14.0	32.0		24.0	30.0		24.0	30.0	
Total Split (%)	14.0%	32.0%		14.0%	32.0%		24.0%	30.0%		24.0%	30.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.1		3.0	4.1	
All-Red Time (s)	2.4	1.6		2.8	1.6		3.9	3.0		4.1	3.0	
Lost Time Adjust (s)	-0.4	-1.1		-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	41.7	43.9		45.7	32.4		40.3	19.6		38.3	26.0	
Actuated g/C Ratio	0.42	0.44		0.46	0.32		0.40	0.20		0.38	0.26	
v/c Ratio	0.45	0.75		0.07	0.46		0.05	0.69		0.82	0.39	
Control Delay	21.8	29.3		12.2	6.6		15.2	47.3		36.5	33.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.8	29.3		12.2	6.6		15.2	47.3		36.5	33.4	
LOS	C	C		B	A		B	D		D	C	
Approach Delay		28.4			6.8			43.9			35.5	
Approach LOS		C			A			D			D	
Queue Length 50th (ft)	59	297		2	10		10	141		172	102	
Queue Length 95th (ft)	111	#607		m9	13		24	210		#239	157	
Internal Link Dist (ft)		611			1319			1542			1004	
Turn Bay Length (ft)	300			200			175			225		
Base Capacity (vph)	359	1540		230	1203		548	438		471	535	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.45	0.75		0.06	0.46		0.05	0.55		0.82	0.33	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Lloyd Farm - 2019 Update
1: Old Fayetteville Rd & NC-54

Existing AM
04/01/2019

Intersection Signal Delay: 26.9

Intersection LOS: C

Intersection Capacity Utilization 83.3%

ICU Level of Service E

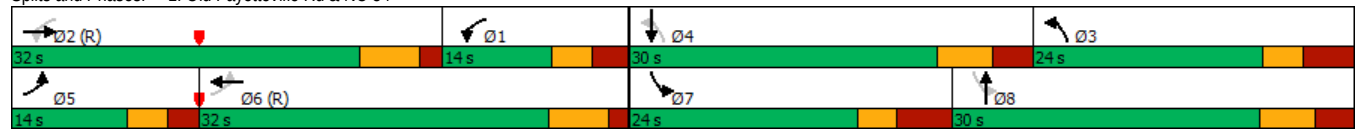
Analysis Period (min) 15

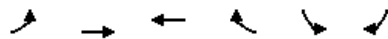
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	1285	517	28	0	6
Future Volume (vph)	0	1285	517	28	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3471	1553	0	1405
Flt Permitted						
Satd. Flow (perm)	0	5085	3471	1553	0	1405
Link Speed (mph)		45	45		25	
Link Distance (ft)		1399	274		420	
Travel Time (s)		21.2	4.2		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	4%	4%	17%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1444	581	31	0	7
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.2%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	1285	517	28	0	6
Future Vol, veh/h	0	1285	517	28	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	17	17
Mvmt Flow	0	1444	581	31	0	7
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	291
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.24
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.47
Pot Cap-1 Maneuver	0	-	-	-	0	663
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	663
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	663		
HCM Lane V/C Ratio	-	-	-	0.01		
HCM Control Delay (s)	-	-	-	10.5		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		

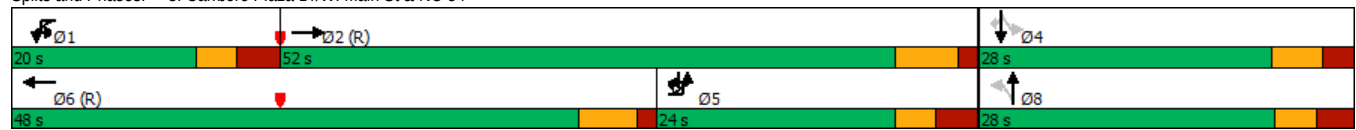
														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	8	196	1054	27	8	56	419	35	12	27	60	162	38	101
Future Volume (vph)	8	196	1054	27	8	56	419	35	12	27	60	162	38	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%				0%		0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1752	3491	0	0	1752	3466	0	1703	1593	0	1752	1845	1568
Flt Permitted		0.950				0.950			0.731			0.697		
Satd. Flow (perm)	0	1752	3491	0	0	1752	3466	0	1310	1593	0	1284	1845	1548
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			3				11			64				107
Link Speed (mph)			45				45			25			35	
Link Distance (ft)			274				857			460			384	
Travel Time (s)			4.2				13.0			12.5			7.5	
Confl. Peds. (#/hr)											1	1		
Confl. Bikes (#/hr)														1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%			0%			0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	218	1150	0	0	69	483	0	13	93	0	172	40	107
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	18.0		13.0	13.0		14.0	14.0	14.0
Total Split (s)	24.0	24.0	52.0		20.0	20.0	48.0		28.0	28.0		28.0	28.0	24.0
Total Split (%)	24.0%	24.0%	52.0%		20.0%	20.0%	48.0%		28.0%	28.0%		28.0%	28.0%	24.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lag		Lead	Lead	Lead							Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		None	None	C-Max		None	None		None	None	None
Act Effect Green (s)		19.0	59.4			10.1	47.8		18.2	18.2		18.2	18.2	37.2
Actuated g/C Ratio		0.19	0.59			0.10	0.48		0.18	0.18		0.18	0.18	0.37
v/c Ratio		0.66	0.55			0.39	0.29		0.05	0.27		0.74	0.12	0.17
Control Delay		30.9	8.2			48.1	16.8		31.7	15.1		56.9	32.9	3.7
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		30.9	8.2			48.1	16.8		31.7	15.1		56.9	32.9	3.7
LOS		C	A			D	B		C	B		E	C	A
Approach Delay			11.9				20.7			17.1			36.1	
Approach LOS			B				C			B			D	
Queue Length 50th (ft)		116	136			42	93		7	15		104	21	0
Queue Length 95th (ft)		m132	107			83	141		22	55		169	48	28
Internal Link Dist (ft)			194				777			380			304	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		332	2075			262	1663		301	415		295	424	646
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.66	0.55			0.26	0.29		0.04	0.22		0.58	0.09	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 93 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74

Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 64.0%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	
! Phase conflict between lane groups.	

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	234	4	4	177	8	8	4	4	16	4	117
Future Volume (vph)	36	234	4	4	177	8	8	4	4	16	4	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1736	1827	1553	1719	1797	0	0	1756	0	0	1639	0
Flt Permitted	0.950			0.950				0.976			0.994	
Satd. Flow (perm)	1736	1827	1553	1719	1797	0	0	1756	0	0	1639	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		384			838			457			474	
Travel Time (s)		7.5			16.3			12.5			12.9	
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	282	5	5	223	0	0	20	0	0	165	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 34.1%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	234	4	4	177	8	8	4	4	16	4	117
Future Vol, veh/h	36	234	4	4	177	8	8	4	4	16	4	117
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	0	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	2	2	2
Mvmt Flow	43	282	5	5	213	10	10	5	5	19	5	141

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	287	0	0	669	603	284	608	603	220
Stage 1	-	-	-	-	-	-	368	368	-	230	230	-
Stage 2	-	-	-	-	-	-	301	235	-	378	373	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1332	-	-	1258	-	-	371	413	755	408	413	820
Stage 1	-	-	-	-	-	-	652	621	-	773	714	-
Stage 2	-	-	-	-	-	-	708	710	-	644	618	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1330	-	-	1258	-	-	296	397	754	389	397	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	296	397	-	389	397	-
Stage 1	-	-	-	-	-	-	631	601	-	747	710	-
Stage 2	-	-	-	-	-	-	580	706	-	613	598	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			15.1			11.6		
HCM LOS							C			B		

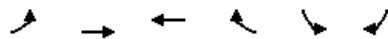
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	377	1330	-	-	1258	-	-	706
HCM Lane V/C Ratio	0.051	0.033	-	-	0.004	-	-	0.234
HCM Control Delay (s)	15.1	7.8	-	-	7.9	-	-	11.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.9

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	12	25	7	4	15	19	16	4	97	7
Future Volume (vph)	4	4	12	25	7	4	15	19	16	4	97	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1634	0	0	1771	0	0	1722	0	0	1844	0
Flt Permitted		0.990			0.966			0.985			0.998	
Satd. Flow (perm)	0	1634	0	0	1771	0	0	1722	0	0	1844	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		293			873			474			1304	
Travel Time (s)		8.0			23.8			12.9			35.6	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	43	0	0	60	0	0	128	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 21.6%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.6											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	4	12	25	7	4	15	19	16	4	97	7
Future Vol, veh/h	4	4	12	25	7	4	15	19	16	4	97	7
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	2	2	2
Mvmt Flow	5	5	14	30	8	5	18	23	19	5	115	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		1					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay	7.3		7.7		7.4		7.8					
HCM LOS	A		A		A		A					
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	30%	20%	69%	4%								
Vol Thru, %	38%	20%	19%	90%								
Vol Right, %	32%	60%	11%	6%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	50	20	36	108								
LT Vol	15	4	25	4								
Through Vol	19	4	7	97								
RT Vol	16	12	4	7								
Lane Flow Rate	60	24	43	129								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.067	0.027	0.052	0.145								
Departure Headway (Hd)	4.049	4.039	4.349	4.063								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	876	870	811	877								
Service Time	2.116	2.138	2.441	2.115								
HCM Lane V/C Ratio	0.068	0.028	0.053	0.147								
HCM Control Delay	7.4	7.3	7.7	7.8								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.2	0.1	0.2	0.5								

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	20	17	4	18	4	7	18	4	4	96	4
Future Volume (vph)	6	20	17	4	18	4	7	18	4	4	96	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1670	0	0	1661	0	0	1657	0	0	1850	0
Flt Permitted		0.993			0.992			0.988			0.998	
Satd. Flow (perm)	0	1670	0	0	1661	0	0	1657	0	0	1850	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			479	
Travel Time (s)		24.1			20.0			35.6			13.1	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	11%	11%	11%	11%	11%	11%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	31	0	0	34	0	0	124	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 17.0%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.7											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	20	17	4	18	4	7	18	4	4	96	4
Future Vol, veh/h	6	20	17	4	18	4	7	18	4	4	96	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	11	11	11	11	11	11	2	2	2
Mvmt Flow	7	24	20	5	21	5	8	21	5	5	114	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		1					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay	7.5		7.6		7.5		7.8					
HCM LOS	A		A		A		A					
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	24%	14%	15%	4%								
Vol Thru, %	62%	47%	69%	92%								
Vol Right, %	14%	40%	15%	4%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	29	43	26	104								
LT Vol	7	6	4	4								
Through Vol	18	20	18	96								
RT Vol	4	17	4	4								
Lane Flow Rate	35	51	31	124								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.041	0.058	0.037	0.141								
Departure Headway (Hd)	4.292	4.109	4.341	4.09								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	826	859	813	872								
Service Time	2.361	2.196	2.432	2.139								
HCM Lane V/C Ratio	0.042	0.059	0.038	0.142								
HCM Control Delay	7.5	7.5	7.6	7.8								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.1	0.2	0.1	0.5								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	35	28	4	4	11
Future Volume (vph)	4	35	28	4	4	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1750	1746	0	1657	0
Flt Permitted		0.995			0.987	
Satd. Flow (perm)	0	1750	1746	0	1657	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		365	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	2			2		1
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	7%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	49	40	0	19	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 15.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	35	28	4	4	11
Future Vol, veh/h	4	35	28	4	4	11
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	8	8	7	7	2	2
Mvmt Flow	5	44	35	5	5	14
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.4	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	27%
Vol Thru, %	90%	88%	0%
Vol Right, %	0%	12%	73%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	39	32	15
LT Vol	4	0	4
Through Vol	35	28	0
RT Vol	0	4	11
Lane Flow Rate	49	40	19
Geometry Grp	1	1	1
Degree of Util (X)	0.056	0.045	0.019
Departure Headway (Hd)	4.12	4.014	3.7
Convergence, Y/N	Yes	Yes	Yes
Cap	872	894	962
Service Time	2.132	2.029	1.742
HCM Lane V/C Ratio	0.056	0.045	0.02
HCM Control Delay	7.4	7.2	6.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	31	588	15	19	507
Future Volume (vph)	11	31	588	15	19	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1655	0	1804	0	0	1772
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1655	0	1804	0	0	1772
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		1084			723
Travel Time (s)	27.6		21.1			14.1
Confl. Peds. (#/hr)		2				
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	662	0	0	578
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 52.7%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	11	31	588	15	19	507
Future Vol, veh/h	11	31	588	15	19	507
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	5	5	7	7
Mvmt Flow	12	34	646	16	21	557
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1253	656	0	0	662	0
Stage 1	654	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	190	465	-	-	903	-
Stage 1	517	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	184	464	-	-	903	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.6	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	332	903	-	
HCM Lane V/C Ratio	-	-	0.139	0.023	-	
HCM Control Delay (s)	-	-	17.6	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	370	62	30	769	371	175	135	17	254	163	77
Future Volume (vph)	40	370	62	30	769	371	175	135	17	254	163	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	300		0	200		0	175		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3465	0	1770	3366	0	1770	1826	0	1770	1773	0
Flt Permitted	0.089			0.427			0.248			0.487		
Satd. Flow (perm)	166	3465	0	795	3366	0	462	1826	0	902	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			97			6			21	
Link Speed (mph)		55			45			35			35	
Link Distance (ft)		691			1399			1622			1084	
Travel Time (s)		8.6			21.2			31.6			21.1	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	496	0	34	1310	0	201	175	0	292	276	0
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		D,P+P	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6			2			4			8		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	19.0		13.0	19.0		14.0	15.0		15.0	15.0	
Total Split (s)	13.0	45.0		13.0	45.0		19.0	24.0		18.0	23.0	
Total Split (%)	13.0%	45.0%		13.0%	45.0%		19.0%	24.0%		18.0%	23.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.1		3.0	4.1	
All-Red Time (s)	2.4	1.6		2.8	1.6		3.9	3.0		4.1	3.0	
Lost Time Adjust (s)	-0.4	-1.1		-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	52.8	48.1		52.8	48.0		29.2	16.2		29.2	17.4	
Actuated g/C Ratio	0.53	0.48		0.53	0.48		0.29	0.16		0.29	0.17	
v/c Ratio	0.22	0.30		0.07	0.79		0.69	0.58		0.78	0.85	
Control Delay	22.2	17.3		7.1	23.2		47.6	44.9		41.7	61.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.2	17.3		7.1	23.2		47.6	44.9		41.7	61.1	
LOS	C	B		A	C		D	D		D	E	
Approach Delay		17.7			22.8			46.4			51.2	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)	13	105		12	381		92	99		142	158	
Queue Length 95th (ft)	30	143		m11	#500		141	158		205	#276	
Internal Link Dist (ft)		611			1319			1542			1004	
Turn Bay Length (ft)	300			200			175			225		
Base Capacity (vph)	216	1677		498	1664		327	351		376	336	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.30		0.07	0.79		0.61	0.50		0.78	0.82	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

