Traffic Impact Analysis

Blake Farm
Pender County, NC

Prepared for:

Pender Farm Development

© Kimley-Horn and Associates, Inc. 2014

Kimley»Horn

Traffic Impact Analysis
for
Blake Farm
Pender County, North Carolina

Prepared for:

Pender Farm Development

Wilmington, NC

Prepared by:

Kimley-Horn and Associates, Inc.

NC License #F-0102

3001 Weston Parkway

Cary, NC 27513

(919) 677-2000

September 2014

018837000

NORTH CAROLINA PROFESSIONAL SEAL 034394 ENGINEER J. TRAVIS FLUITT

9/29/14

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed Blake Farm development, located northwest of US 17 (Market Street) at Sidbury Road in Pender County, North Carolina. The approximate 1,300 acre site is currently vacant and is proposed to be developed in two phases. Phase 1 will consist of 500 single-family homes, 300 active adult / senior attached housing units, and 50,000 SF of retail space with a projected build-out of 2019. The development is proposed to be accessed by one directional crossover driveway on US 17 (to align with Scotts Hill Loop Road North) in Phase 1.

Per the approved Blake Farm Master Plan, Phase 2 was assumed to be built-out by the year 2029 and, inclusive of Phase 1, was anticipated to consist of 500 single-family homes, 700 active adult / senior attached housing units, 1,798 active adult / senior detached housing units, 50,000 SF of mini-warehouse, 50,000 SF of retail space, and two 150-room hotels. Phase 2 of development was assumed to be accessed by one full-movement driveway on Sidbury Road and two driveways on US 17: one left-in (from Phase 1) and one left-out (to be located at the existing median opening for the power sub-station). The approved Blake Farm Master Plan shows an additional point of access on the north end of the site, but due to the uncertainty of whether this driveway would access the proposed Hampstead Bypass, it was not assumed to be included in the Phase 2 analysis. Conservatively, the Phase 2 analysis in this report shows the impact of assigning all of the traffic accessing Blake Farm via US 17.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2014) traffic condition, the projected (2019) background traffic condition, and the projected (2019) Phase 1 build-out traffic condition. In addition, a supplemental analysis was performed for the (2029) background and projected (2029) Phase 2 build-out traffic condition.

As shown in table ES-1, Phase 1 of the proposed development has the potential to generate 3,928 new trips in and 3,928 new trips out during a typical weekday with 173 new trips entering and 349 new trips exiting during the AM peak hour and 407 new trips entering and 297 new trips exiting during the PM peak hour:

Table ES-1
Phase 1 ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
210	Single Family Detached Housing	500	d.u.	2,309	2,309	90	270	282	165
252	Senior Adult Housing - Attached	300	d.u.	458	458	20	40	40	34
820	Shopping Center	50,000	s.f.	2,164	2,164	63	39	181	196
Subtotal				**4,931**	**4,931**	**173**	**349**	**503**	**395**
Internal Capture				***433***	***433***	***0***	***0***	***40***	***40***
Pass-By Capture				***570***	***570***	***0***	***0***	***56***	***58***
Total Driveway Volumes				**3,928**	**3,928**	**173**	**349**	**407**	**297**

Capacity analyses were performed using Synchro Version 8 software. Table ES-2 summarizes the operation of the study intersections for the Phase 1 AM and PM peak hour traffic conditions.

Table ES-2
Phase 1 Level-of-Service Summary

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
US 17 Southbound & Sidbury Road (Signalized)		
Existing (2014) Traffic	A (10.0)	A (6.2)
Background (2019) Traffic	B (12.7)	A (6.9)
Phase 1 Build-out (2019) Traffic	B (11.1)	A (4.1)
US 17 Northbound & Sidbury Road Southbound U-turn (Unsignalized)		
Phase 1 Build-out (2019) Traffic	U-turn – B (14.0)	U-turn – D (26.8)
US 17 Northbound & Scotts Hill Loop Road North (Signalized)		
Existing (2014) Traffic	A (3.8)	A (3.1)
Background (2019) Traffic	A (4.4)	A (3.5)
Phase 1 Build-out (2019) Traffic	A (4.6)	A (3.8)

Table ES-2 (cont.) Phase 1 Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
US 17 Northbound & Scotts Hill Loop Road South (Signalized)		
Existing (2014) Traffic	A (5.6)	A (7.5)
Background (2019) Traffic	A (6.4)	A (9.3)
Phase 1 Build-out (2019) Traffic	A (6.6)	B (12.7)
US 17 Southbound & I-140 Eastbound Off-Ramp (Unsignalized)		
Existing (2014) Traffic	EB – C (22.2)	EB – E (39.2)
Background (2019) Traffic	EB – D (28.8)	EB – F (72.2)
Background (2019) Traffic w/ Improvements	EB – C (19.2)	EB – C (21.4)
Phase 1 Build-out (2019) Traffic w/ Background Improvements	EB – C (21.7)	EB – C (24.4)
US 17 & Porters Neck Road (Signalized)		
Existing (2014) Traffic	C (23.9)	C (29.2)
Background (2019) Traffic	C (25.6)	C (31.8)
Phase 1 Build-out (2019) Traffic	C (26.9)	C (33.8)
US 17 & NC 210 / Dan Owen Drive (Signalized)		
Existing (2014) Traffic	C (23.2)	C (28.7)
Background (2019) Traffic	C (26.0)	C (33.1)
Phase 1 Build-out (2019) Traffic	C (26.9)	C (34.8)
US 17 & Site Driveway 1 (Signalized)		
Phase 1 Build-out (2019) Traffic	C (21.3)	B (17.8)

The following roadway improvements are recommended to accommodate projected 2019 Background and Build-out traffic volumes:

Phase 1 (2019) – Recommended Background Improvements

US 17 Southbound & I-140 Eastbound Off-Ramp:

- Construct an additional eastbound right-turn lane on the I-140 off-ramp

Phase 1 (2019) – Recommended Developer Improvements

US 17 Northbound & Sidbury Road Southbound U-Turn:

- Construct an exclusive southbound U-turn lane with a minimum of 150 feet of storage on US 17

US 17 & Site Driveway 1:

- Construct an exclusive northbound left-turn lane with a minimum of 225 feet of storage on US 17
- Construct an exclusive southbound right-turn lane with a minimum of 125 feet of storage on US 17
- Provide dual right-turn lanes on the eastbound approach of the Site Driveway
- Install a traffic signal for southbound US 17 and eastbound Site Driveway approaches as well as the northbound left-turn on US 17 when warranted

Analysis indicates that with the recommended improvements in place, all of the study intersections are expected to operate at an acceptable level of service at project build-out in Phase 1 (2019). The recommended lane geometry for Phase 1 is shown on Figure ES-1.

Although the ultimate land uses are somewhat uncertain, analysis was also performed for the Phase 2 build-out. Analysis indicates that with the recommended Phase 2 improvements in place, all of the study intersections are expected to operate at an acceptable level of service at project build-out in Phase 2 (2029).

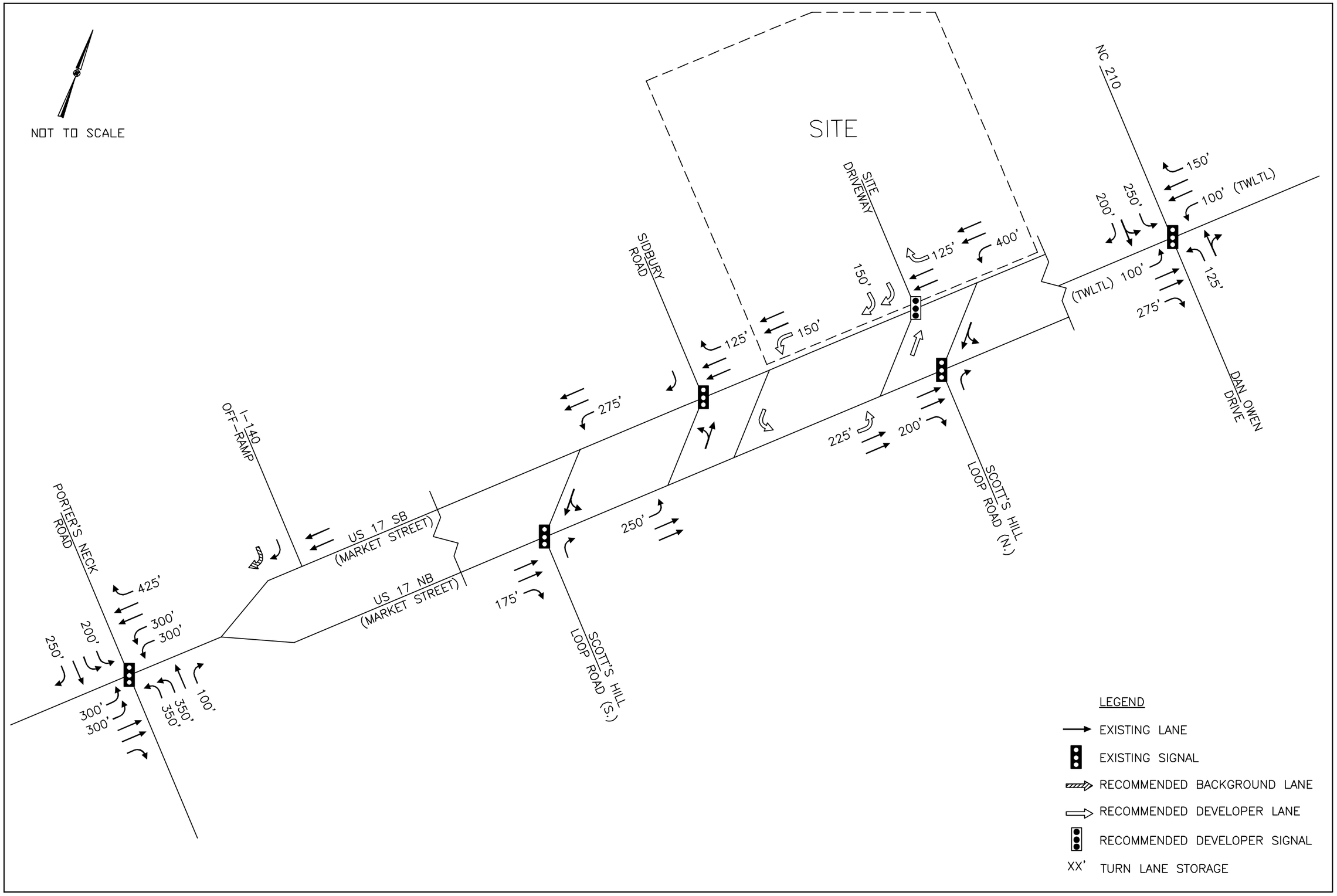


FIGURE ES-1

RECOMMENDED ROADWAY LANEAGE – PHASE 1 (2019)

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 – Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

TABLE OF CONTENTS

Page No.