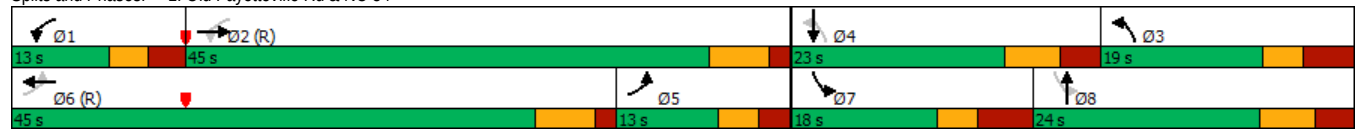
Maximum v/c Ratio: 0.85

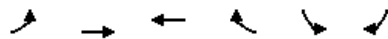
Lloyd Farm - 2019 Update
1: Old Fayetteville Rd & NC-54

Existing PM
04/01/2019

Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 68.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	602	1162	16	0	23
Future Volume (vph)	0	602	1162	16	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3539	1583	0	1580
Flt Permitted						
Satd. Flow (perm)	0	5085	3539	1583	0	1580
Link Speed (mph)		45	45		25	
Link Distance (ft)		1399	274		420	
Travel Time (s)		21.2	4.2		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	725	1400	19	0	28
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 42.1%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	602	1162	16	0	23
Future Vol, veh/h	0	602	1162	16	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	0	725	1400	19	0	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	700
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.34
Pot Cap-1 Maneuver	0	-	-	-	0	377
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	377
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		15.3		
HCM LOS	C					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	377		
HCM Lane V/C Ratio	-	-	-	0.074		
HCM Control Delay (s)	-	-	-	15.3		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	0.2		

														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	4	122	458	20	12	189	892	89	56	94	75	89	108	203
Future Volume (vph)	4	122	458	20	12	189	892	89	56	94	75	89	108	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%				0%		0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1770	3518	0	0	1770	3486	0	1770	1727	0	1770	1863	1583
Flt Permitted		0.950				0.950			0.623			0.420		
Satd. Flow (perm)	0	1769	3518	0	0	1770	3486	0	1160	1727	0	780	1863	1563
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			5				12				43			105
Link Speed (mph)			45				45				25			35
Link Distance (ft)			274				857				460			384
Travel Time (s)			4.2				13.0				12.5			7.5
Confl. Peds. (#/hr)		1						1	1		5	5		1
Confl. Bikes (#/hr)														
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%				0%		0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	144	543	0	0	229	1115	0	64	192	0	101	123	231
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	35.0		38.0	38.0		14.0	14.0	14.0
Total Split (s)	18.0	18.0	39.0		23.0	23.0	44.0		38.0	38.0		38.0	38.0	18.0
Total Split (%)	18.0%	18.0%	39.0%		23.0%	23.0%	44.0%		38.0%	38.0%		38.0%	38.0%	18.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		Max	Max	C-Max		None	None		None	None	None
Act Effect Green (s)		13.8	51.9			18.0	56.1		15.1	15.1		15.1	15.1	28.9
Actuated g/C Ratio		0.14	0.52			0.18	0.56		0.15	0.15		0.15	0.15	0.29
v/c Ratio		0.59	0.30			0.72	0.57		0.37	0.64		0.86	0.44	0.44
Control Delay		41.2	18.6			52.8	17.2		42.0	40.0		92.4	41.9	14.2
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		41.2	18.6			52.8	17.2		42.0	40.0		92.4	41.9	14.2
LOS		D	B			D	B		D	D		F	D	B
Approach Delay			23.3				23.2			40.5			39.1	
Approach LOS			C				C			D			D	
Queue Length 50th (ft)		71	85			139	224		37	90		64	72	57
Queue Length 95th (ft)		m83	132			#232	362		70	146		#115	114	92
Internal Link Dist (ft)			194				777			380			304	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		263	1826			318	1960		382	598		257	614	545
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.55	0.30			0.72	0.57		0.17	0.32		0.39	0.20	0.42

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 53 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86

Intersection Signal Delay: 27.5 Intersection LOS: C
 Intersection Capacity Utilization 69.7% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.
 ! Phase conflict between lane groups.

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	231	5	4	338	18	6	4	4	12	4	55
Future Volume (vph)	68	231	5	4	338	18	6	4	4	12	4	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	0	1754	0	0	1590	0
Flt Permitted	0.950			0.950				0.977			0.992	
Satd. Flow (perm)	1770	1863	1583	1770	1848	0	0	1754	0	0	1590	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		384			838			457			474	
Travel Time (s)		7.5			16.3			12.5			12.9	
Confl. Peds. (#/hr)	4		4	4		4			4	4		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	260	6	4	400	0	0	15	0	0	79	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 37.3%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱		↰			↱	
Traffic Vol, veh/h	68	231	5	4	338	18	6	4	4	12	4	55
Future Vol, veh/h	68	231	5	4	338	18	6	4	4	12	4	55
Conflicting Peds, #/hr	4	0	4	4	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75		0	120		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	6	6	6
Mvmt Flow	76	260	6	4	380	20	7	4	4	13	4	62
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	404	0	0	270	0	0	847	828	268	825	824	394
Stage 1	-	-	-	-	-	-	416	416	-	402	402	-
Stage 2	-	-	-	-	-	-	431	412	-	423	422	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	1155	-	-	1293	-	-	282	306	771	287	304	646
Stage 1	-	-	-	-	-	-	614	592	-	617	593	-
Stage 2	-	-	-	-	-	-	603	594	-	601	581	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1151	-	-	1289	-	-	238	283	766	265	282	644
Mov Cap-2 Maneuver	-	-	-	-	-	-	238	283	-	265	282	-
Stage 1	-	-	-	-	-	-	572	551	-	574	589	-
Stage 2	-	-	-	-	-	-	539	590	-	552	541	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			0.1			17.1			13.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	314		1151	-	-	1289	-	-	490			
HCM Lane V/C Ratio	0.05		0.066	-	-	0.003	-	-	0.163			
HCM Control Delay (s)	17.1		8.3	-	-	7.8	-	-	13.8			
HCM Lane LOS	C		A	-	-	A	-	-	B			
HCM 95th %tile Q(veh)	0.2		0.2	-	-	0	-	-	0.6			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	4	32	20	10	4	29	31	12	4	31	11
Future Volume (vph)	6	4	32	20	10	4	29	31	12	4	31	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1659	0	0	1764	0	0	1785	0	0	1796	0
Flt Permitted		0.993			0.971			0.980			0.996	
Satd. Flow (perm)	0	1659	0	0	1764	0	0	1785	0	0	1796	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		293			873			474			1304	
Travel Time (s)		8.0			23.8			12.9			35.6	
Confl. Peds. (#/hr)	4		1	1		4	6		1	1		6
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	37	0	0	81	0	0	51	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 24.1%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

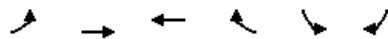
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	4	32	20	10	4	29	31	12	4	31	11
Future Vol, veh/h	6	4	32	20	10	4	29	31	12	4	31	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	3	3	3	2	2	2	2	2	2
Mvmt Flow	7	4	36	22	11	4	33	35	13	4	35	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	7.5	7.6	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	14%	59%	9%
Vol Thru, %	43%	10%	29%	67%
Vol Right, %	17%	76%	12%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	42	34	46
LT Vol	29	6	20	4
Through Vol	31	4	10	31
RT Vol	12	32	4	11
Lane Flow Rate	81	47	38	52
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.049	0.045	0.058
Departure Headway (Hd)	4.102	3.764	4.265	4.018
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	869	940	831	885
Service Time	2.148	1.835	2.333	2.071
HCM Lane V/C Ratio	0.093	0.05	0.046	0.059
HCM Control Delay	7.6	7	7.5	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	8	11	4	23	4	9	36	4	4	30	4
Future Volume (vph)	4	8	11	4	23	4	9	36	4	4	30	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1531	0	0	1802	0	0	1826	0	0	1742	0
Flt Permitted		0.991			0.994			0.991			0.995	
Satd. Flow (perm)	0	1531	0	0	1802	0	0	1826	0	0	1742	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			479	
Travel Time (s)		24.1			20.0			35.6			13.1	
Confl. Peds. (#/hr)	1		4	4		1	5		1	1		5
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	15%	15%	15%	3%	3%	3%	2%	2%	2%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	39	0	0	62	0	0	48	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 16.1%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.4											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	8	11	4	23	4	9	36	4	4	30	4
Future Vol, veh/h	4	8	11	4	23	4	9	36	4	4	30	4
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	15	15	15	3	3	3	2	2	2	7	7	7
Mvmt Flow	5	10	14	5	29	5	11	46	5	5	38	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.3			7.4			7.4			7.4		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	18%	17%	13%	11%								
Vol Thru, %	73%	35%	74%	79%								
Vol Right, %	8%	48%	13%	11%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	49	23	31	38								
LT Vol	9	4	4	4								
Through Vol	36	8	23	30								
RT Vol	4	11	4	4								
Lane Flow Rate	62	29	39	48								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.07	0.033	0.045	0.055								
Departure Headway (Hd)	4.078	4.124	4.113	4.143								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	875	861	864	860								
Service Time	2.121	2.185	2.171	2.19								
HCM Lane V/C Ratio	0.071	0.034	0.045	0.056								
HCM Control Delay	7.4	7.3	7.4	7.4								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.2	0.1	0.1	0.2								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	22	30	4	4	6
Future Volume (vph)	6	22	30	4	4	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1693	1831	0	1504	0
Flt Permitted		0.989			0.980	
Satd. Flow (perm)	0	1693	1831	0	1504	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		365	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	10			10	3	1
Confl. Bikes (#/hr)						
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	2%	2%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	46	56	0	17	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.7%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	22	30	4	4	6
Future Vol, veh/h	6	22	30	4	4	6
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Heavy Vehicles, %	11	11	2	2	14	14
Mvmt Flow	10	36	49	7	7	10
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.5	7.2	7.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	40%
Vol Thru, %	79%	88%	0%
Vol Right, %	0%	12%	60%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	28	34	10
LT Vol	6	0	4
Through Vol	22	30	0
RT Vol	0	4	6
Lane Flow Rate	46	56	16
Geometry Grp	1	1	1
Degree of Util (X)	0.054	0.061	0.018
Departure Headway (Hd)	4.202	3.927	4.034
Convergence, Y/N	Yes	Yes	Yes
Cap	854	914	883
Service Time	2.217	1.944	2.08
HCM Lane V/C Ratio	0.054	0.061	0.018
HCM Control Delay	7.5	7.2	7.2
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.2	0.2	0.1

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	6	528	10	10	486
Future Volume (vph)	15	6	528	10	10	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1726	0	1857	0	0	1861
Flt Permitted	0.966					0.999
Satd. Flow (perm)	1726	0	1857	0	0	1861
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		1084			723
Travel Time (s)	27.6		21.1			14.1
Confl. Peds. (#/hr)				9	9	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	585	0	0	539
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 43.6%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	
Traffic Vol, veh/h	15	6	528	10	10	486
Future Vol, veh/h	15	6	528	10	10	486
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	7	574	11	11	528
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1139	589	0	0	594	0
Stage 1	589	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	223	508	-	-	982	-
Stage 1	554	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	218	504	-	-	975	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	20.2	0		0.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	260	975	-	
HCM Lane V/C Ratio	-	-	0.088	0.011	-	
HCM Control Delay (s)	-	-	20.2	8.7	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Appendix F:
Synchro Output:
Background (2022)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	1009	80	13	268	260	27	213	13	364	127	42
Future Volume (vph)	151	1009	80	13	268	260	27	213	13	364	127	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	200		0	175		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3500	0	1736	3214	0	1671	1743	0	1703	1724	0
Flt Permitted	0.315			0.107			0.589			0.339		
Satd. Flow (perm)	587	3500	0	195	3214	0	1036	1743	0	608	1724	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			274			2			16	
Link Speed (mph)		55			45			35			35	
Link Distance (ft)		681			1399			1622			1084	
Travel Time (s)		8.4			21.2			31.6			21.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	8%	8%	8%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	1184	0	14	574	0	29	246	0	396	184	0
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		D,P+P	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6			2			4			8		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	19.0		13.0	19.0		14.0	15.0		15.0	15.0	
Total Split (s)	13.0	41.0		13.0	41.0		14.0	18.0		28.0	32.0	
Total Split (%)	13.0%	41.0%		13.0%	41.0%		14.0%	18.0%		28.0%	32.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.1		3.0	4.1	
All-Red Time (s)	2.4	1.6		2.8	1.6		3.9	3.0		4.1	3.0	
Lost Time Adjust (s)	-0.4	-1.1		-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	44.0	46.4		48.0	36.1		39.0	14.0		36.0	32.8	
Actuated g/C Ratio	0.44	0.46		0.48	0.36		0.39	0.14		0.36	0.33	
v/c Ratio	0.47	0.73		0.07	0.43		0.06	1.00		0.86	0.32	
Control Delay	19.4	25.9		7.7	3.1		18.6	104.0		43.8	28.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	25.9		7.7	3.1		18.6	104.0		43.8	28.0	
LOS	B	C		A	A		B	F		D	C	
Approach Delay		25.1			3.2			95.0			38.8	
Approach LOS		C			A			F			D	
Queue Length 50th (ft)	57	292		2	0		11	~175		190	69	
Queue Length 95th (ft)	96	#518		m6	0		29	#332		#341	160	
Internal Link Dist (ft)		601			1319			1542			1004	
Turn Bay Length (ft)	300			200			175			225		
Base Capacity (vph)	353	1628		216	1336		477	245		476	620	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.73		0.06	0.43		0.06	1.00		0.83	0.30	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 30.2

Intersection LOS: C

Intersection Capacity Utilization 85.1%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

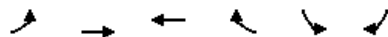
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	1324	533	28	0	6
Future Volume (vph)	0	1324	533	28	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3471	1553	0	1405
Flt Permitted						
Satd. Flow (perm)	0	5085	3471	1553	0	1405
Link Speed (mph)		45	45		25	
Link Distance (ft)		1399	274		420	
Travel Time (s)		21.2	4.2		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	4%	4%	17%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1488	599	31	0	7
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.9%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	1324	533	28	0	6
Future Vol, veh/h	0	1324	533	28	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	17	17
Mvmt Flow	0	1488	599	31	0	7
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	300
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.24
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.47
Pot Cap-1 Maneuver	0	-	-	-	0	653
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	653
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	653		
HCM Lane V/C Ratio	-	-	-	0.01		
HCM Control Delay (s)	-	-	-	10.6		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		

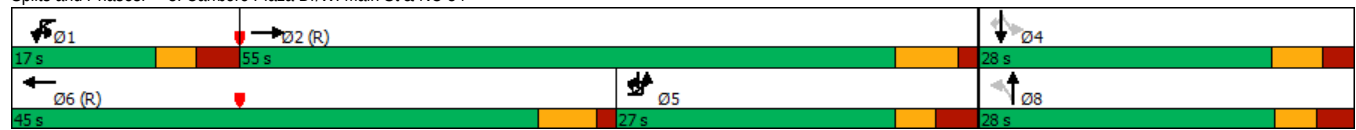
														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	8	202	1086	28	8	58	432	36	12	28	62	167	39	104
Future Volume (vph)	8	202	1086	28	8	58	432	36	12	28	62	167	39	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%			0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1752	3491	0	0	1752	3466	0	1703	1593	0	1752	1845	1568
Flt Permitted		0.950				0.950			0.730			0.695		
Satd. Flow (perm)	0	1752	3491	0	0	1752	3466	0	1308	1593	0	1281	1845	1548
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			4				10			66				111
Link Speed (mph)			45				45			25			35	
Link Distance (ft)			274				857			460			384	
Travel Time (s)			4.2				13.0			12.5			7.5	
Confl. Peds. (#/hr)											1	1		
Confl. Bikes (#/hr)														1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%			0%			0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	224	1185	0	0	71	498	0	13	96	0	178	41	111
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	18.0		13.0	13.0		14.0	14.0	14.0
Total Split (s)	27.0	27.0	55.0		17.0	17.0	45.0		28.0	28.0		28.0	28.0	27.0
Total Split (%)	27.0%	27.0%	55.0%		17.0%	17.0%	45.0%		28.0%	28.0%		28.0%	28.0%	27.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lag		Lead	Lead	Lead							Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		None	None	C-Max		None	None		None	None	None
Act Efect Green (s)		22.0	59.3			9.9	44.5		18.5	18.5		18.5	18.5	40.5
Actuated g/C Ratio		0.22	0.59			0.10	0.44		0.18	0.18		0.18	0.18	0.40
v/c Ratio		0.58	0.57			0.41	0.32		0.05	0.28		0.75	0.12	0.16
Control Delay		28.4	9.5			49.2	19.1		31.5	15.0		57.6	32.7	3.2
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		28.4	9.5			49.2	19.1		31.5	15.0		57.6	32.7	3.2
LOS		C	A			D	B		C	B		E	C	A
Approach Delay			12.5				22.9			16.9			36.2	
Approach LOS			B				C			B			D	
Queue Length 50th (ft)		99	153			43	104		7	16		107	22	0
Queue Length 95th (ft)		m138	178			86	154		22	57		176	49	27
Internal Link Dist (ft)			194				777			380			304	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		385	2070			210	1547		300	417		294	424	697
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.58	0.57			0.34	0.32		0.04	0.23		0.61	0.10	0.16

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 93 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75

Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	
! Phase conflict between lane groups.	

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	241	4	4	182	8	8	4	4	16	4	121
Future Volume (vph)	37	241	4	4	182	8	8	4	4	16	4	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1736	1827	1553	1719	1797	0	0	1756	0	0	1637	0
Flt Permitted	0.950			0.950				0.976			0.994	
Satd. Flow (perm)	1736	1827	1553	1719	1797	0	0	1756	0	0	1637	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		384			838			457			474	
Travel Time (s)		7.5			16.3			12.5			12.9	
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	290	5	5	229	0	0	20	0	0	170	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 34.7%	ICU Level of Service A											
Analysis Period (min) 15												

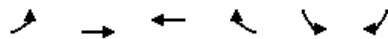
Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	241	4	4	182	8	8	4	4	16	4	121
Future Vol, veh/h	37	241	4	4	182	8	8	4	4	16	4	121
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	0	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	2	2	2
Mvmt Flow	45	290	5	5	219	10	10	5	5	19	5	146
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	231	0	0	295	0	0	690	621	292	626	621	226
Stage 1	-	-	-	-	-	-	380	380	-	236	236	-
Stage 2	-	-	-	-	-	-	310	241	-	390	385	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1325	-	-	1249	-	-	359	403	747	397	403	813
Stage 1	-	-	-	-	-	-	642	614	-	767	710	-
Stage 2	-	-	-	-	-	-	700	706	-	634	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1323	-	-	1249	-	-	283	387	746	378	387	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	387	-	378	387	-
Stage 1	-	-	-	-	-	-	620	593	-	739	706	-
Stage 2	-	-	-	-	-	-	568	702	-	603	590	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			15.4			11.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	364	1323	-	-	1249	-	-	699				
HCM Lane V/C Ratio	0.053	0.034	-	-	0.004	-	-	0.243				
HCM Control Delay (s)	15.4	7.8	-	-	7.9	-	-	11.8				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.9				

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	12	26	7	4	15	20	16	4	100	7
Future Volume (vph)	4	4	12	26	7	4	15	20	16	4	100	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1634	0	0	1772	0	0	1724	0	0	1844	0
Flt Permitted		0.990			0.966			0.985			0.998	
Satd. Flow (perm)	0	1634	0	0	1772	0	0	1724	0	0	1844	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		293			873			474			1304	
Travel Time (s)		8.0			23.8			12.9			35.6	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	44	0	0	61	0	0	132	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 21.9%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.6											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	4	12	26	7	4	15	20	16	4	100	7
Future Vol, veh/h	4	4	12	26	7	4	15	20	16	4	100	7
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	2	2	2
Mvmt Flow	5	5	14	31	8	5	18	24	19	5	119	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.3			7.7			7.4			7.8		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	29%	20%	70%	4%								
Vol Thru, %	39%	20%	19%	90%								
Vol Right, %	31%	60%	11%	6%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	51	20	37	111								
LT Vol	15	4	26	4								
Through Vol	20	4	7	100								
RT Vol	16	12	4	7								
Lane Flow Rate	61	24	44	132								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.068	0.027	0.053	0.149								
Departure Headway (Hd)	4.056	4.149	4.36	4.067								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	874	868	809	876								
Service Time	2.124	2.149	2.454	2.118								
HCM Lane V/C Ratio	0.07	0.028	0.054	0.151								
HCM Control Delay	7.4	7.3	7.7	7.8								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.2	0.1	0.2	0.5								

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	21	18	4	19	4	7	19	4	4	99	4
Future Volume (vph)	6	21	18	4	19	4	7	19	4	4	99	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1670	0	0	1664	0	0	1661	0	0	1850	0
Flt Permitted		0.993			0.992			0.989			0.998	
Satd. Flow (perm)	0	1670	0	0	1664	0	0	1661	0	0	1850	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			479	
Travel Time (s)		24.1			20.0			35.6			13.1	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	11%	11%	11%	11%	11%	11%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	33	0	0	36	0	0	128	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 17.2%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.7											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	21	18	4	19	4	7	19	4	4	99	4
Future Vol, veh/h	6	21	18	4	19	4	7	19	4	4	99	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	11	11	11	11	11	11	2	2	2
Mvmt Flow	7	25	21	5	23	5	8	23	5	5	118	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.5			7.6			7.6			7.9		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	23%	13%	15%	4%								
Vol Thru, %	63%	47%	70%	93%								
Vol Right, %	13%	40%	15%	4%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	30	45	27	107								
LT Vol	7	6	4	4								
Through Vol	19	21	19	99								
RT Vol	4	18	4	4								
Lane Flow Rate	36	54	32	127								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.043	0.061	0.039	0.145								
Departure Headway (Hd)	4.302	4.113	4.353	4.097								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	823	857	810	869								
Service Time	2.376	2.205	2.449	2.151								
HCM Lane V/C Ratio	0.044	0.063	0.04	0.146								
HCM Control Delay	7.6	7.5	7.6	7.9								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.1	0.2	0.1	0.5								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	36	29	4	4	11
Future Volume (vph)	4	36	29	4	4	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1750	1747	0	1657	0
Flt Permitted		0.995			0.987	
Satd. Flow (perm)	0	1750	1747	0	1657	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		365	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	2			2		1
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	7%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	50	41	0	19	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 15.6%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	36	29	4	4	11
Future Vol, veh/h	4	36	29	4	4	11
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	8	8	7	7	2	2
Mvmt Flow	5	45	36	5	5	14
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.4	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	27%
Vol Thru, %	90%	88%	0%
Vol Right, %	0%	12%	73%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	40	33	15
LT Vol	4	0	4
Through Vol	36	29	0
RT Vol	0	4	11
Lane Flow Rate	50	41	19
Geometry Grp	1	1	1
Degree of Util (X)	0.057	0.046	0.019
Departure Headway (Hd)	4.121	4.017	3.704
Convergence, Y/N	Yes	Yes	Yes
Cap	872	893	961
Service Time	2.132	2.032	1.746
HCM Lane V/C Ratio	0.057	0.046	0.02
HCM Control Delay	7.4	7.2	6.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	32	606	15	20	522
Future Volume (vph)	11	32	606	15	20	522
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1653	0	1804	0	0	1772
Flt Permitted	0.987					0.998
Satd. Flow (perm)	1653	0	1804	0	0	1772
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		1084			723
Travel Time (s)	27.6		21.1			14.1
Confl. Peds. (#/hr)		2				
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	682	0	0	596
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 54.3%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	11	32	606	15	20	522
Future Vol, veh/h	11	32	606	15	20	522
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	5	5	7	7
Mvmt Flow	12	35	666	16	22	574
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1292	676	0	0	682	0
Stage 1	674	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	180	453	-	-	888	-
Stage 1	506	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	174	452	-	-	888	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	18.1	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	321	888	-	
HCM Lane V/C Ratio	-	-	0.147	0.025	-	
HCM Control Delay (s)	-	-	18.1	9.2	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	381	64	31	792	382	180	139	18	262	168	79
Future Volume (vph)	41	381	64	31	792	382	180	139	18	262	168	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	200		0	175		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3461	0	1770	3366	0	1770	1826	0	1770	1773	0
Flt Permitted	0.090			0.416			0.232			0.477		
Satd. Flow (perm)	168	3461	0	775	3366	0	432	1826	0	884	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			97			6			21	
Link Speed (mph)		55			45			35			35	
Link Distance (ft)		682			1399			1622			1084	
Travel Time (s)		8.5			21.2			31.6			21.1	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	512	0	36	1349	0	207	181	0	301	284	0
Turn Type	D,P+P	NA		D,P+P	NA		D,P+P	NA		D,P+P	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6			2			4			8		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	19.0		13.0	19.0		14.0	15.0		15.0	15.0	
Total Split (s)	13.0	45.0		13.0	45.0		19.0	24.0		18.0	23.0	
Total Split (%)	13.0%	45.0%		13.0%	45.0%		19.0%	24.0%		18.0%	23.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	4.1		3.0	4.1	
All-Red Time (s)	2.4	1.6		2.8	1.6		3.9	3.0		4.1	3.0	
Lost Time Adjust (s)	-0.4	-1.1		-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	52.3	47.7		52.3	47.5		29.7	16.7		29.7	17.5	
Actuated g/C Ratio	0.52	0.48		0.52	0.48		0.30	0.17		0.30	0.18	
v/c Ratio	0.22	0.31		0.07	0.82		0.71	0.59		0.80	0.87	
Control Delay	22.5	17.6		6.9	24.4		49.2	44.8		43.5	63.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.5	17.6		6.9	24.4		49.2	44.8		43.5	63.4	
LOS	C	B		A	C		D	D		D	E	
Approach Delay		18.0			23.9			47.1			53.2	
Approach LOS		B			C			D			D	
Queue Length 50th (ft)	14	110		12	406		94	102		146	164	
Queue Length 95th (ft)	30	147		m10	#528		145	163		#223	#288	
Internal Link Dist (ft)		602			1319			1542			1004	
Turn Bay Length (ft)	300			200			175			225		
Base Capacity (vph)	215	1661		486	1651		323	351		377	336	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.22	0.31		0.07	0.82		0.64	0.52		0.80	0.85	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