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 11*

5.4 *SITE TRAFFIC 11*

5.5 *BUILD-OUT TRAFFIC 12*

6.0 CAPACITY ANALYSIS 17

6.1 *US 17 SOUTHBOUND & SIDBURY ROAD 20*

6.2 *US 17 NORTHBOUND & SIDBURY ROAD SOUTHBOUND U-TURN 21*

6.3 *US 17 NORTHBOUND & SCOTTS HILL LOOP ROAD NORTH 22*

6.4 *US 17 NORTHBOUND & SCOTTS HILL LOOP ROAD SOUTH 23*

6.5 *US 17 SOUTHBOUND & I-140 EASTBOUND OFF-RAMP 24*

6.6 *US 17 & PORTERS NECK ROAD 25*

6.7 *US 17 & NC 210 / DAN OWEN DRIVE 26*

6.8 *US 17 & SITE DRIVEWAY 1 ..... 27*

7.0 RECOMMENDATIONS 28

8.0 PHASE 2 ANALYSIS 30

LIST OF TABLES

Table No.	Title	Page No.
Table 3.0	Phase 1 ITE Traffic Generation (Vehicles)	7
Table 6.0-A	Level-of-Service Control Delay Thresholds	17
Table 6.0-B	Phase 1 Level-of-Service Summary	18
Table 6.1	Phase 1 Level-of-Service: US 17 SB & Sidbury Road	20
Table 6.2	Phase 1 Level-of-Service: US 17 NB & Sidbury Road SB U-Turn	21
Table 6.3	Phase 1 Level-of-Service: US 17 NB & Scotts Hill Loop Road North	22
Table 6.4	Phase 1 Level-of-Service: US 17 NB & Scotts Hill Loop Road South	23
Table 6.5	Phase 1 Level-of-Service: US 17 SB & I-140 EB Off-Ramp	24
Table 6.6	Phase 1 Level-of-Service: US 17 & Porters Neck Road	25
Table 6.7	Phase 1 Level-of-Service: US 17 & NC 210 / Dan Owen Drive	26
Table 6.8	Phase 1 Level-of-Service: US 17 & Site Driveway 1	27
Table 8.1	Phase 2 ITE Traffic Generation (Vehicles)	30
Table 8.2	Phase 2 Level-of-Service Summary	31

LIST OF FIGURES

Figure No.	Title	Page No.
Figure 1	Site Location	4
Figure 2	Site Plan	5
Figure 3	Existing Roadway Laneage	6
Figure 4	Site Traffic Distribution and Percent Assignment - Phase 1	10
Figure 5	Existing and Projected (2019) Phase 1 Background AM Peak Hour Traffic Volumes	13
Figure 6	Existing and Projected (2019) Phase 1 Background PM Peak Hour Traffic Volumes	14
Figure 7	Projected (2019) Phase 1 Build-out AM Peak Hour Traffic Volumes	15
Figure 8	Projected (2019) Phase 1 Build-out PM Peak Hour Traffic Volumes	16
Figure 9	Phase 1 (2019) Recommended Roadway Laneage	29
Figure 10	Site Traffic Distribution and Percent Assignment - Phase 2	34
Figure 11	Projected (2029) Phase 2 Build-out AM Peak Hour Traffic Volumes	35
Figure 12	Projected (2029) Phase 2 Build-out PM Peak Hour Traffic Volumes	36
Figure 13	Phase 2 (2029) Recommended Roadway Laneage	37

1.0 Introduction

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed Blake Farm development, located northwest of US 17 (Market Street) at Sidbury Road in Pender County, North Carolina. The approximate 1,300 acre site is currently vacant and is proposed to be developed in two phases. Phase 1 will consist of 500 single-family homes, 300 active adult / senior attached housing units, and 50,000 SF of retail space with a projected build-out of 2019. The development is proposed to be accessed by one directional crossover driveway on US 17 (to align with Scotts Hill Loop Road North) in Phase 1.

Per the approved Blake Farm Master Plan, Phase 2 was assumed to be built-out by the year 2029 and inclusive of Phase 1 was anticipated to consist of 500 single-family homes, 700 active adult / senior attached housing units, 1,798 active adult / senior detached housing units, 50,000 SF of mini-warehouse, 50,000 SF of retail space, and two 150-room hotels. Phase 2 of development was assumed to be accessed by one full-movement driveway on Sidbury Road and two driveways on US 17: one left-in (from Phase 1) and one left-out (to be located at the existing median opening for the power sub-station). The approved Blake Farm Master Plan shows an additional point of access on the north end of the site, but due to the uncertainty of whether this driveway would access the proposed Hampstead Bypass, it was not assumed to be included in the Phase 2 analysis. Conservatively, the Phase 2 analysis in this report shows the impact of assigning all of the traffic accessing Blake Farm along US 17.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2014) traffic condition, the projected (2019) background traffic condition, and the projected (2019) Phase 1 build-out traffic condition. In addition, a supplemental analysis was performed for the (2029) background and projected (2029) Phase 2 build-out traffic condition.

Wilmington Urban Area MPO and NCDOT staffs provided background and were consulted regarding the elements to be covered in this analysis. The approved scoping letter is included in the Appendix of this report.

2.0 Inventory

2.1 *Study Area*

The study area for this development in Phase 1 includes the following intersections:

- US 17 (Market Street) & Sidbury Road
- US 17 (Market Street) & Scotts Hill Loop Road North
- US 17 (Market Street) & Scotts Hill Loop Road South
- US 17 (Market Street) & I-140 Eastbound Off-Ramp
- US 17 (Market Street) & Porters Neck Road
- US 17 (Market Street) & NC 210 / Dan Owen Drive

Based on discussions with Wilmington Urban Area MPO and NDCOT staff, the intersections of US 17 at I-140 Interchange, at Porters Neck Road, and at NC 210 / Dan Owen Drive are included for planning purposes only. Figure 1 shows the site location. The approved master plan is shown on Figure 2.

2.2 *Existing Conditions*

The proposed Blake Farm development is located northwest of the US 17 (Market Street) at Sidbury Road intersection in Pender County, North Carolina. The site is currently vacant, and the surrounding land uses are primarily residential with some commercial on US 17. Roadways in the study area include US 17 (Market Street), Sidbury Road, Scotts Hill Loop Road, I-140, Porters Neck Road, and NC 210. The existing roadway laneage is shown in Figure 3.

US 17 is a four-lane principal arterial with a posted speed limit of 55 mph in the vicinity of the site and a posted speed limit of 45 mph near NC 210/Dan Owen Drive and Porters Neck Road. The reported 2011 ADT volume was approximately 31,000 vehicles per day (vpd) in the vicinity of the proposed site.

Sidbury Road is a two-lane minor collector with a posted speed limit of 55 mph. The reported 2011 ADT volume was approximately 2,000 vpd.

Scotts Hill Loop Road is a two-lane local road with a posted speed limit of 45 mph. The reported 2011 ADT volume was approximately 3,000 vpd.