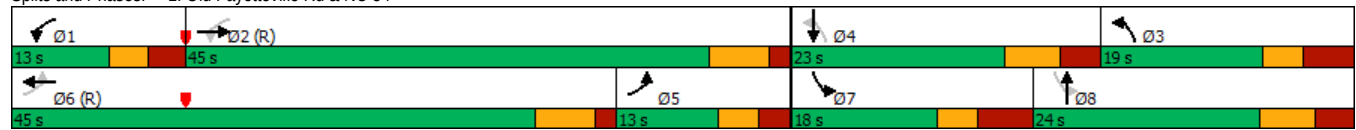
Natural Cycle: 90

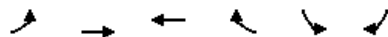
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 31.7 Intersection LOS: C
Intersection Capacity Utilization 70.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	620	1197	16	0	23
Future Volume (vph)	0	620	1197	16	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3539	1583	0	1580
Flt Permitted						
Satd. Flow (perm)	0	5085	3539	1583	0	1580
Link Speed (mph)		45	45		25	
Link Distance (ft)		1399	274		420	
Travel Time (s)		21.2	4.2		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	747	1442	19	0	28
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 43.1%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	620	1197	16	0	23
Future Vol, veh/h	0	620	1197	16	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	0	747	1442	19	0	28
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	721
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.34
Pot Cap-1 Maneuver	0	-	-	-	0	365
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	365
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		15.7		
HCM LOS	C					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	365		
HCM Lane V/C Ratio	-	-	-	0.076		
HCM Control Delay (s)	-	-	-	15.7		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	0.2		

														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	4	126	472	21	12	195	919	92	58	97	77	92	111	209
Future Volume (vph)	4	126	472	21	12	195	919	92	58	97	77	92	111	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%			0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1770	3518	0	0	1770	3486	0	1770	1725	0	1770	1863	1583
Flt Permitted		0.950				0.950			0.618			0.413		
Satd. Flow (perm)	0	1769	3518	0	0	1770	3486	0	1150	1725	0	767	1863	1563
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			5				12			43				105
Link Speed (mph)			45				45			25			35	
Link Distance (ft)			274				857			460			384	
Travel Time (s)			4.2				13.0			12.5			7.5	
Confl. Peds. (#/hr)		1						1	1		5	5		1
Confl. Bikes (#/hr)														
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%			0%			0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	148	560	0	0	236	1149	0	66	198	0	105	126	238
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	35.0		38.0	38.0		14.0	14.0	14.0
Total Split (s)	18.0	18.0	39.0		23.0	23.0	44.0		38.0	38.0		38.0	38.0	18.0
Total Split (%)	18.0%	18.0%	39.0%		23.0%	23.0%	44.0%		38.0%	38.0%		38.0%	38.0%	18.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		Max	Max	C-Max		None	None		None	None	None
Act Effect Green (s)		14.0	51.4			18.0	55.3		15.6	15.6		15.6	15.6	29.7
Actuated g/C Ratio		0.14	0.51			0.18	0.55		0.16	0.16		0.16	0.16	0.30
v/c Ratio		0.60	0.31			0.74	0.59		0.37	0.65		0.88	0.43	0.44
Control Delay		40.9	19.0			54.3	18.2		41.5	39.8		95.6	41.3	14.2
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		40.9	19.0			54.3	18.2		41.5	39.8		95.6	41.3	14.2
LOS		D	B			D	B		D	D		F	D	B
Approach Delay			23.6				24.3			40.2			39.7	
Approach LOS			C				C			D			D	
Queue Length 50th (ft)		73	88			144	240		38	93		66	74	60
Queue Length 95th (ft)		m89	156			#242	386		71	149		#119	116	93
Internal Link Dist (ft)			194				777			380			304	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		266	1809			318	1933		379	598		253	614	555
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.56	0.31			0.74	0.59		0.17	0.33		0.42	0.21	0.43

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 53 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88

Intersection Signal Delay: 28.2 Intersection LOS: C
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	238	5	4	348	19	6	4	4	12	4	57
Future Volume (vph)	70	238	5	4	348	19	6	4	4	12	4	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	0	1754	0	0	1588	0
Flt Permitted	0.950			0.950				0.977			0.992	
Satd. Flow (perm)	1770	1863	1583	1770	1848	0	0	1754	0	0	1588	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		384			838			457			474	
Travel Time (s)		7.5			16.3			12.5			12.9	
Confl. Peds. (#/hr)	4		4	4		4			4	4		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	267	6	4	412	0	0	15	0	0	81	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 38.0%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	238	5	4	348	19	6	4	4	12	4	57
Future Vol, veh/h	70	238	5	4	348	19	6	4	4	12	4	57
Conflicting Peds, #/hr	4	0	4	4	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	0	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	6	6	6
Mvmt Flow	79	267	6	4	391	21	7	4	4	13	4	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	416	0	0	277	0	0	873	853	275	850	849	406
Stage 1	-	-	-	-	-	-	429	429	-	414	414	-
Stage 2	-	-	-	-	-	-	444	424	-	436	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	1143	-	-	1286	-	-	271	296	764	276	294	636
Stage 1	-	-	-	-	-	-	604	584	-	608	586	-
Stage 2	-	-	-	-	-	-	593	587	-	591	574	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1139	-	-	1282	-	-	227	273	759	254	271	634
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	273	-	254	271	-
Stage 1	-	-	-	-	-	-	561	542	-	564	582	-
Stage 2	-	-	-	-	-	-	527	583	-	540	533	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			0.1			17.6			14		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	302	1139	-	-	1282	-	-	481
HCM Lane V/C Ratio	0.052	0.069	-	-	0.004	-	-	0.171
HCM Control Delay (s)	17.6	8.4	-	-	7.8	-	-	14
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.6

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	4	33	21	10	4	30	32	12	4	32	11
Future Volume (vph)	6	4	33	21	10	4	30	32	12	4	32	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1657	0	0	1764	0	0	1787	0	0	1798	0
Flt Permitted		0.993			0.970			0.980			0.996	
Satd. Flow (perm)	0	1657	0	0	1764	0	0	1787	0	0	1798	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		293			873			474			1304	
Travel Time (s)		8.0			23.8			12.9			35.6	
Confl. Peds. (#/hr)	4		1	1		4	6		1	1		6
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	39	0	0	83	0	0	52	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 24.5%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	4	33	21	10	4	30	32	12	4	32	11
Future Vol, veh/h	6	4	33	21	10	4	30	32	12	4	32	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	3	3	3	2	2	2	2	2	2
Mvmt Flow	7	4	37	24	11	4	34	36	13	4	36	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	7.6	7.6	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	14%	60%	9%
Vol Thru, %	43%	9%	29%	68%
Vol Right, %	16%	77%	11%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	43	35	47
LT Vol	30	6	21	4
Through Vol	32	4	10	32
RT Vol	12	33	4	11
Lane Flow Rate	83	48	39	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.095	0.051	0.047	0.059
Departure Headway (Hd)	4.11	3.766	4.276	4.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	866	938	829	882
Service Time	2.16	1.841	2.347	2.084
HCM Lane V/C Ratio	0.096	0.051	0.047	0.06
HCM Control Delay	7.6	7	7.6	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.2

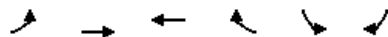
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	8	11	4	24	4	9	37	4	4	31	4
Future Volume (vph)	4	8	11	4	24	4	9	37	4	4	31	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1531	0	0	1802	0	0	1826	0	0	1742	0
Flt Permitted		0.991			0.994			0.991			0.995	
Satd. Flow (perm)	0	1531	0	0	1802	0	0	1826	0	0	1742	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			479	
Travel Time (s)		24.1			20.0			35.6			13.1	
Confl. Peds. (#/hr)	1		4	4		1	5		1	1		5
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	15%	15%	15%	3%	3%	3%	2%	2%	2%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	40	0	0	63	0	0	49	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 16.1%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	8	11	4	24	4	9	37	4	4	31	4
Future Vol, veh/h	4	8	11	4	24	4	9	37	4	4	31	4
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	15	15	15	3	3	3	2	2	2	7	7	7
Mvmt Flow	5	10	14	5	30	5	11	47	5	5	39	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.3	7.4	7.4	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	17%	12%	10%
Vol Thru, %	74%	35%	75%	79%
Vol Right, %	8%	48%	12%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	23	32	39
LT Vol	9	4	4	4
Through Vol	37	8	24	31
RT Vol	4	11	4	4
Lane Flow Rate	63	29	41	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.072	0.033	0.046	0.057
Departure Headway (Hd)	4.081	4.129	4.118	4.147
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	873	859	862	859
Service Time	2.125	2.194	2.18	2.194
HCM Lane V/C Ratio	0.072	0.034	0.048	0.057
HCM Control Delay	7.4	7.3	7.4	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	23	31	4	4	6
Future Volume (vph)	6	23	31	4	4	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1695	1833	0	1504	0
Flt Permitted		0.990			0.980	
Satd. Flow (perm)	0	1695	1833	0	1504	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		365	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	10			10	3	1
Confl. Bikes (#/hr)						
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	2%	2%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	48	58	0	17	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.7%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	23	31	4	4	6
Future Vol, veh/h	6	23	31	4	4	6
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Heavy Vehicles, %	11	11	2	2	14	14
Mvmt Flow	10	38	51	7	7	10
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.5	7.2	7.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	40%
Vol Thru, %	79%	89%	0%
Vol Right, %	0%	11%	60%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	29	35	10
LT Vol	6	0	4
Through Vol	23	31	0
RT Vol	0	4	6
Lane Flow Rate	48	57	16
Geometry Grp	1	1	1
Degree of Util (X)	0.055	0.063	0.018
Departure Headway (Hd)	4.201	3.93	4.038
Convergence, Y/N	Yes	Yes	Yes
Cap	854	913	881
Service Time	2.217	1.947	2.086
HCM Lane V/C Ratio	0.056	0.062	0.018
HCM Control Delay	7.5	7.2	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT	WT	WT	WT	WT	WT
Traffic Volume (vph)	15	6	544	10	10	501
Future Volume (vph)	15	6	544	10	10	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1726	0	1859	0	0	1861
Flt Permitted	0.966					0.999
Satd. Flow (perm)	1726	0	1859	0	0	1861
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		1084			723
Travel Time (s)	27.6		21.1			14.1
Confl. Peds. (#/hr)				9	9	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	602	0	0	556
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 44.4%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	15	6	544	10	10	501
Future Vol, veh/h	15	6	544	10	10	501
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	7	591	11	11	545
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1173	606	0	0	611	0
Stage 1	606	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	212	497	-	-	968	-
Stage 1	545	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	207	493	-	-	961	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	21	0	0.2			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	248	961	-	
HCM Lane V/C Ratio	-	-	0.092	0.011	-	
HCM Control Delay (s)	-	-	21	8.8	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Appendix G:
Synchro & SimTraffic Output:
Build-out (2022)

													
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	183	1052	80	37	19	292	260	27	217	24	382	129	60
Future Volume (vph)	183	1052	80	37	19	292	260	27	217	24	382	129	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%						3%		-2%		-3%		
Storage Length (ft)	300		0		300		0	175		0	325		100
Storage Lanes	1		0		1		0	1		0	2		1
Taper Length (ft)	100				100			100			200		
Satd. Flow (prot)	1770	3500	0	0	1710	3176	0	1688	1750	0	3353	1819	1546
Flt Permitted	0.283				0.122			0.950			0.950		
Satd. Flow (perm)	527	3500	0	0	220	3176	0	1688	1750	0	3353	1819	1546
Right Turn on Red			Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		9				231			5				178
Link Speed (mph)		55				45			35			35	
Link Distance (ft)		640				877			1622			679	
Travel Time (s)		7.9				13.3			31.6			13.2	
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
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	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	8%	8%	8%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)													
Mid-Block Traffic (%)	0%				0%				0%			0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	199	1230	0	0	61	600	0	29	262	0	415	140	65
Turn Type	D,P+P	NA		D,P+P	D,P+P	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	1	6		3	8		7	4	5
Permitted Phases	6			2	2								4
Detector Phase	5	2		1	1	6		3	8		7	4	5
Switch Phase													
Minimum Initial (s)	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.0	19.0		13.0	13.0	19.0		14.0	15.0		15.0	15.0	13.0
Total Split (s)	20.0	40.0		15.0	15.0	35.0		15.0	20.0		25.0	30.0	20.0
Total Split (%)	20.0%	40.0%		15.0%	15.0%	35.0%		15.0%	20.0%		25.0%	30.0%	20.0%
Yellow Time (s)	3.0	4.5		3.0	3.0	4.5		3.0	4.1		3.0	4.1	3.0
All-Red Time (s)	2.4	1.6		2.8	2.8	1.6		3.9	3.0		4.1	3.0	2.4
Lost Time Adjust (s)	-0.4	-1.1			-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	-0.4
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None	None
Act Effect Green (s)	45.5	38.5			46.5	34.3		13.0	16.5		17.9	29.8	44.0
Actuated g/C Ratio	0.46	0.38			0.46	0.34		0.13	0.16		0.18	0.30	0.44
v/c Ratio	0.53	0.91			0.25	0.48		0.13	0.89		0.69	0.26	0.08
Control Delay	19.6	41.6			15.2	7.9		37.4	73.6		44.7	32.5	0.2
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.6	41.6			15.2	7.9		37.4	73.6		44.7	32.5	0.2
LOS	B	D			B	A		D	E		D	C	A
Approach Delay		38.5				8.6			70.0			37.2	
Approach LOS		D				A			E			D	
Queue Length 50th (ft)	69	405			11	15		17	163		127	57	0
Queue Length 95th (ft)	112	#564			m25	43		41	#329		175	141	0
Internal Link Dist (ft)		560				797			1542			599	
Turn Bay Length (ft)	300				300			175			325		100
Base Capacity (vph)	443	1353			251	1241		230	293		670	608	831
Starvation Cap Reductn	0	0			0	0		0	0		0	0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0	0
Reduced v/c Ratio	0.45	0.91			0.24	0.48		0.13	0.89		0.62	0.23	0.08

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

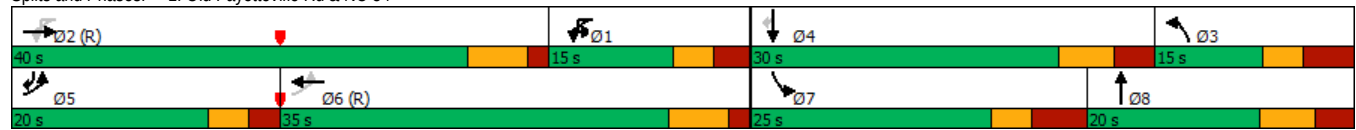
Natural Cycle: 90

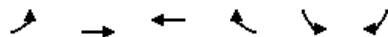
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 77.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	1355	576	49	0	18
Future Volume (vph)	0	1355	576	49	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3471	1553	0	1405
Flt Permitted						
Satd. Flow (perm)	0	5085	3471	1553	0	1405
Link Speed (mph)		45	45		25	
Link Distance (ft)		521	270		420	
Travel Time (s)		7.9	4.1		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	4%	4%	17%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1522	647	55	0	20
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 29.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑	↗		↗
Traffic Vol, veh/h	0	1355	576	49	0	18
Future Vol, veh/h	0	1355	576	49	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	17	17
Mvmt Flow	0	1522	647	55	0	20
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	324
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.24
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.47
Pot Cap-1 Maneuver	0	-	-	-	0	630
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	630
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	630		
HCM Lane V/C Ratio	-	-	-	0.032		
HCM Control Delay (s)	-	-	-	10.9		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		

														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	8	208	1111	28	8	58	475	36	12	28	62	167	39	125
Future Volume (vph)	8	208	1111	28	8	58	475	36	12	28	62	167	39	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%			0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1752	3491	0	0	1752	3470	0	1703	1593	0	1752	1845	1568
Flt Permitted		0.950				0.950			0.730			0.695		
Satd. Flow (perm)	0	1752	3491	0	0	1752	3470	0	1308	1593	0	1281	1845	1548
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			3				10				66			133
Link Speed (mph)			45				45				25		35	
Link Distance (ft)			270				855				460		381	
Travel Time (s)			4.1				13.0				12.5		7.4	
Confl. Peds. (#/hr)											1	1		
Confl. Bikes (#/hr)														1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	6%	6%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%			0%			0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	230	1212	0	0	71	543	0	13	96	0	178	41	133
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	18.0		13.0	13.0		14.0	14.0	14.0
Total Split (s)	24.0	24.0	52.0		20.0	20.0	48.0		28.0	28.0		28.0	28.0	24.0
Total Split (%)	24.0%	24.0%	52.0%		20.0%	20.0%	48.0%		28.0%	28.0%		28.0%	28.0%	24.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lag		Lead	Lead	Lead							Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		None	None	C-Max		None	None		None	None	None
Act Efect Green (s)		19.0	59.0			10.2	47.5		18.5	18.5		18.5	18.5	37.5
Actuated g/C Ratio		0.19	0.59			0.10	0.48		0.18	0.18		0.18	0.18	0.38
v/c Ratio		0.69	0.59			0.40	0.33		0.05	0.28		0.75	0.12	0.20
Control Delay		30.5	7.0			48.2	17.5		31.5	15.0		57.6	32.7	3.5
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		30.5	7.0			48.2	17.5		31.5	15.0		57.6	32.7	3.5
LOS		C	A			D	B		C	B		E	C	A
Approach Delay			10.7				21.0			16.9			34.3	
Approach LOS			B				C			B			C	
Queue Length 50th (ft)		107	121			43	109		7	16		107	22	0
Queue Length 95th (ft)		m141	m143			85	159		22	57		176	49	31
Internal Link Dist (ft)			190				775			380			301	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		332	2060			262	1653		300	417		294	424	667
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.69	0.59			0.27	0.33		0.04	0.23		0.61	0.10	0.20

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 93 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.8

Intersection LOS: B

Intersection Capacity Utilization 65.9%

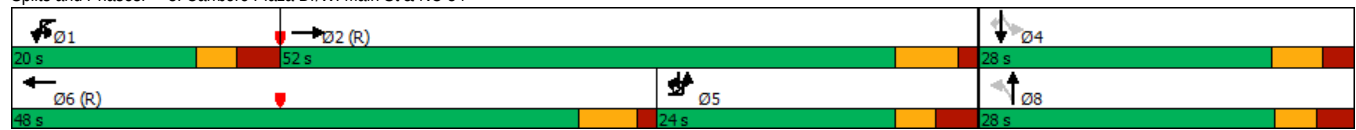
ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

! Phase conflict between lane groups.

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	247	4	4	203	8	8	4	4	22	4	121
Future Volume (vph)	37	247	4	4	203	8	8	4	4	22	4	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1736	1827	1553	1719	1799	0	0	1756	0	0	1643	0
Flt Permitted	0.950			0.950				0.976			0.992	
Satd. Flow (perm)	1736	1827	1553	1719	1799	0	0	1756	0	0	1643	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		381			838			457			474	
Travel Time (s)		7.4			16.3			12.5			12.9	
Confl. Peds. (#/hr)	2					2			2	2		
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	298	5	5	255	0	0	20	0	0	178	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 35.4%	ICU Level of Service A											
Analysis Period (min) 15												

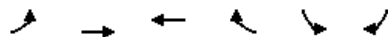
Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	247	4	4	203	8	8	4	4	22	4	121
Future Vol, veh/h	37	247	4	4	203	8	8	4	4	22	4	121
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	0	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	4	4	4	5	5	5	2	2	2	2	2	2
Mvmt Flow	45	298	5	5	245	10	10	5	5	27	5	146
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	257	0	0	303	0	0	724	655	300	660	655	252
Stage 1	-	-	-	-	-	-	388	388	-	262	262	-
Stage 2	-	-	-	-	-	-	336	267	-	398	393	-
Critical Hdwy	4.14	-	-	4.15	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1296	-	-	1241	-	-	341	386	740	376	386	787
Stage 1	-	-	-	-	-	-	636	609	-	743	691	-
Stage 2	-	-	-	-	-	-	678	688	-	628	606	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1294	-	-	1241	-	-	267	370	739	358	370	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	370	-	358	370	-
Stage 1	-	-	-	-	-	-	614	588	-	716	687	-
Stage 2	-	-	-	-	-	-	546	684	-	596	585	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.1			16			12.6		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	346	1294	-	-	1241	-	-	650				
HCM Lane V/C Ratio	0.056	0.034	-	-	0.004	-	-	0.272				
HCM Control Delay (s)	16	7.9	-	-	7.9	-	-	12.6				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	1.1				

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	8	18	26	18	4	15	20	16	4	100	11
Future Volume (vph)	5	8	18	26	18	4	15	20	16	4	100	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1641	0	0	1793	0	0	1724	0	0	1835	0
Flt Permitted		0.992			0.974			0.985			0.998	
Satd. Flow (perm)	0	1641	0	0	1793	0	0	1724	0	0	1835	0
Link Speed (mph)		25			25			25			30	
Link Distance (ft)		293			877			474			1304	
Travel Time (s)		8.0			23.9			12.9			29.6	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)						1			1			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	57	0	0	61	0	0	137	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 23.1%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.7											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	8	18	26	18	4	15	20	16	4	100	11
Future Vol, veh/h	5	8	18	26	18	4	15	20	16	4	100	11
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	2	2	2
Mvmt Flow	6	10	21	31	21	5	18	24	19	5	119	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.4			7.8			7.5			7.9		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	29%	16%	54%	3%								
Vol Thru, %	39%	26%	38%	87%								
Vol Right, %	31%	58%	8%	10%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	51	31	48	115								
LT Vol	15	5	26	4								
Through Vol	20	8	18	100								
RT Vol	16	18	4	11								
Lane Flow Rate	61	37	57	137								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.069	0.043	0.071	0.156								
Departure Headway (Hd)	4.108	4.183	4.466	4.094								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	859	861	807	867								
Service Time	2.198	2.185	2.467	2.166								
HCM Lane V/C Ratio	0.071	0.043	0.071	0.158								
HCM Control Delay	7.5	7.4	7.8	7.9								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.2	0.1	0.2	0.6								

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	25	18	4	25	4	7	21	4	4	103	10
Future Volume (vph)	10	25	18	4	25	4	7	21	4	4	103	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1681	0	0	1673	0	0	1664	0	0	1837	0
Flt Permitted		0.991			0.994			0.990			0.998	
Satd. Flow (perm)	0	1681	0	0	1673	0	0	1664	0	0	1837	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			486	
Travel Time (s)		24.1			20.0			35.6			13.3	
Confl. Peds. (#/hr)	1		1	1		1	4		1	1		4
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	11%	11%	11%	11%	11%	11%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	40	0	0	38	0	0	140	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 19.0%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	10	25	18	4	25	4	7	21	4	4	103	10
Future Vol, veh/h	10	25	18	4	25	4	7	21	4	4	103	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	7	7	7	11	11	11	11	11	11	2	2	2
Mvmt Flow	12	30	21	5	30	5	8	25	5	5	123	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.6			7.7			7.7			8		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	22%	19%	12%	3%								
Vol Thru, %	66%	47%	76%	88%								
Vol Right, %	12%	34%	12%	9%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	32	53	33	117								
LT Vol	7	10	4	4								
Through Vol	21	25	25	103								
RT Vol	4	18	4	10								
Lane Flow Rate	38	63	39	139								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.046	0.075	0.049	0.158								
Departure Headway (Hd)	4.342	4.292	4.502	4.096								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	812	840	800	865								
Service Time	2.437	2.293	2.504	2.171								
HCM Lane V/C Ratio	0.047	0.075	0.049	0.161								
HCM Control Delay	7.7	7.6	7.7	8								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.1	0.2	0.2	0.6								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	43	42	4	4	11
Future Volume (vph)	4	43	42	4	4	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1752	1754	0	1657	0
Flt Permitted		0.996			0.987	
Satd. Flow (perm)	0	1752	1754	0	1657	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		368	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	2			2		1
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	7%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	59	58	0	19	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 15.9%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	43	42	4	4	11
Future Vol, veh/h	4	43	42	4	4	11
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	8	8	7	7	2	2
Mvmt Flow	5	54	53	5	5	14
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.4	7.3	6.9
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	27%
Vol Thru, %	91%	91%	0%
Vol Right, %	0%	9%	73%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	47	46	15
LT Vol	4	0	4
Through Vol	43	42	0
RT Vol	0	4	11
Lane Flow Rate	59	58	19
Geometry Grp	1	1	1
Degree of Util (X)	0.067	0.065	0.02
Departure Headway (Hd)	4.129	4.044	3.746
Convergence, Y/N	Yes	Yes	Yes
Cap	869	887	947
Service Time	2.147	2.063	1.801
HCM Lane V/C Ratio	0.068	0.065	0.02
HCM Control Delay	7.4	7.3	6.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	24	32	624	22	20	554
Future Volume (vph)	24	32	624	22	20	554
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1683	0	1800	0	0	1772
Flt Permitted	0.979					0.998
Satd. Flow (perm)	1683	0	1800	0	0	1772
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		402			723
Travel Time (s)	27.6		7.8			14.1
Confl. Peds. (#/hr)	2					
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	710	0	0	631
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 55.3%	ICU Level of Service B					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	24	32	624	22	20	554
Future Vol, veh/h	24	32	624	22	20	554
Conflicting Peds, #/hr	2	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	5	5	7	7
Mvmt Flow	26	35	686	24	22	609
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1353	698	0	0	710	0
Stage 1	698	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	165	440	-	-	866	-
Stage 1	494	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	158	440	-	-	866	-
Mov Cap-2 Maneuver	158	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	24.1	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	249	866	-	
HCM Lane V/C Ratio	-	-	0.247	0.025	-	
HCM Control Delay (s)	-	-	24.1	9.3	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-	