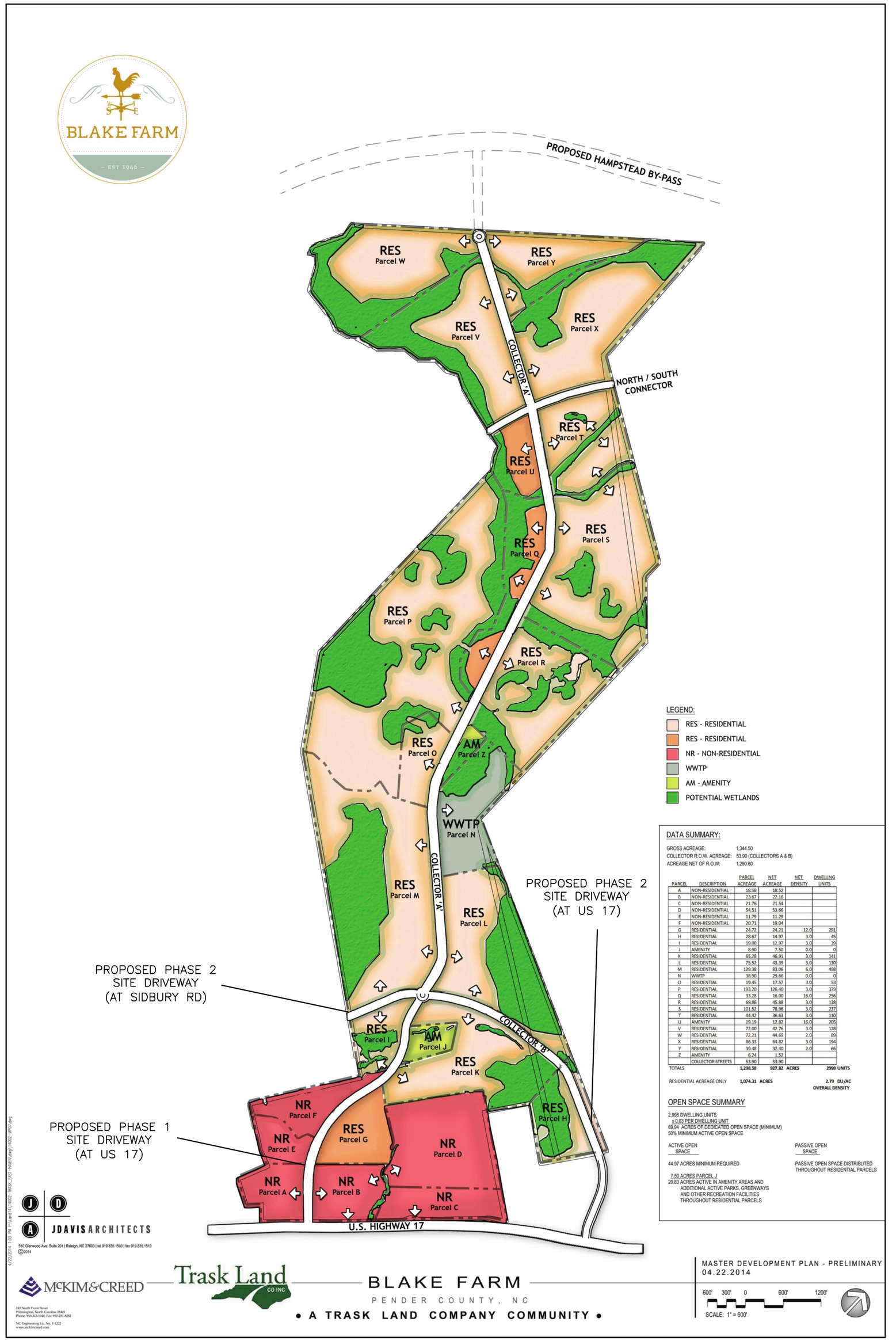
I-140 is a freeway facility with a posted speed limit of 70 mph. The reported 2011 ADT volume was approximately 14,000 vpd near US 17.

Porters Neck Road is a two-lane local road with a posted speed limit of 45 mph. The reported 2011 ADT volume was approximately 12,000 vpd near US 17.

NC 210 is a two-lane major collector with a posted speed limit of 35 mph. The reported 2011 ADT volume was approximately 5,600 vpd near US 17.

Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	SITE LOCATION	FIGURE 1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

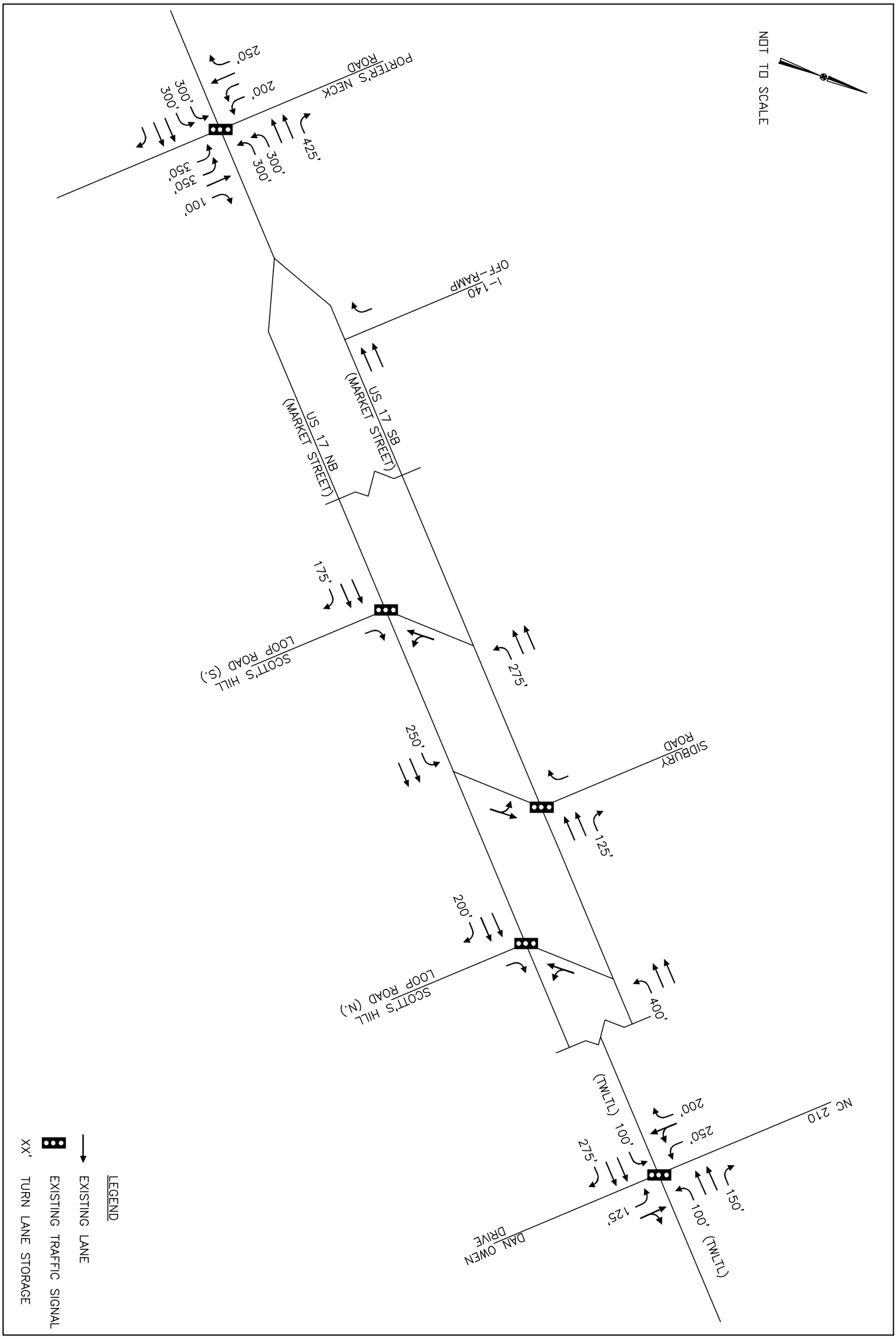


PARCEL	DESCRIPTION	PARCEL ACREAGE	NET ACREAGE	NET DENSITY	DWELLING UNITS
A	NON-RESIDENTIAL	18.58	18.52		
B	NON-RESIDENTIAL	23.67	22.16		
C	NON-RESIDENTIAL	21.76	21.54		
D	NON-RESIDENTIAL	54.51	53.66		
E	NON-RESIDENTIAL	11.79	11.29		
F	NON-RESIDENTIAL	20.71	19.04		
G	RESIDENTIAL	24.72	24.21	12.0	291
H	RESIDENTIAL	28.67	14.97	3.0	45
I	RESIDENTIAL	19.00	12.97	3.0	39
J	AMENITY	8.90	7.50	0.0	0
K	RESIDENTIAL	65.28	46.91	3.0	141
L	RESIDENTIAL	75.52	43.39	3.0	130
M	RESIDENTIAL	129.38	83.06	6.0	498
N	WWTP	38.90	29.66	0.0	0
O	RESIDENTIAL	19.45	17.57	3.0	53
P	RESIDENTIAL	193.20	126.40	3.0	379
Q	RESIDENTIAL	33.28	16.00	16.0	256
R	RESIDENTIAL	69.86	45.88	3.0	138
S	RESIDENTIAL	101.52	78.96	3.0	237
T	RESIDENTIAL	44.42	36.63	3.0	110
U	AMENITY	19.19	12.82	16.0	205
V	RESIDENTIAL	72.00	42.76	3.0	128
W	RESIDENTIAL	72.21	44.69	2.0	89
X	RESIDENTIAL	86.33	64.82	3.0	194
Y	RESIDENTIAL	39.48	32.40	2.0	65
Z	AMENITY	6.24	1.52		
	COLLECTOR STREETS	53.90	53.90		
TOTALS		1,298.58	927.82 ACRES		2998 UNITS
RESIDENTIAL ACREAGE ONLY		1,074.31 ACRES			2.79 DU/AC OVERALL DENSITY

Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	PROPOSED MASTER PLAN	FIGURE 2

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg



Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	EXISTING ROADWAY LANEAGE	FIGURE 3

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

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, Ninth Edition, 2012). As currently envisioned, the site will include approximately 500 single-family homes, 300 active adult / senior attached housing units, and 50,000 SF of retail space in Phase 1. Table 3.0 summarizes the estimated traffic generation for the proposed development.

Table 3.0
Phase 1 ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
210	Single Family Detached Housing	500	d.u.	2,309	2,309	90	270	282	165
252	Senior Adult Housing - Attached	300	d.u.	458	458	20	40	40	34
820	Shopping Center	50,000	s.f.	2,164	2,164	63	39	181	196
Subtotal				**4,931**	**4,931**	**173**	**349**	**503**	**395**
Internal Capture				***433***	***433***	***0***	***0***	***40***	***40***
Pass-By Capture				***570***	***570***	***0***	***0***	***56***	***58***
Total Driveway Volumes				**3,928**	**3,928**	**173**	**349**	**407**	**297**

Table 3.0 shows that the proposed development has the potential to generate 3,928 new trips in and 3,928 new trips out during a typical weekday with 173 new trips entering and 349 new trips exiting during the AM peak hour and 407 new trips entering and 297 new trips exiting during the PM peak hour.

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 rates published in the *Trip Generation Manual User's Guide and Handbook* (Ninth Edition, 2012) indicate that the internal capture for this site will be approximately 9% in the PM peak hour. No internal capture was applied to the AM peak hour.

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. The ITE *Trip Generation Manual User's Guide and Handbook*

indicates that approximately 34% of the PM peak hour retail site traffic may be pass-by trips. No pass-by capture was applied to the AM peak hour. Pass-by trips were assigned based on existing traffic patterns.