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	78	1417	538	56	0	68
Future Volume (vph)	78	1417	538	56	0	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			100	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	150				25	
Satd. Flow (prot)	1770	3539	3539	1583	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	1583	0	1611
Link Speed (mph)		45	45		30	
Link Distance (ft)		877	521		467	
Travel Time (s)		13.3	7.9		10.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	1574	598	62	0	76
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 42.5%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1417	538	56	0	68
Future Vol, veh/h	78	1417	538	56	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	1574	598	62	0	76
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	660	0	-	0	-	299
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	924	-	-	-	0	697
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	924	-	-	-	-	697
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		10.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	924	-	-	-	697	
HCM Lane V/C Ratio	0.094	-	-	-	0.108	
HCM Control Delay (s)	9.3	-	-	-	10.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4	

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	26	623	36	45	534
Future Volume (vph)	39	26	623	36	45	534
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	0		100	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	100				100	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1863	1583	1770	1863
Link Speed (mph)	30		35			35
Link Distance (ft)	720		679			402
Travel Time (s)	16.4		13.2			7.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	29	692	40	50	593
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 47.4%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↰	↰	↰	↰	↰
Traffic Vol, veh/h	39	26	623	36	45	534
Future Vol, veh/h	39	26	623	36	45	534
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	29	692	40	50	593
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1385	692	0	0	732	0
Stage 1	692	-	-	-	-	-
Stage 2	693	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	158	444	-	-	873	-
Stage 1	497	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	149	444	-	-	873	-
Mov Cap-2 Maneuver	149	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	28.8	0	0.7			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	149	444	873	-
HCM Lane V/C Ratio	-	-	0.291	0.065	0.057	-
HCM Control Delay (s)	-	-	38.8	13.7	9.4	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0.2	0.2	-

													
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	97	407	64	26	44	828	397	180	129	45	335	173	133
Future Volume (vph)	97	407	64	26	44	828	397	180	129	45	335	173	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				3%			-2%			-3%	
Storage Length (ft)	300		0		300		50	325		0	325		100
Storage Lanes	1		1		1		0	1		0	2		1
Taper Length (ft)	100				100			100			200		
Satd. Flow (prot)	1770	3468	0	0	1743	3315	0	1787	1796	0	3485	1891	1607
Flt Permitted	0.100				0.396			0.950			0.950		
Satd. Flow (perm)	186	3468	0	0	727	3315	0	1787	1796	0	3397	1891	1607
Right Turn on Red			Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		21				96			15				175
Link Speed (mph)		55				45			35			35	
Link Distance (ft)		656				877			1622			679	
Travel Time (s)		8.1				13.3			31.6			13.2	
Confl. Peds. (#/hr)										8	8		
Confl. Bikes (#/hr)													
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)													
Mid-Block Traffic (%)		0%				0%			0%			0%	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	111	542	0	0	81	1408	0	207	200	0	385	199	153
Turn Type	D,P+P	NA		D,P+P	D,P+P	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	1	6		3	8		7	4	5
Permitted Phases	6			2	2								4
Detector Phase	5	2		1	1	6		3	8		7	4	5
Switch Phase													
Minimum Initial (s)	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.0	19.0		13.0	13.0	19.0		14.0	15.0		15.0	15.0	13.0
Total Split (s)	15.0	45.0		15.0	15.0	45.0		21.0	23.0		17.0	19.0	15.0
Total Split (%)	15.0%	45.0%		15.0%	15.0%	45.0%		21.0%	23.0%		17.0%	19.0%	15.0%
Yellow Time (s)	3.0	4.5		3.0	3.0	4.5		3.0	4.1		3.0	4.1	3.0
All-Red Time (s)	2.4	1.6		2.8	2.8	1.6		3.9	3.0		4.1	3.0	2.4
Lost Time Adjust (s)	-0.4	-1.1			-0.8	-1.1		-1.9	-2.1		-2.1	-2.1	-0.4
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead		Lag	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None		None	None	None
Act Effect Green (s)	51.8	46.2			52.8	41.8		15.2	16.2		12.0	13.0	28.0
Actuated g/C Ratio	0.52	0.46			0.53	0.42		0.15	0.16		0.12	0.13	0.28
v/c Ratio	0.44	0.34			0.17	0.98		0.77	0.66		0.92	0.81	0.27
Control Delay	31.5	18.6			8.1	40.1		59.9	47.0		72.6	67.5	4.2
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	31.5	18.6			8.1	40.1		59.9	47.0		72.6	67.5	4.2
LOS	C	B			A	D		E	D		E	E	A
Approach Delay		20.8				38.3			53.6			57.0	
Approach LOS		C				D			D			E	
Queue Length 50th (ft)	32	116			27	433		127	109		127	124	0
Queue Length 95th (ft)	64	157			m21	#534		#215	177		#202	#216	30
Internal Link Dist (ft)		576				797			1542			599	
Turn Bay Length (ft)	300				300			325			325		100
Base Capacity (vph)	254	1612			495	1442		285	335		418	264	576
Starvation Cap Reductn	0	0			0	0		0	0		0	0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0	0
Reduced v/c Ratio	0.44	0.34			0.16	0.98		0.73	0.60		0.92	0.75	0.27

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 40.9

Intersection LOS: D

Intersection Capacity Utilization 77.4%

ICU Level of Service D

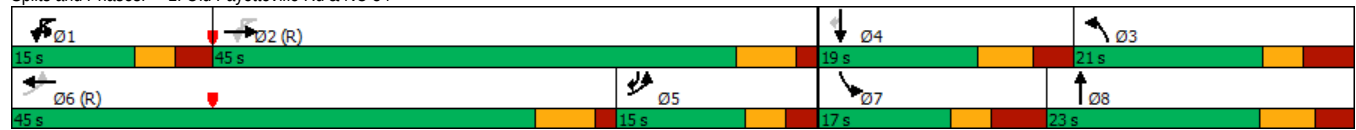
Analysis Period (min) 15

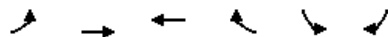
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Old Fayetteville Rd & NC-54





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↑		↑
Traffic Volume (vph)	0	685	1243	39	0	49
Future Volume (vph)	0	685	1243	39	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	73			75	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	250				25	
Satd. Flow (prot)	0	5085	3539	1583	0	1580
Flt Permitted						
Satd. Flow (perm)	0	5085	3539	1583	0	1580
Link Speed (mph)		45	45		25	
Link Distance (ft)		521	270		420	
Travel Time (s)		7.9	4.1		11.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	714	1295	41	0	51
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 44.4%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↗		↗
Traffic Vol, veh/h	0	685	1243	39	0	49
Future Vol, veh/h	0	685	1243	39	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	73	-	-	75	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	0	714	1295	41	0	51
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	648
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.98
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.34
Pot Cap-1 Maneuver	0	-	-	-	0	408
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	408
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		15.1		
HCM LOS				C		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	408		
HCM Lane V/C Ratio	-	-	-	0.125		
HCM Control Delay (s)	-	-	-	15.1		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	0.4		

														
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	4	139	524	21	12	195	966	92	58	97	77	92	111	232
Future Volume (vph)	4	139	524	21	12	195	966	92	58	97	77	92	111	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%				0%		0%	
Storage Length (ft)		0		0		175		0	0		85	60		70
Storage Lanes		1		0		1		1	1		1	1		1
Taper Length (ft)		25				150			25			115		
Satd. Flow (prot)	0	1770	3518	0	0	1770	3489	0	1770	1725	0	1770	1863	1583
Flt Permitted		0.950				0.950			0.618			0.413		
Satd. Flow (perm)	0	1769	3518	0	0	1770	3489	0	1150	1725	0	767	1863	1563
Right Turn on Red				Yes				Yes			Yes			Yes
Satd. Flow (RTOR)			4				11			43				105
Link Speed (mph)			45				45			25			35	
Link Distance (ft)			270				855			460			381	
Travel Time (s)			4.1				13.0			12.5			7.4	
Confl. Peds. (#/hr)		1						1	1		5	5		1
Confl. Bikes (#/hr)														
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)														
Mid-Block Traffic (%)			0%				0%			0%			0%	
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	163	619	0	0	236	1203	0	66	198	0	105	126	264
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	5!	5	2		1	1	6			8			4	5!
Permitted Phases									8			4		4
Detector Phase	5	5	2		1	1	6		8	8		4	4	5
Switch Phase														
Minimum Initial (s)	7.0	7.0	12.0		7.0	7.0	12.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	14.0	19.0		14.0	14.0	35.0		38.0	38.0		14.0	14.0	14.0
Total Split (s)	20.0	20.0	37.0		25.0	25.0	42.0		38.0	38.0		38.0	38.0	20.0
Total Split (%)	20.0%	20.0%	37.0%		25.0%	25.0%	42.0%		38.0%	38.0%		38.0%	38.0%	20.0%
Yellow Time (s)	3.0	3.0	4.7		3.0	3.0	4.3		3.1	3.1		3.7	3.7	3.0
All-Red Time (s)	3.3	3.3	1.6		3.3	3.3	1.5		2.9	2.9		2.5	2.5	3.3
Lost Time Adjust (s)		-1.3	-1.3			-1.3	-0.8		-1.0	-1.0		-1.2	-1.2	-1.3
Total Lost Time (s)		5.0	5.0			5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag							Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes							Yes
Recall Mode	None	None	C-Max		Max	Max	C-Max		None	None		None	None	None
Act Effect Green (s)		14.8	49.4			20.0	54.6		15.6	15.6		15.6	15.6	30.4
Actuated g/C Ratio		0.15	0.49			0.20	0.55		0.16	0.16		0.16	0.16	0.30
v/c Ratio		0.62	0.36			0.67	0.63		0.37	0.65		0.88	0.43	0.48
Control Delay		46.4	22.0			47.2	19.5		41.5	39.8		95.6	41.3	15.7
Queue Delay		0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		46.4	22.0			47.2	19.5		41.5	39.8		95.6	41.3	15.7
LOS		D	C			D	B		D	D		F	D	B
Approach Delay			27.0				24.0			40.2			39.1	
Approach LOS			C				C			D			D	
Queue Length 50th (ft)		87	112			140	261		38	93		66	74	72
Queue Length 95th (ft)		m100	m167			217	422		71	149		#119	116	106
Internal Link Dist (ft)			190				775			380			301	
Turn Bay Length (ft)						175						60		70
Base Capacity (vph)		290	1738			354	1909		379	598		253	614	575
Starvation Cap Reductn		0	0			0	0		0	0		0	0	0
Spillback Cap Reductn		0	0			0	0		0	0		0	0	0
Storage Cap Reductn		0	0			0	0		0	0		0	0	0
Reduced v/c Ratio		0.56	0.36			0.67	0.63		0.17	0.33		0.42	0.21	0.46

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 53 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88

Intersection Signal Delay: 28.8

Intersection LOS: C

Intersection Capacity Utilization 74.5%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

! Phase conflict between lane groups.

Splits and Phases: 3: Carrboro Plaza Dr/W. Main St & NC-54



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	251	5	4	371	19	6	4	4	25	4	57
Future Volume (vph)	70	251	5	4	371	19	6	4	4	25	4	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	75		0	120		0	0		0	0		0
Storage Lanes	1		1	1		0	0		0	0		0
Taper Length (ft)	125			100			25			25		
Satd. Flow (prot)	1770	1863	1583	1770	1850	0	0	1754	0	0	1608	0
Flt Permitted	0.950			0.950				0.977			0.986	
Satd. Flow (perm)	1770	1863	1583	1770	1850	0	0	1754	0	0	1608	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		381			838			457			474	
Travel Time (s)		7.4			16.3			12.5			12.9	
Confl. Peds. (#/hr)	4		4	4		4			4	4		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	282	6	4	438	0	0	15	0	0	96	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 40.4%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	251	5	4	371	19	6	4	4	25	4	57
Future Vol, veh/h	70	251	5	4	371	19	6	4	4	25	4	57
Conflicting Peds, #/hr	4	0	4	4	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	0	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	6	6	6
Mvmt Flow	79	282	6	4	417	21	7	4	4	28	4	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	292	0	0	914	894	290	891	890	432
Stage 1	-	-	-	-	-	-	444	444	-	440	440	-
Stage 2	-	-	-	-	-	-	470	450	-	451	450	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.16	5.56	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.554	4.054	3.354
Pot Cap-1 Maneuver	1118	-	-	1270	-	-	254	280	749	259	278	615
Stage 1	-	-	-	-	-	-	593	575	-	588	571	-
Stage 2	-	-	-	-	-	-	574	572	-	580	565	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1114	-	-	1266	-	-	211	258	744	238	256	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	258	-	238	256	-
Stage 1	-	-	-	-	-	-	549	532	-	544	568	-
Stage 2	-	-	-	-	-	-	508	569	-	529	523	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.1			18.4			16.7		
HCM LOS							C			C		

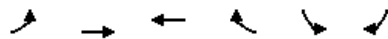
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	284	1114	-	-	1266	-	-	403
HCM Lane V/C Ratio	0.055	0.071	-	-	0.004	-	-	0.24
HCM Control Delay (s)	18.4	8.5	-	-	7.9	-	-	16.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.9

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	16	46	21	22	4	30	32	12	4	32	16
Future Volume (vph)	12	16	46	21	22	4	30	32	12	4	32	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1691	0	0	1786	0	0	1787	0	0	1779	0
Flt Permitted		0.992			0.978			0.980			0.997	
Satd. Flow (perm)	0	1691	0	0	1786	0	0	1787	0	0	1779	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		293			877			474			1304	
Travel Time (s)		8.0			23.9			12.9			35.6	
Confl. Peds. (#/hr)	4		1	1		4	6		1	1		6
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	53	0	0	83	0	0	58	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 24.2%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.5											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	12	16	46	21	22	4	30	32	12	4	32	16
Future Vol, veh/h	12	16	46	21	22	4	30	32	12	4	32	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	3	3	3	2	2	2	2	2	2
Mvmt Flow	13	18	52	24	25	4	34	36	13	4	36	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.4			7.7			7.7			7.4		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	41%	16%	45%	8%								
Vol Thru, %	43%	22%	47%	62%								
Vol Right, %	16%	62%	9%	31%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	74	74	47	52								
LT Vol	30	12	21	4								
Through Vol	32	16	22	32								
RT Vol	12	46	4	16								
Lane Flow Rate	83	83	53	58								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.097	0.09	0.063	0.066								
Departure Headway (Hd)	4.199	3.879	4.3	4.065								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	844	909	821	869								
Service Time	2.274	1.965	2.387	2.148								
HCM Lane V/C Ratio	0.098	0.091	0.065	0.067								
HCM Control Delay	7.7	7.4	7.7	7.4								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.3	0.3	0.2	0.2								

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	11	4	31	4	9	42	4	4	36	7
Future Volume (vph)	9	16	11	4	31	4	9	42	4	4	36	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1564	0	0	1810	0	0	1829	0	0	1733	0
Flt Permitted		0.988			0.995			0.992			0.996	
Satd. Flow (perm)	0	1564	0	0	1810	0	0	1829	0	0	1733	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			733			1304			486	
Travel Time (s)		24.1			20.0			35.6			13.3	
Confl. Peds. (#/hr)	1		4	4		1	5		1	1		5
Confl. Bikes (#/hr)									1			1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	15%	15%	15%	3%	3%	3%	2%	2%	2%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	49	0	0	69	0	0	60	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization 17.0%	ICU Level of Service A											
Analysis Period (min) 15												

Intersection												
Intersection Delay, s/veh	7.6											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	9	16	11	4	31	4	9	42	4	4	36	7
Future Vol, veh/h	9	16	11	4	31	4	9	42	4	4	36	7
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	15	15	15	3	3	3	2	2	2	7	7	7
Mvmt Flow	11	20	14	5	39	5	11	53	5	5	46	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.6			7.5			7.6			7.5		
HCM LOS	A			A			A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	16%	25%	10%	9%								
Vol Thru, %	76%	44%	79%	77%								
Vol Right, %	7%	31%	10%	15%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	55	36	39	47								
LT Vol	9	9	4	4								
Through Vol	42	16	31	36								
RT Vol	4	11	4	7								
Lane Flow Rate	70	46	49	59								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.08	0.054	0.057	0.069								
Departure Headway (Hd)	4.135	4.284	4.169	4.166								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	858	826	849	851								
Service Time	2.2	2.362	2.247	2.233								
HCM Lane V/C Ratio	0.082	0.056	0.058	0.069								
HCM Control Delay	7.6	7.6	7.5	7.5								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.3	0.2	0.2	0.2								



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	39	45	4	4	6
Future Volume (vph)	6	39	45	4	4	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1700	1840	0	1504	0
Flt Permitted		0.993			0.980	
Satd. Flow (perm)	0	1700	1840	0	1504	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1012	884		368	
Travel Time (s)		27.6	24.1		10.0	
Confl. Peds. (#/hr)	10			10	3	1
Confl. Bikes (#/hr)						
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	2%	2%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	74	81	0	17	0
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 17.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	39	45	4	4	6
Future Vol, veh/h	6	39	45	4	4	6
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61
Heavy Vehicles, %	11	11	2	2	14	14
Mvmt Flow	10	64	74	7	7	10
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.6	7.4	7.3
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	40%
Vol Thru, %	87%	92%	0%
Vol Right, %	0%	8%	60%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	45	49	10
LT Vol	6	0	4
Through Vol	39	45	0
RT Vol	0	4	6
Lane Flow Rate	74	80	16
Geometry Grp	1	1	1
Degree of Util (X)	0.086	0.089	0.019
Departure Headway (Hd)	4.203	3.97	4.122
Convergence, Y/N	Yes	Yes	Yes
Cap	853	902	859
Service Time	2.226	1.995	2.194
HCM Lane V/C Ratio	0.087	0.089	0.019
HCM Control Delay	7.6	7.4	7.3
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.3	0.3	0.1

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	29	6	583	26	10	560
Future Volume (vph)	29	6	583	26	10	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1747	0	1852	0	0	1861
Flt Permitted	0.961					0.999
Satd. Flow (perm)	1747	0	1852	0	0	1861
Link Speed (mph)	25		35			35
Link Distance (ft)	1012		402			723
Travel Time (s)	27.6		7.8			14.1
Confl. Peds. (#/hr)				9	9	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	662	0	0	620
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 47.5%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	29	6	583	26	10	560
Future Vol, veh/h	29	6	583	26	10	560
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	7	634	28	11	609
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1288	657	0	0	671	0
Stage 1	657	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	181	465	-	-	919	-
Stage 1	516	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	176	462	-	-	912	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	27.6	0	0.2			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	197	912	-	
HCM Lane V/C Ratio	-	-	0.193	0.012	-	
HCM Control Delay (s)	-	-	27.6	9	0	
HCM Lane LOS	-	-	D	A	A	
HCM 95th %tile Q(veh)	-	-	0.7	0	-	

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	725	1196	98	0	115
Future Volume (vph)	86	725	1196	98	0	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			100	0	0
Storage Lanes	1			1	0	1
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	3539	3539	1583	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	1583	0	1611
Link Speed (mph)		45	45		30	
Link Distance (ft)		877	521		294	
Travel Time (s)		13.3	7.9		6.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	806	1329	109	0	128
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 46.8%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	725	1196	98	0	115
Future Vol, veh/h	86	725	1196	98	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	96	806	1329	109	0	128
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	1438	0	-	0	-	665
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	468	-	-	-	0	403
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	468	-	-	-	-	403
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		18		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	468	-	-	-	403	
HCM Lane V/C Ratio	0.204	-	-	-	0.317	
HCM Control Delay (s)	14.7	-	-	-	18	
HCM Lane LOS	B	-	-	-	C	
HCM 95th %tile Q(veh)	0.8	-	-	-	1.3	

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	151	85	528	90	68	494
Future Volume (vph)	151	85	528	90	68	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	0		100	100	
Storage Lanes	1	1		1	1	
Taper Length (ft)	100				100	
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1863	1583	1770	1863
Link Speed (mph)	30		35			35
Link Distance (ft)	786		679			402
Travel Time (s)	17.9		13.2			7.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	94	587	100	76	549
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 49.9%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	15					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↱	↱	↱	↱	↱	↱
Traffic Vol, veh/h	151	85	528	90	68	494
Future Vol, veh/h	151	85	528	90	68	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	168	94	587	100	76	549
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1288	587	0	0	687	0
Stage 1	587	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	181	510	-	-	907	-
Stage 1	556	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 166	510	-	-	907	-
Mov Cap-2 Maneuver	~ 166	-	-	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	87.1	0	1.1			
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	166	510	907	-
HCM Lane V/C Ratio	-	-	1.011	0.185	0.083	-
HCM Control Delay (s)	-	-	128.4	13.7	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	8	0.7	0.3	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

1: Old Fayetteville Rd & NC-54 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.6	0.0	0.1
Total Del/Veh (s)	31.7	12.3	360.9	46.9	63.4

2: NC-54 & Post Office Dr Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.0
Total Del/Veh (s)	2.3	2.2	4.9	2.3

3: Carrboro Plaza Dr/W. Main St & NC-54 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.6	3.6	0.2	0.4
Total Del/Veh (s)	17.4	18.7	21.9	28.2	19.3

4: James St & W. Main St/W Main St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.3	0.1	0.0	0.1
Total Del/Veh (s)	2.4	0.6	4.8	6.5	2.8

5: James St & Lorraine St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.4	4.1	4.3	6.3	5.3

6: James St & Carol St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.1	0.1
Total Del/Veh (s)	5.0	4.7	5.8	5.0	5.1

7: Carol St & Lisa Dr Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	4.9	5.5	3.4	5.1

8: Old Fayetteville Rd & Carol St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.5	0.2
Total Del/Veh (s)	18.7	0.9	1.5	2.1

9: NC-54 & Site Drive Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	5.0	0.7	6.0	3.8

10: Old Fayetteville Rd & Site Drive Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	2.7	0.0	0.0	0.2
Total Del/Veh (s)	22.9	2.1	1.3	2.9

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	69.0

Intersection: 1: Old Fayetteville Rd & NC-54

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	L	T	R
Maximum Queue (ft)	400	500	455	55	61	84	275	1244	200	214	367	200
Average Queue (ft)	95	226	217	15	15	9	102	795	117	126	123	33
95th Queue (ft)	254	385	366	46	41	39	310	1189	194	188	273	150
Link Distance (ft)		541	541		747	747		1514			562	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			300			175		325	325		100
Storage Blk Time (%)		4						90			26	
Queuing Penalty (veh)		7						24			114	

Intersection: 2: NC-54 & Post Office Dr

Movement	EB	EB	SB
Directions Served	T	T	R
Maximum Queue (ft)	48	90	77
Average Queue (ft)	3	6	15
95th Queue (ft)	20	37	46
Link Distance (ft)	456	456	363
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Carrboro Plaza Dr/W. Main St & NC-54

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	UL	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	246	256	254	124	159	154	37	128	164	93	172
Average Queue (ft)	137	153	163	47	65	80	4	38	99	12	12
95th Queue (ft)	234	250	253	98	133	144	20	92	162	45	65
Link Distance (ft)	189	189	189		782	782	386			264	
Upstream Blk Time (%)	5	3	4								
Queuing Penalty (veh)	23	13	17								
Storage Bay Dist (ft)				175				85	60		70
Storage Blk Time (%)					0			2	32	0	
Queuing Penalty (veh)					0			0	52	0	

Intersection: 4: James St & W. Main St/W Main St

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	22	15	30	93
Average Queue (ft)	5	1	13	34
95th Queue (ft)	20	5	36	58
Link Distance (ft)			404	390
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	75	120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: James St & Lorraine St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	68	44	70	53
Average Queue (ft)	15	19	27	31
95th Queue (ft)	41	35	51	38
Link Distance (ft)	265	842	390	1244
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: James St & Carol St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	46	74	53
Average Queue (ft)	24	20	24	31
95th Queue (ft)	47	43	56	41
Link Distance (ft)	817	701	1244	452
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Carol St & Lisa Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	50	54	31
Average Queue (ft)	24	27	8
95th Queue (ft)	51	52	31
Link Distance (ft)	961	817	340
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Old Fayetteville Rd & Carol St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	93	41	109
Average Queue (ft)	39	1	24
95th Queue (ft)	76	14	75
Link Distance (ft)	961	334	701
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: NC-54 & Site Drive

Movement	EB	SB
Directions Served	L	R
Maximum Queue (ft)	89	68
Average Queue (ft)	21	28
95th Queue (ft)	57	55
Link Distance (ft)		402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Old Fayetteville Rd & Site Drive