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 are based on land uses in the area and existing travel patterns.

- 30% to/from the north on US 17
- 30% to/from the south on US 17
- 25% to/from the west on I-140
- 7% to/from the east on Porters Neck Road
- 6% to/from the west on NC 210
- 1% to/from Scotts Hill Loop Road North
- 1% to/from Scotts Hill Loop Road South

The site traffic distribution and percent assignment for Phase 1 of the development are shown on Figure 4.

FIGURE 4

SITE TRAFFIC DISTRIBUTION AND PERCENT ASSIGNMENT – PHASE 1

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 – Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

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 at the following intersections:

- US 17 (Market Street) at Scotts Hill Loop Road North — June 18, 2014
- US 17 (Market Street) at NC 210 / Dan Owen Drive — May 28, 2014

Peak hour turning movement counts were obtained from previous studies for the following intersections:

- US 17 (Market Street) at Sidbury Road — December 10, 2013
- US 17 (Market Street) at Scotts Hill Loop Road South — December 12, 2013
- US 17 (Market Street) at I-140 Interchange — October 24, 2012
- US 17 (Market Street) at Porters Neck Road — October 24, 2012

Older counts were grown, and all counts were balanced with adjacent intersections. The existing AM and PM Peak Hour traffic volumes are shown on Figures 5 and 6, and the traffic count data are included in the Appendix.

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 2% annual growth rate was applied to the existing traffic for 5 years up to the Phase 1 analysis year 2019. Background growth calculations are detailed on intersection spreadsheets in the Appendix of this report.

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 in the vicinity of the proposed site for inclusion in the analysis as background traffic.

5.4 *Site Traffic*

The proposed (2019) Phase 1 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 in Figures 7 and 8, respectively.

5.5 *Build-Out Traffic*

To obtain the Phase 1 (2019) build-out traffic volumes, the projected site traffic was added to the projected (2019) background traffic. Traffic volume calculations are detailed in intersection spreadsheets in the Appendix of this report. Figures 7 and 8 show the projected (2019) Phase 1 AM and PM build-out peak hour traffic volumes, respectively.