Movement	WB	WB	NB	SB
Directions Served	L	R	T	L
Maximum Queue (ft)	121	38	50	79
Average Queue (ft)	33	9	2	24
95th Queue (ft)	79	25	17	58
Link Distance (ft)		666	562	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 250

1: Old Fayetteville Rd & NC-54 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.8	0.0	0.2
Total Del/Veh (s)	17.0	59.7	160.1	91.6	71.3

2: NC-54 & Post Office Dr Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	1.8	3.4	8.1	3.0

3: Carrboro Plaza Dr/W. Main St & NC-54 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.7	2.9	0.0	0.6
Total Del/Veh (s)	25.8	30.1	30.7	21.9	27.7

4: James St & W. Main St/W Main St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.3	0.1	0.0	0.2
Total Del/Veh (s)	3.1	0.9	9.3	8.3	2.8

5: James St & Lorraine St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	3.7	4.1	4.1	5.1	4.2

6: James St & Carol St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.1	0.1
Total Del/Veh (s)	4.7	4.4	5.9	4.5	4.9

7: Carol St & Lisa Dr Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.1	0.0
Total Del/Veh (s)	4.9	5.6	3.1	5.2

8: Old Fayetteville Rd & Carol St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.5	0.2
Total Del/Veh (s)	8.6	0.9	0.8	1.2

9: NC-54 & Site Drive Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.0
Total Del/Veh (s)	4.8	2.8	17.6	4.2

10: Old Fayetteville Rd & Site Drive Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	2.5	0.0	0.0	0.4
Total Del/Veh (s)	33.7	1.9	1.4	7.0

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	78.5

Intersection: 1: Old Fayetteville Rd & NC-54

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	L	T	R
Maximum Queue (ft)	120	180	146	400	772	768	425	527	267	278	492	200
Average Queue (ft)	51	50	32	131	372	356	190	370	117	130	342	176
95th Queue (ft)	104	129	96	428	732	734	405	479	236	244	464	276
Link Distance (ft)		556	556		747	747		1514			560	
Upstream Blk Time (%)					1	0						
Queuing Penalty (veh)					6	3						
Storage Bay Dist (ft)	300			300			325		325	325		100
Storage Blk Time (%)					36			33			89	8
Queuing Penalty (veh)					25			61			414	41

Intersection: 2: NC-54 & Post Office Dr

Movement	WB	WB	SB
Directions Served	T	R	R
Maximum Queue (ft)	104	74	76
Average Queue (ft)	4	3	25
95th Queue (ft)	35	25	52
Link Distance (ft)	189		363
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		75	
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	

Intersection: 3: Carrboro Plaza Dr/W. Main St & NC-54

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	UL	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	252	237	248	324	479	569	154	134	174	180	89
Average Queue (ft)	80	95	117	112	199	227	48	58	47	49	40
95th Queue (ft)	161	164	182	215	392	450	113	117	112	118	89
Link Distance (ft)	189	189	189		782	782	386			264	
Upstream Blk Time (%)	1	1	1								
Queuing Penalty (veh)	2	2	2								
Storage Bay Dist (ft)				175				85	60		70
Storage Blk Time (%)				2	13		1	4	6	5	4
Queuing Penalty (veh)				10	30		1	3	22	18	8

Intersection: 4: James St & W. Main St/W Main St

Movement	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR
Maximum Queue (ft)	45	8	30	84
Average Queue (ft)	15	0	9	35
95th Queue (ft)	36	3	31	68
Link Distance (ft)		785	404	390
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	75			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: James St & Lorraine St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	68	43	70	68
Average Queue (ft)	31	19	28	34
95th Queue (ft)	57	38	52	63
Link Distance (ft)	265	842	390	1244
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: James St & Carol St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	64	65	74	55
Average Queue (ft)	25	24	29	27
95th Queue (ft)	60	46	59	51
Link Distance (ft)	817	701	1244	452
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Carol St & Lisa Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	89	68	31
Average Queue (ft)	30	30	6
95th Queue (ft)	71	52	26
Link Distance (ft)	961	817	340
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Old Fayetteville Rd & Carol St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	66	118
Average Queue (ft)	25	4
95th Queue (ft)	52	40
Link Distance (ft)	961	701
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: NC-54 & Site Drive

Movement	EB	WB	SB
Directions Served	L	T	R
Maximum Queue (ft)	116	31	128
Average Queue (ft)	49	1	45
95th Queue (ft)	100	10	93
Link Distance (ft)		456	229
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Old Fayetteville Rd & Site Drive

Movement	WB	WB	NB	SB
Directions Served	L	R	R	L
Maximum Queue (ft)	196	174	22	55
Average Queue (ft)	86	25	1	26
95th Queue (ft)	158	49	7	54
Link Distance (ft)		732		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200		100	100
Storage Blk Time (%)	1			
Queuing Penalty (veh)	1			

Intersection: 12: Bend

Movement	WB	WB
Directions Served	T	
Maximum Queue (ft)	563	80
Average Queue (ft)	95	3
95th Queue (ft)	424	27
Link Distance (ft)	556	556
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

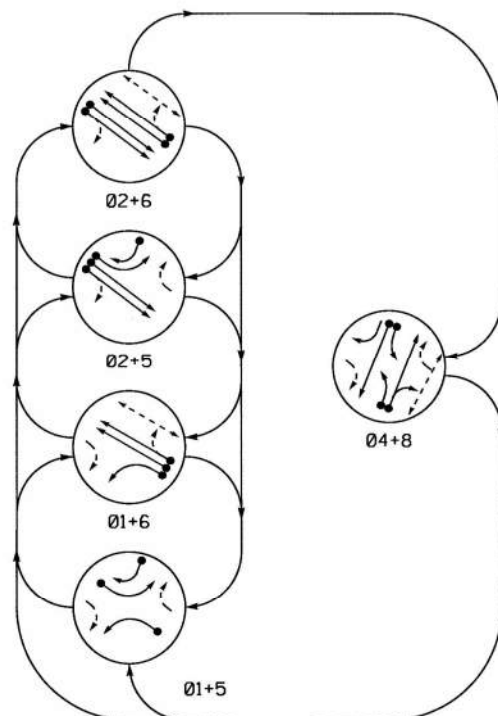
Network Summary

Network wide Queuing Penalty: 649

Appendix H:

Signal Plans

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

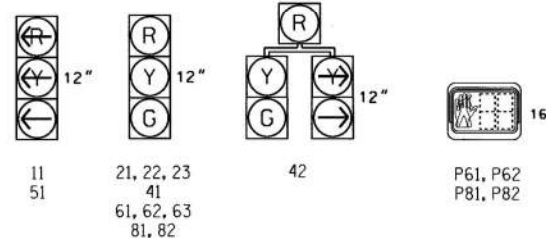
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE				
	01+5	01+6	02+5	02+6	FLASH
11	←	←	←	←	←
21, 22, 23	R	R	G	G	R
41	R	R	R	R	G
42	R	R	R	R	G
51	←	←	←	←	←
61, 62, 63	R	G	R	G	R
81, 82	R	R	R	R	G
P61, P62	DW	W	DW	W	DRK
P81, P82	DW	DW	DW	DW	W

W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.D.

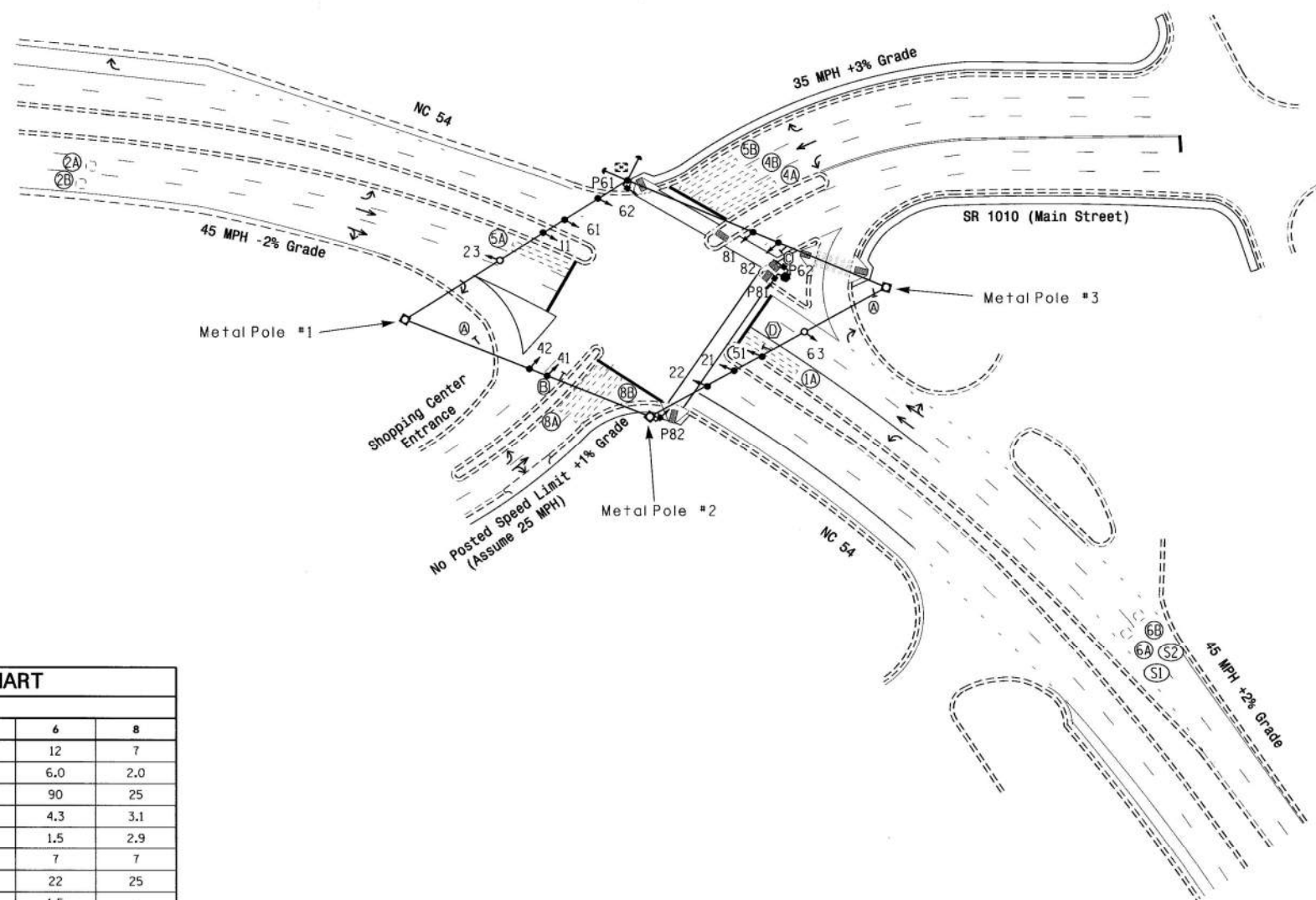
All Heads L.E.D.



2070L LOOP & DETECTOR INSTALLATION										
INDUCTIVE LOOPS					DETECTOR PROGRAMMING					
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	-
2A	6X6	300	6	-	2	Y	Y	-	-	-
2B	6X6	300	6	-	2	Y	Y	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	15
6A/S01	6X6	300	5	-	6	Y	Y	-	-	Y
6B/S02	6X6	300	5	-	6	Y	Y	-	-	Y
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	-
8B	6X40	0	2-4-2	-	8	Y	Y	-	-	10

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



LEGEND

- | PROPOSED | EXISTING |
|--|----------|
| Traffic Signal Head | N/A |
| Modified Signal Head | N/A |
| Sign | N/A |
| Pedestrian Signal Head With Push Button & Sign | N/A |
| Signal Pole with Guy | N/A |
| Signal Pole with Sidewalk Guy | N/A |
| Inductive Loop Detector | N/A |
| Controller & Cabinet | N/A |
| Junction Box | N/A |
| 2-in Underground Conduit | N/A |
| Right of Way | N/A |
| Directional Arrow | N/A |
| "YIELD" Sign (R1-2) | N/A |
| Left Arrow "ONLY" Sign (R3-5L) | N/A |
| Combined Through and Right Arrow Sign (R3-6R) | N/A |
| "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) | N/A |

OASIS 2070L TIMING CHART						
FEATURE	PHASE					
	1	2	4	5	6	8
Min Green 1 *	7	12	7	7	12	7
Extension 1 *	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	15	90	25	15	90	25
Yellow Clearance	3.0	4.7	3.7	3.0	4.3	3.1
Red Clearance	3.3	1.6	2.5	3.3	1.5	2.9
Walk 1 *	-	-	-	-	7	7
Don't Walk 1	-	-	-	-	22	25
Seconds Per Actuation *	-	1.5	-	-	1.5	-
Max Variable Initial *	-	34	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	45	-	-	45	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

Prepared In the Office of: Transportation Mobility and Safety Division NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Signal Design Section	NC 54 at SR 1010 (Main Street) Division 7 Orange County Carrboro PLAN DATE: February 2012 PREPARED BY: M. Bazzarrie REVIEWED BY: [Signature] REVISIONS: [Table] SCALE: 0 50 1"=50'	SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT J. ZIEGLER 026486 DATE: 3/2/12 SHEET NO. 07-1025
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