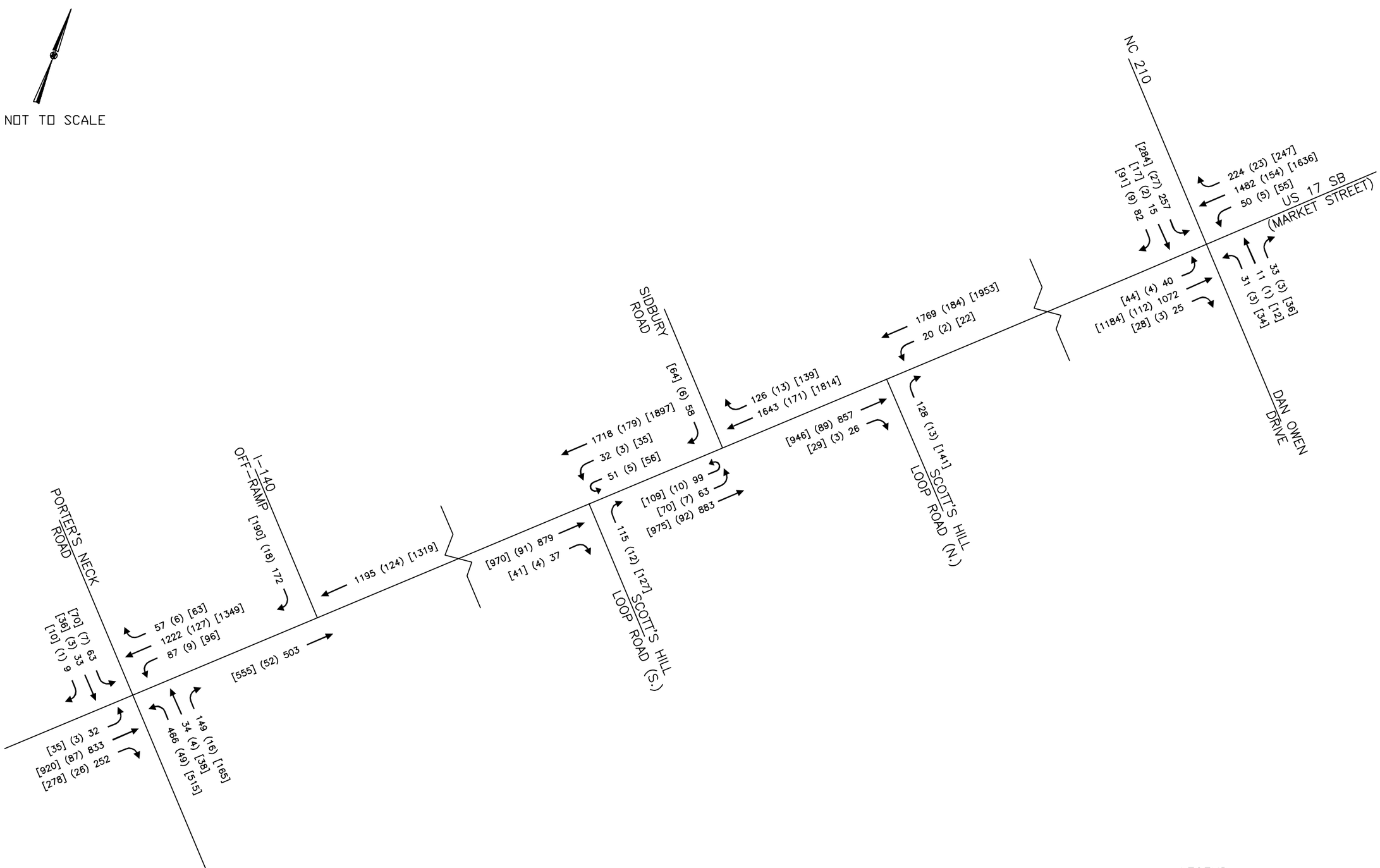


FIGURE 5

EXISTING AND PROJECTED (2019) PHASE 1 BACKGROUND AM PEAK HOUR TRAFFIC VOLUMES

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

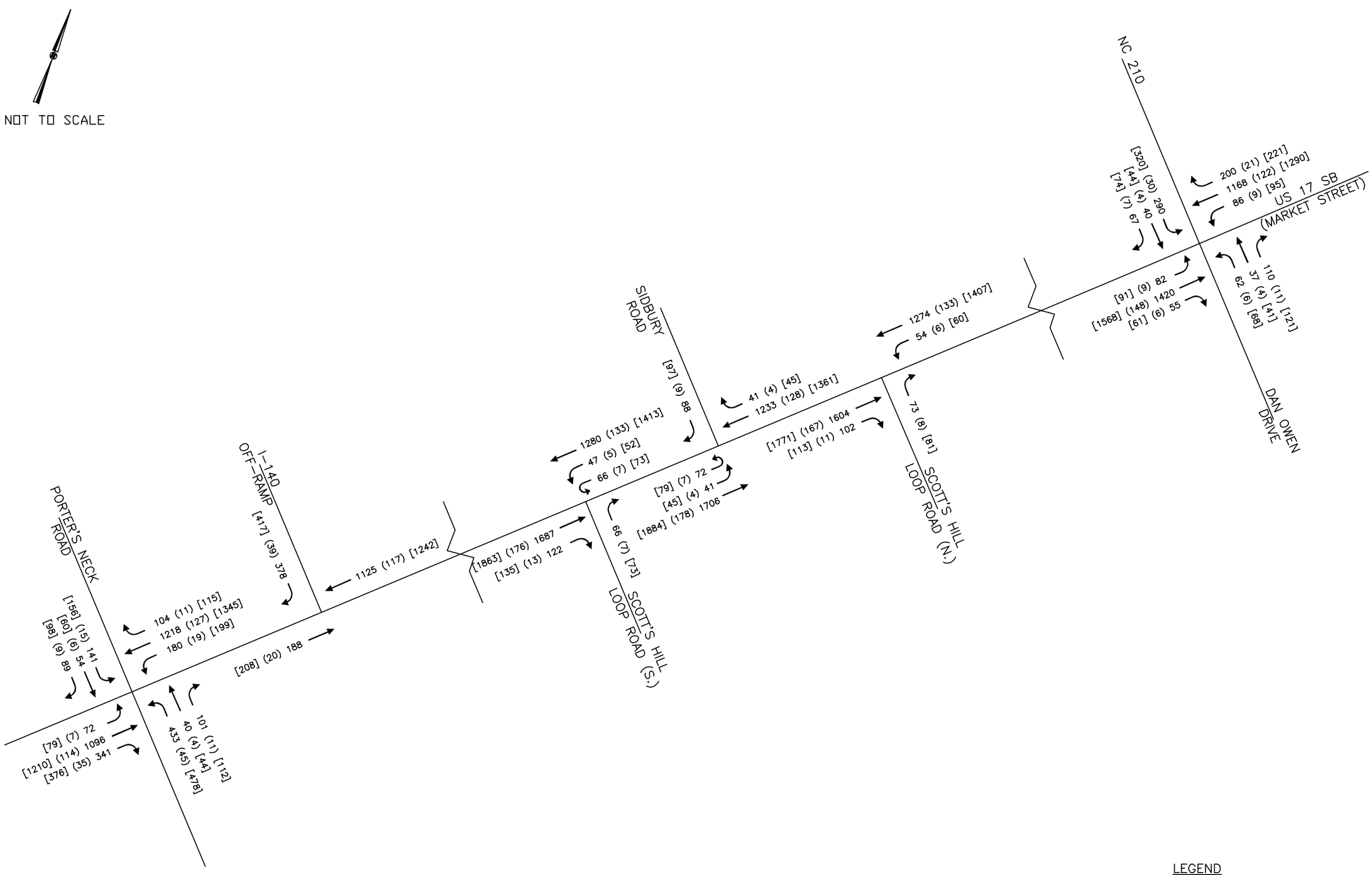


FIGURE 6

EXISTING AND PROJECTED (2019) PHASE 1 BACKGROUND PM PEAK HOUR TRAFFIC VOLUMES

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

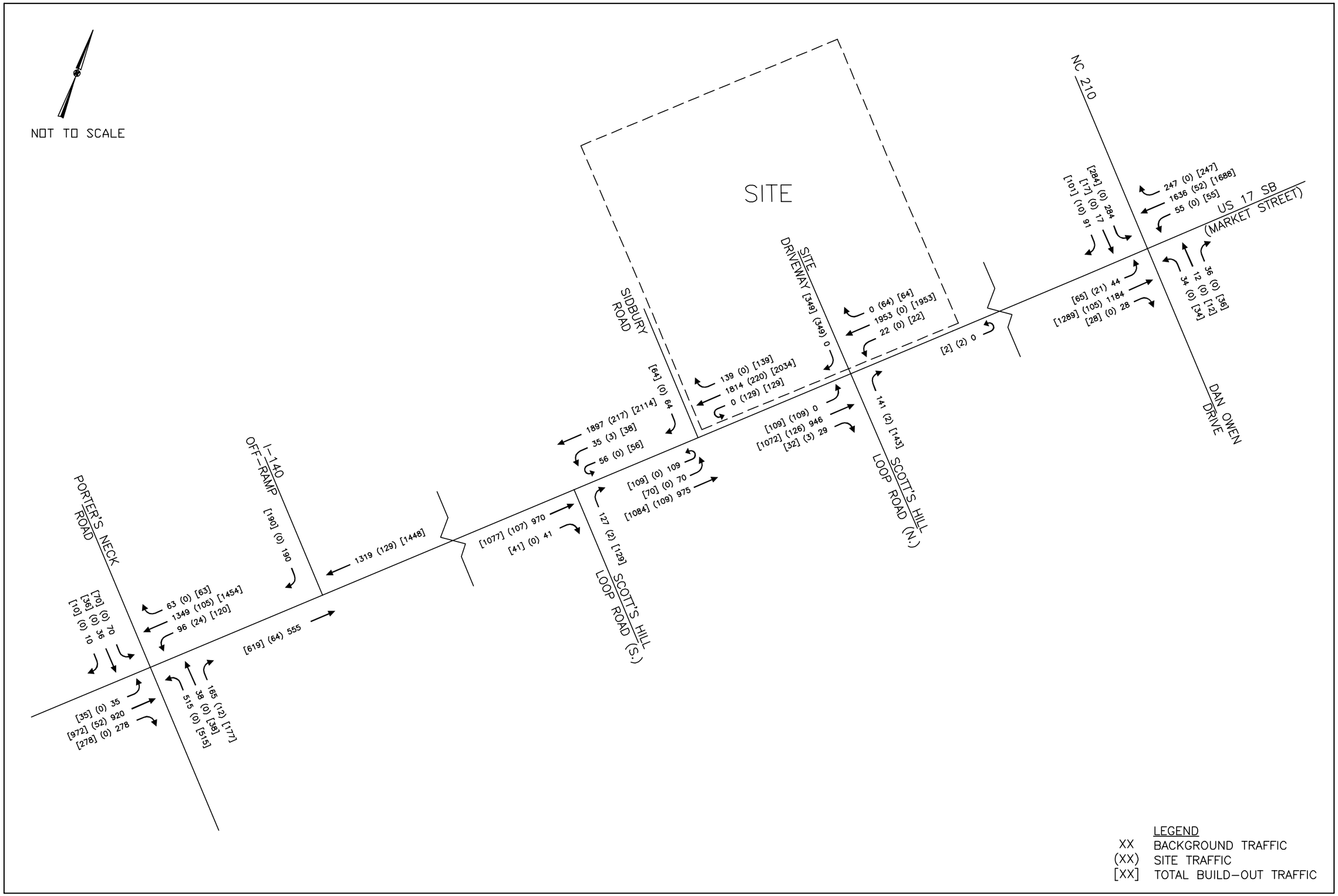


FIGURE 7

PROJECTED (2019) PHASE 1 BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

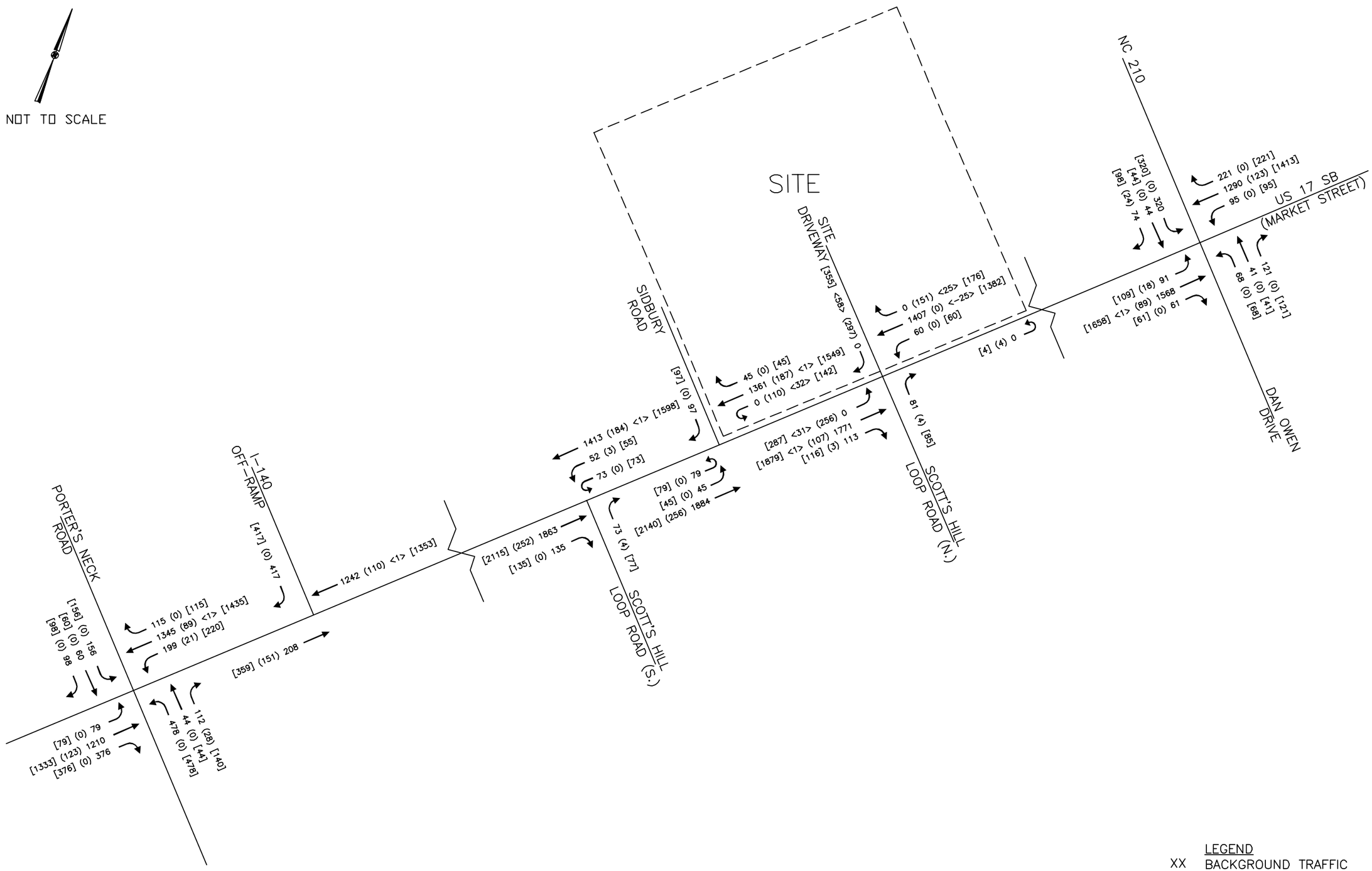


FIGURE 8

PROJECTED (2019) PHASE 1 BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

6.0 Capacity Analysis

Capacity analyses (see Appendix) were performed for the AM and PM peak hours for the existing traffic condition and the projected (2019) background and Phase 1 build-out traffic conditions using Synchro Version 8 software to determine the operating characteristics of the adjacent road network and the impacts of the proposed project. The North Carolina Department of Transportation Congestion Management Group uses and reports Synchro Level-of-Service output for the analysis of intersection operating conditions.

Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a set 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 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 8 or computable using methodology published in the *Highway Capacity Manual.* 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.

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	Short Delays
B	> 10 – 20	> 10 – 15	
C	> 20 – 35	> 15 – 25	
D	> 35 – 55	> 25 – 35	Moderate Delays
E	> 55 – 80	> 35 – 50	
F	> 80	> 50	Long Delays

Capacity analyses were performed for the existing (2014) traffic condition and the projected (2019) background and Phase 1 build-out traffic conditions for the following intersections:

- US 17 (Market Street) & Sidbury Road
- US 17 (Market Street) & Scotts Hill Loop Road North
- US 17 (Market Street) & Scotts Hill Loop Road South
- US 17 (Market Street) & I-140 Interchange
- US 17 (Market Street) & Porters Neck Road
- US 17 (Market Street) & NC 210 / Dan Owen Drive
- US 17 (Market Street) & Site Driveway 1

Table 6.0-B summarizes the LOS and delay (seconds per vehicle) for all of the study intersections for the existing (2014) traffic condition and the projected (2019) background and Phase 1 build-out traffic conditions. All capacity analyses are included in the Appendix and are briefly summarized in the following sub-sections.

Table 6.0-B
Phase 1 Level-of-Service Summary

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
US 17 Southbound & Sidbury Road (Signalized)		
Existing (2014) Traffic	A (10.0)	A (6.2)
Background (2019) Traffic	B (12.7)	A (6.9)
Phase 1 Build-out (2019) Traffic	B (11.1)	A (4.1)
US 17 Northbound & Sidbury Road Southbound U-turn (Unsignalized)		
Phase 1 Build-out (2019) Traffic	U-turn – B (14.0)	U-turn – D (26.8)
US 17 Northbound & Scotts Hill Loop Road North (Signalized)		
Existing (2014) Traffic	A (3.8)	A (3.1)
Background (2019) Traffic	A (4.4)	A (3.5)
Phase 1 Build-out (2019) Traffic	A (4.6)	A (3.8)
US 17 Northbound & Scotts Hill Loop Road South (Signalized)		
Existing (2014) Traffic	A (5.6)	A (7.5)
Background (2019) Traffic	A (6.4)	A (9.3)
Phase 1 Build-out (2019) Traffic	A (6.6)	B (12.7)

Table 6.0-B (cont.) Phase 1 Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
US 17 Southbound & I-140 Eastbound Off-Ramp (Unsignalized)		
Existing (2014) Traffic	EB – C (22.2)	EB – E (39.2)
Background (2019) Traffic	EB – D (28.8)	EB – F (72.2)
Background (2019) Traffic w/ Improvements	EB – C (19.2)	EB – C (21.4)
Phase 1 Build-out (2019) Traffic w/ Background Improvements	EB – C (21.7)	EB – C (24.4)
US 17 & Porters Neck Road (Signalized)		
Existing (2014) Traffic	C (23.9)	C (29.2)
Background (2019) Traffic	C (25.6)	C (31.8)
Phase 1 Build-out (2019) Traffic	C (26.9)	C (33.8)
US 17 & NC 210 / Dan Owen Drive (Signalized)		
Existing (2014) Traffic	C (23.2)	C (28.7)
Background (2019) Traffic	C (26.0)	C (33.1)
Phase 1 Build-out (2019) Traffic	C (26.9)	C (34.8)
US 17 & Site Driveway 1 (Signalized)		
Phase 1 Build-out (2019) Traffic	C (21.3)	B (17.8)

6.1 *US 17 Southbound & Sidbury Road*

Analyses indicate that the signalized intersection of US 17 Southbound & Sidbury Road currently operates at LOS A in the AM and PM peak hours. In 2019 without the project in place, the intersection is projected to operate at LOS B in the AM peak hour and LOS A in the PM peak hour. At Phase 1 build-out in 2019, the intersection is projected to continue to operate at LOS B in the AM peak hour and LOS A in the PM peak hour. No roadway improvements are recommended at this intersection to accommodate projected site traffic.

Table 6.1 summarizes the operation of the intersection of US 17 Southbound & Sidbury Road for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.1
Phase 1 Level-of-Service
US 17 Southbound & Sidbury Road (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	A (10.0)	A (6.2)
Projected (2019) Background Traffic	B (12.7)	A (6.9)
Projected (2019) Phase 1 Build-out Traffic	B (11.1)	A (4.1)

6.2 *US 17 Northbound & Sidbury Road Southbound U-Turn*

A southbound U-turn is proposed to be located on US 17 at the Sidbury Road intersection. The following roadway improvement is recommended at this intersection:

- Construct an exclusive southbound U-turn lane with a minimum of 150 feet of storage on US 17

At Phase 1 build-out in 2019 with the recommended improvement in place, the unsignalized intersection of US 17 Northbound & the Southbound U-turn is projected to operate with short delays in the AM peak hour and moderate delays in the PM peak hour for the U-turn movement.

This intersection and the recommended roadway improvement are consistent with the "superstreet" concept adopted along US 17 in this area.

Table 6.2 summarizes the LOS and delay (seconds per vehicle) for the unsignalized intersection of US 17 Northbound & Sidbury Road SB U-turn for the projected (2019) Phase 1 build-out traffic condition.

Table 6.2
Phase 1 Level-of-Service
US 17 Northbound & Sidbury Road Southbound U-turn (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Projected (2019) Phase 1 Build-out Traffic	U-turn – B (14.0)	U-turn – D (26.8)

6.3 *US 17 Northbound & Scotts Hill Loop Road North*

Analyses indicate that the signalized intersection of US 17 Northbound & Scotts Hill Loop Road North currently operates at LOS A in the AM and PM peak hours. In 2019 the intersection is projected to continue to operate at LOS A in the AM and PM peak hours with or without the proposed project in place. No roadway improvements are recommended at this intersection to accommodate projected site traffic.

Table 6.3 summarizes the operation of the signalized intersection of US 17 Northbound & Scotts Hill Loop Road North for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.3
Phase 1 Level-of-Service
US 17 Northbound & Scotts Hill Loop Road North (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	A (3.8)	A (3.1)
Projected (2019) Background Traffic	A (4.4)	A (3.5)
Projected (2019) Phase 1 Build-out Traffic	A (4.6)	A (3.8)

6.4 *US 17 Northbound & Scotts Hill Loop Road South*

Analyses indicate that the signalized intersection of US 17 Northbound & Scotts Hill Loop Road South currently operates at LOS A in the AM and PM peak hours. In 2019 without the project in place, the intersection is projected to continue to operate at LOS A in the AM and PM peak hours. At Phase 1 build-out in 2019, the intersection is projected to operate at LOS A in the AM peak hour and LOS B in the PM peak hour. No roadway improvements are recommended at this intersection to accommodate projected site traffic.

Table 6.4 summarizes the operation of the signalized intersection of US 17 Northbound & Scotts Hill Loop Road South for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.4
Phase 1 Level-of-Service
US 17 Northbound & Scotts Hill Loop Road South (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	A (5.6)	A (7.5)
Projected (2019) Background Traffic	A (6.4)	A (9.3)
Projected (2019) Phase 1 Build-out Traffic	A (6.6)	B (12.7)

6.5 *US 17 Southbound & I-140 Eastbound Off-Ramp*

Analyses indicate that the unsignalized intersection of US 17 Southbound & I-140 Eastbound Off-Ramp currently operates with short delays in the AM peak hour and moderate delays in the PM peak hour for the off-ramp movement. In 2019 without the project in place, the intersection is projected to operate with moderate delays in the AM peak hour and long delays with queue concerns in the PM peak hour. The following roadway improvement is recommended at this intersection to accommodate projected background traffic:

- Construct an additional eastbound right-turn lane on the I-140 off-ramp

With the recommended improvement in place, the eastbound off-ramp is projected to operate with short delays in the AM and PM peak hours with or without the proposed project in place.

Table 6.5 summarizes the operation of the unsignalized intersection of US 17 Southbound & I-140 Eastbound Off-Ramp for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.5
Phase 1 Level-of-Service
US 17 Southbound & I-140 Eastbound Off-Ramp (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	EB – C (22.2)	EB – E (39.2)
Projected (2019) Background Traffic	EB – D (28.8)	EB – F (72.2)
Projected (2019) Background Traffic with Improvement	EB – C (19.2)	EB – C (21.4)
Projected (2019) Phase 1 Build-out Traffic with Background Improvement	EB – C (21.7)	EB – C (24.4)

6.6 *US 17 & Porters Neck Road*

Analyses indicate that the signalized intersection of US 17 & Porters Neck Road currently operates at LOS C in the AM and PM peak hours. In 2019 the intersection is projected to continue to operate at LOS C in the AM and PM peak hours with or without the project in place. No roadway improvements are recommended at this intersection to accommodate projected site traffic.

Table 6.6 summarizes the operation of the signalized intersection of US 17 & Porters Neck Road for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.6
Phase 1 Level-of-Service
US 17 & Porters Neck Road (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	C (23.9)	C (29.2)
Projected (2019) Background Traffic	C (25.6)	C (31.8)
Projected (2019) Phase 1 Build-out Traffic	C (26.9)	C (33.8)

6.7 *US 17 & NC 210 / Dan Owen Drive*

Analyses indicate that the signalized intersection of US 17 & NC 210 / Dan Owen Drive currently operates at LOS C in the AM and PM peak hours. In 2019 the intersection is projected to continue to operate at LOS C in the AM and PM peak hours with or without the project in place. No roadway improvements are recommended at this intersection to accommodate projected site traffic.

Table 6.7 summarizes the operation of the signalized intersection of US 17 & NC 210 / Dan Owen Drive for the existing (2014) and projected (2019) background and Phase 1 build-out traffic conditions.

Table 6.7
Phase 1 Level-of-Service
US 17 & NC 210 / Dan Owen Drive (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2014) Traffic	C (23.2)	C (28.7)
Projected (2019) Background Traffic	C (26.0)	C (33.1)
Projected (2019) Phase 1 Build-out Traffic	C (26.9)	C (34.8)

6.8 *US 17 & Site Driveway 1*

A site driveway is proposed to connect to US 17 as a left-in / right-in / right-out access directly across from Scotts Hill Loop Road North. This is consistent with the "superstreet" concept adopted along US 17 in this area. Analysis indicates that this intersection does meet the Manual of Uniform Traffic Control Devices (MUTCD) peak hour vehicular volume warrant in the Phase 1 (2019) build-out scenario based on the US 17 NB left-turn movement versus the southbound approach on US 17. Signal warrant spreadsheets are included in the Appendix.

The following roadway improvements are recommended at this intersection:

- Construct an exclusive northbound left-turn lane with a minimum of 225 feet of storage on US 17
- Construct an exclusive southbound right-turn lane with a minimum of 125 feet of storage on US 17
- Provide dual right-turn lanes on the eastbound approach of the Site Driveway
- Install a traffic signal for southbound US 17 and eastbound Site Driveway approaches as well as the northbound left-turn on US 17 when warranted

At Phase 1 build-out in 2019 with the recommended improvements and a traffic signal in place, this intersection is projected to operate at LOS C in the AM peak hour and LOS B in the PM peak hour. Table 6.8 summarizes the operation of the signalized intersection of US 17 & Site Driveway 1 for the projected (2019) Phase 1 build-out traffic conditions.

Table 6.8
Phase 1 Level-of-Service
US 17 & Site Driveway 1 (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Projected (2019) Phase 1 Build-out Traffic	C (21.3)	B (17.8)

7.0 Recommendations

The following roadway improvements are recommended to accommodate projected 2019 Background and Build-out traffic volumes:

Phase 1 (2019) – Recommended Background Improvements

US 17 Southbound & I-140 Eastbound Off-Ramp:

- Construct an additional eastbound right-turn lane on the I-140 off-ramp

Phase 1 (2019) – Recommended Developer Improvements

US 17 Northbound & Sidbury Road Southbound U-Turn:

- Construct an exclusive southbound U-turn lane with a minimum of 150 feet of storage on US 17

US 17 & Site Driveway:

- Construct an exclusive northbound left-turn lane with a minimum of 225 feet of storage on US 17
- Construct an exclusive southbound right-turn lane with a minimum of 125 feet of storage on US 17
- Provide dual right-turn lanes on the eastbound approach of the Site Driveway
- Install a traffic signal for southbound US 17 and eastbound Site Driveway approaches as well as the northbound left-turn on US 17 when warranted

Based on the capacity analyses presented herein, all of the study intersections will operate at acceptable levels of service at project build-out in Phase 1 (2019). The recommended Phase 1 roadway laneage is shown on Figure 9.

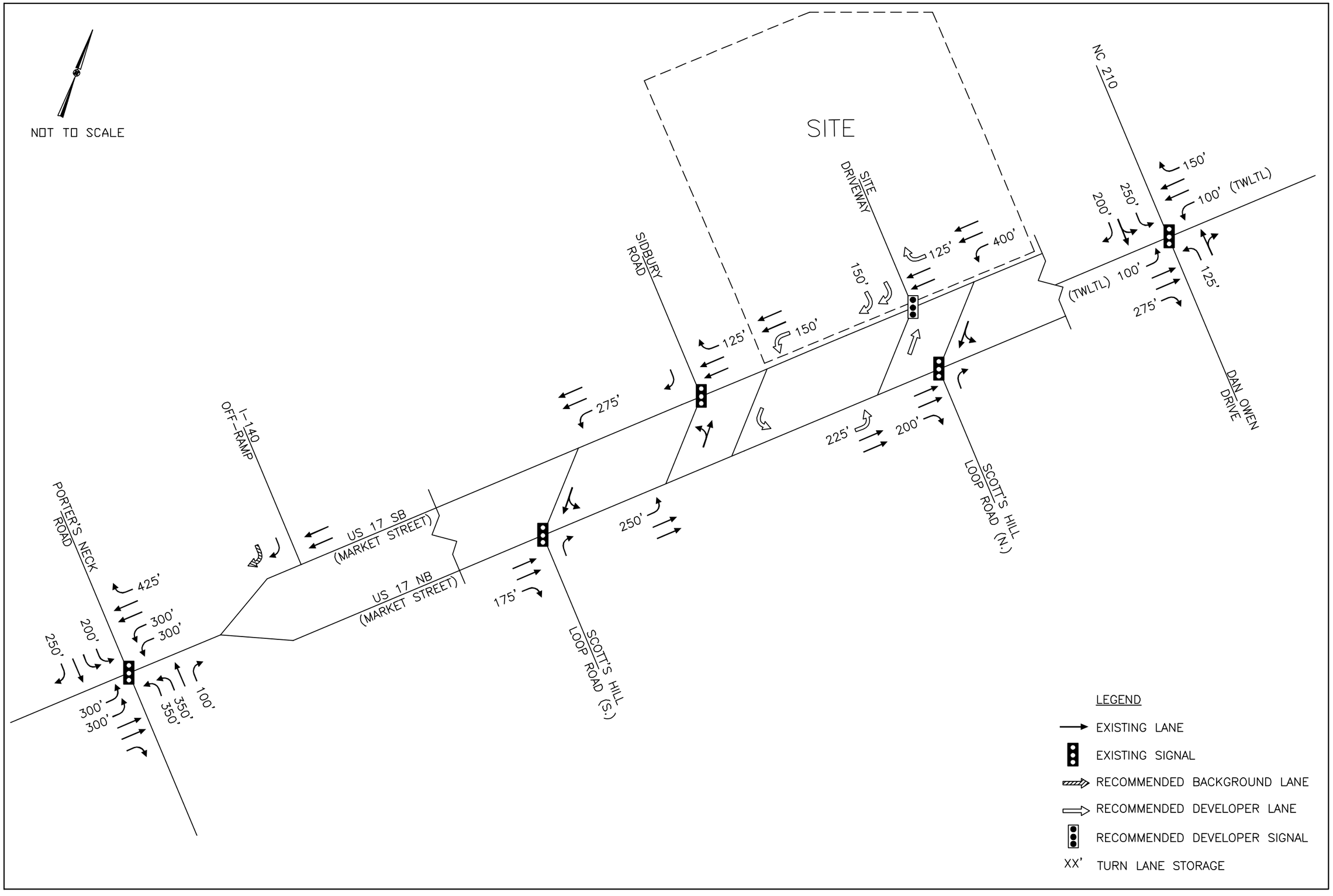


FIGURE 9

RECOMMENDED ROADWAY LANEAGE – PHASE 1 (2019)

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 – Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

8.0 Phase 2 Analysis

In addition to Site Driveway 1, it was assumed that site access for Phase 2 of the development will consist of a channelized left-out / right-in / right-out access at the existing full-movement median opening on US 17 (for the power sub-station) approximately 4,500 feet north of Site Driveway 1 and a full-movement access on Sidbury Road approximately 2,800 feet west of US 17.

While the final land uses and build-out year for Phase 2 are somewhat uncertain, to be consistent with the approved Blake Farm Master Plan, Phase 2 is anticipated to include a total of approximately 500 single-family homes, 700 active adult / senior attached housing units, 1,798 active adult / senior detached housing units, 50,000 SF of mini-warehouse, 50,000 SF of retail space, and two 150-room hotels. The traffic generation potential of the proposed development was determined using the traffic generation rates published in *Trip Generation* (Institute of Transportation Engineers, Ninth Edition, 2012). Table 8.1 summarizes the estimated traffic generation for the proposed development in Phase 2.

Table 8.1
Phase 2 ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
151	Mini-Warehouse	50,000	s.f.	63	63	4	3	7	6
210	Single Family Detached Housing	500	d.u.	2,309	2,309	90	270	282	165
251	Senior Adult Housing - Detached	1,798	d.u.	3,093	3,093	118	218	239	153
252	Senior Adult Housing - Attached	700	d.u.	1,054	1,054	48	92	92	78
310	Hotel	300	rooms	1,156	1,156	94	65	92	88
820	Shopping Center	50,000	s.f.	2,164	2,164	63	39	181	196
Subtotal				**9,839**	**9,839**	**417**	**687**	**893**	**686**
Internal Capture				***445***	***445***	***0***	***0***	***41***	***41***
Pass-By Capture				***575***	***575***	***0***	***0***	***56***	***59***
Total Driveway Volumes				**8,819**	**8,819**	**417**	**687**	**796**	**586**

Table 8.1 shows that in Phase 2, the proposed development has the potential to generate 8,819 new trips in and 8,819 new trips out during a typical weekday with 417 new trips entering and 687 new trips exiting during the AM peak hour and 796 new trips entering and 586 new trips exiting during the PM peak hour.

Internal capture and pass-by capture reductions were applied using the same ITE methodology as applied in the Phase 1 analysis. No reductions were applied to the AM peak hour. Detailed trip generation calculations are included in the Appendix of this report.

Phase 2 (2029) background traffic volumes were developed by growing the Phase 1 (2019) background traffic volumes by 1% per year from 2019 to 2029. Phase 2 (2029) background traffic volumes for the AM and PM peak hours are shown in Figures 11 and 12, respectively.

The proposed Phase 2 site traffic was generated and assigned to the adjacent roadway network according to the same overall distribution discussed previously in Section 4.0. The site traffic distribution and percent assignment for Phase 2 are shown in Figure 10. The site traffic volumes as well as Phase 2 (2029) build-out traffic volumes for the AM and PM peak hours are shown in Figures 11 and 12, respectively.

Table 8.2 summarizes the LOS and delay (seconds per vehicle) for all of the study intersections for the projected (2029) background and build-out traffic conditions for Phase 2. All capacity analyses are included in the Appendix.

Table 8.2
Phase 2 Level-of-Service Summary

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
US 17 Southbound & Sidbury Road (Signalized)		
Background (2029) Traffic	B (14.3)	A (7.3)
Phase 2 Build-out (2029) Traffic	C (31.2)	A (9.0)
US 17 Northbound & Sidbury Road Southbound U-turn (Signalized)		
Phase 2 Build-out (2029) Traffic	A (4.1)	C (21.1)
US 17 Northbound & Scotts Hill Loop Road North (Signalized)		
Background (2029) Traffic	A (4.4)	A (3.6)
Phase 2 Build-out (2029) Traffic	A (4.0)	A (3.2)

Table 8.2 (cont.) Phase 2 Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
US 17 Northbound & Scotts Hill Loop Road South (Signalized)		
Background (2029) Traffic	A (6.8)	B (12.2)
Phase 2 Build-out (2029) Traffic	A (7.6)	D (49.1)
US 17 Southbound & I-140 Eastbound Off-Ramp (Unsignalized)		
Background (2029) Traffic	EB – E (42.6)	EB – F (145.9)
Background (2029) Traffic w/ Improvements	EB – C (22.8)	EB – D (27.5)
Phase 2 Build-out (2029) Traffic w/ Background Improvements	EB – D (30.5)	EB – E (39.3)
US 17 & Porters Neck Road (Signalized)		
Background (2029) Traffic	C (31.6)	C (34.4)
Phase 2 Build-out (2029) Traffic	D (35.7)	D (40.2)
US 17 & NC 210 / Dan Owen Drive (Signalized)		
Background (2029) Traffic	C (28.8)	D (36.2)
Phase 2 Build-out (2029) Traffic	C (32.3)	D (41.6)
US 17 & Site Driveway 1 (Signalized)		
Phase 2 Build-out (2029) Traffic	C (31.1)	B (16.6)
US 17 & Site Driveway 2 (Signalized)		
Phase 2 Build-out (2029) Traffic	C (22.6)	A (9.0)
Sidbury Road & Site Driveway 3 (Unsignalized)		
Phase 2 Build-out (2029) Traffic	SB – B (11.2)	SB – B (10.2)

The following roadway improvements are recommended to accommodate projected 2029 Phase 2 build-out traffic volumes:

Phase 2 (2029) – Recommended Developer Improvements (in addition to Phase 1)

US 17 Northbound & Sidbury Road Southbound U-Turn:

- Install a traffic signal for the southbound U-turn and the northbound through movement when warranted

US 17 & Site Driveway 1:

- Construct an additional northbound left-turn lane to provide dual left-turn lanes with a minimum of 150 feet of storage each on US 17 and provide two inbound lanes on Site Driveway 1 to accept the dual left-turn movements

US 17 & Site Driveway 2:

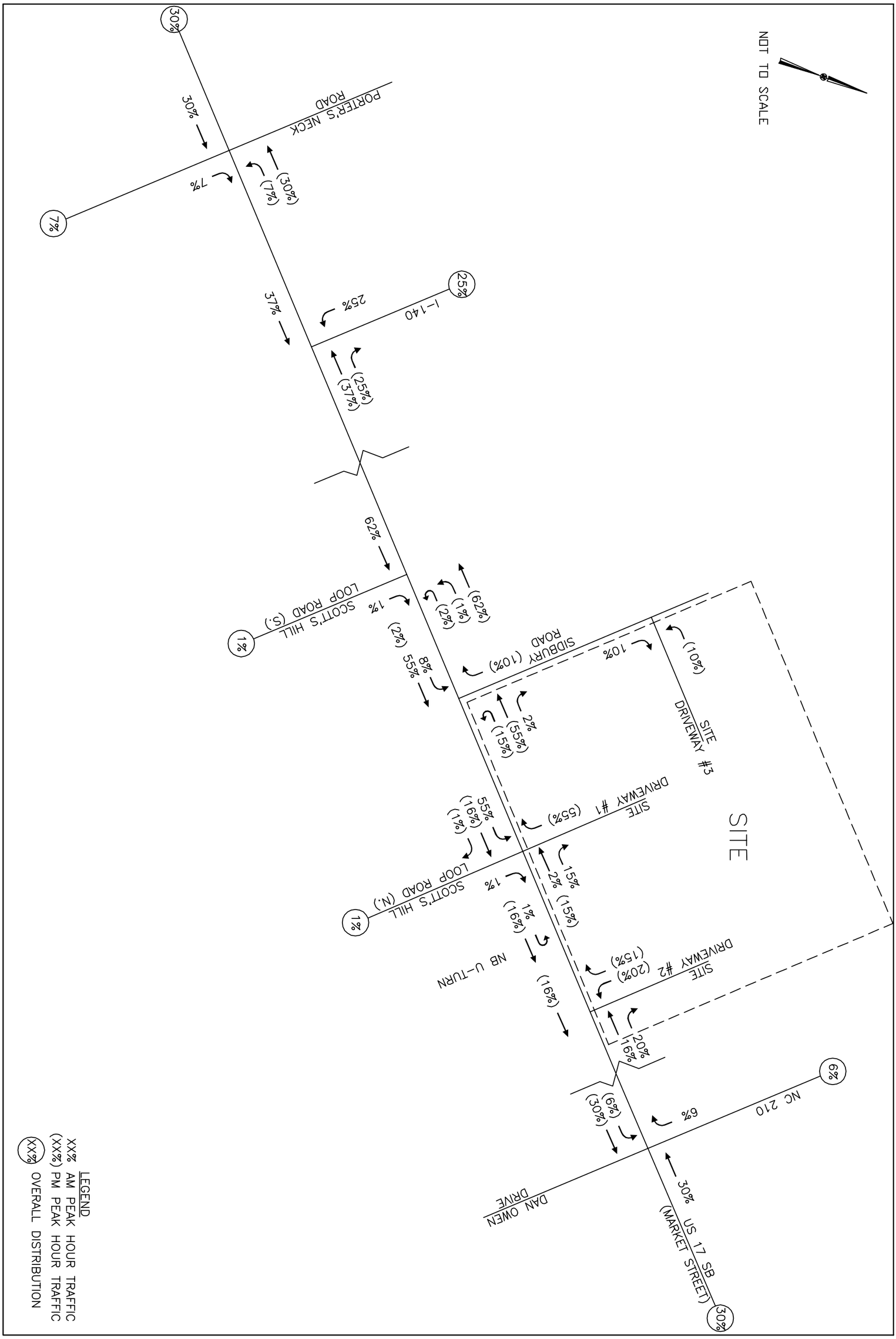
- Construct an exclusive southbound right-turn lane with a minimum of 125 feet of storage on US 17
- Construct a channelized acceleration lane in the median on US 17 NB to accept the eastbound left-turn movement exiting Site Driveway 2
- Provide separate left- and right-turn lanes on the eastbound approach of Site Driveway 2
- Install a traffic signal for the southbound US 17 and eastbound Site Driveway approaches when warranted

US 17 & Site Driveway 3:

- Construct an exclusive westbound right-turn lane with a minimum of 50 feet of storage on Sidbury Road

Analysis indicates that with the recommended improvements in place, all of the study intersections are expected to operate at an acceptable level of service at project build-out in Phase 2 (2029). The recommended lane geometry for Phase 2 is shown on Figure 13.

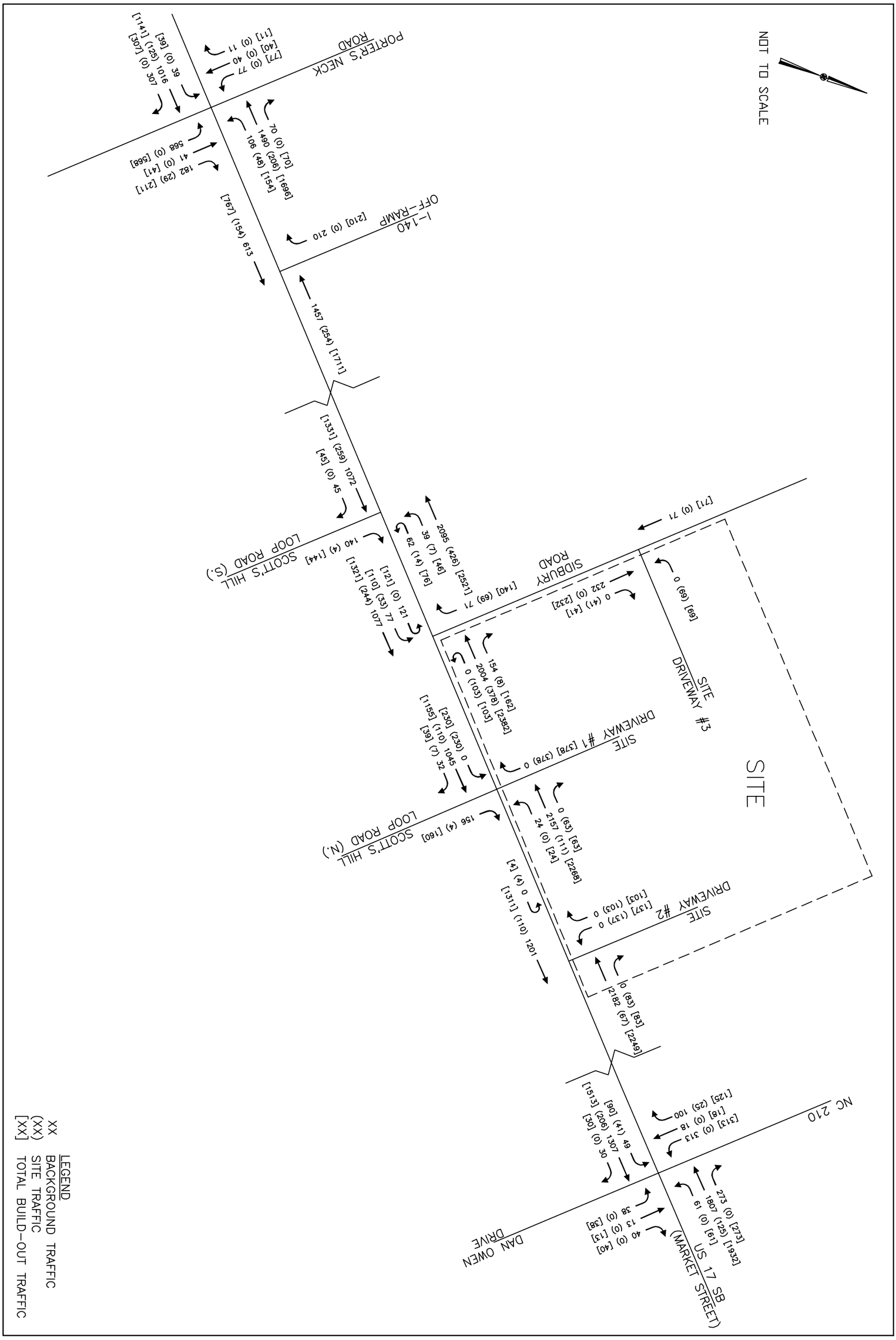
K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg



Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	SITE TRAFFIC DISTRIBUTION AND PERCENT ASSIGNMENT – PHASE 2	FIGURE 10

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

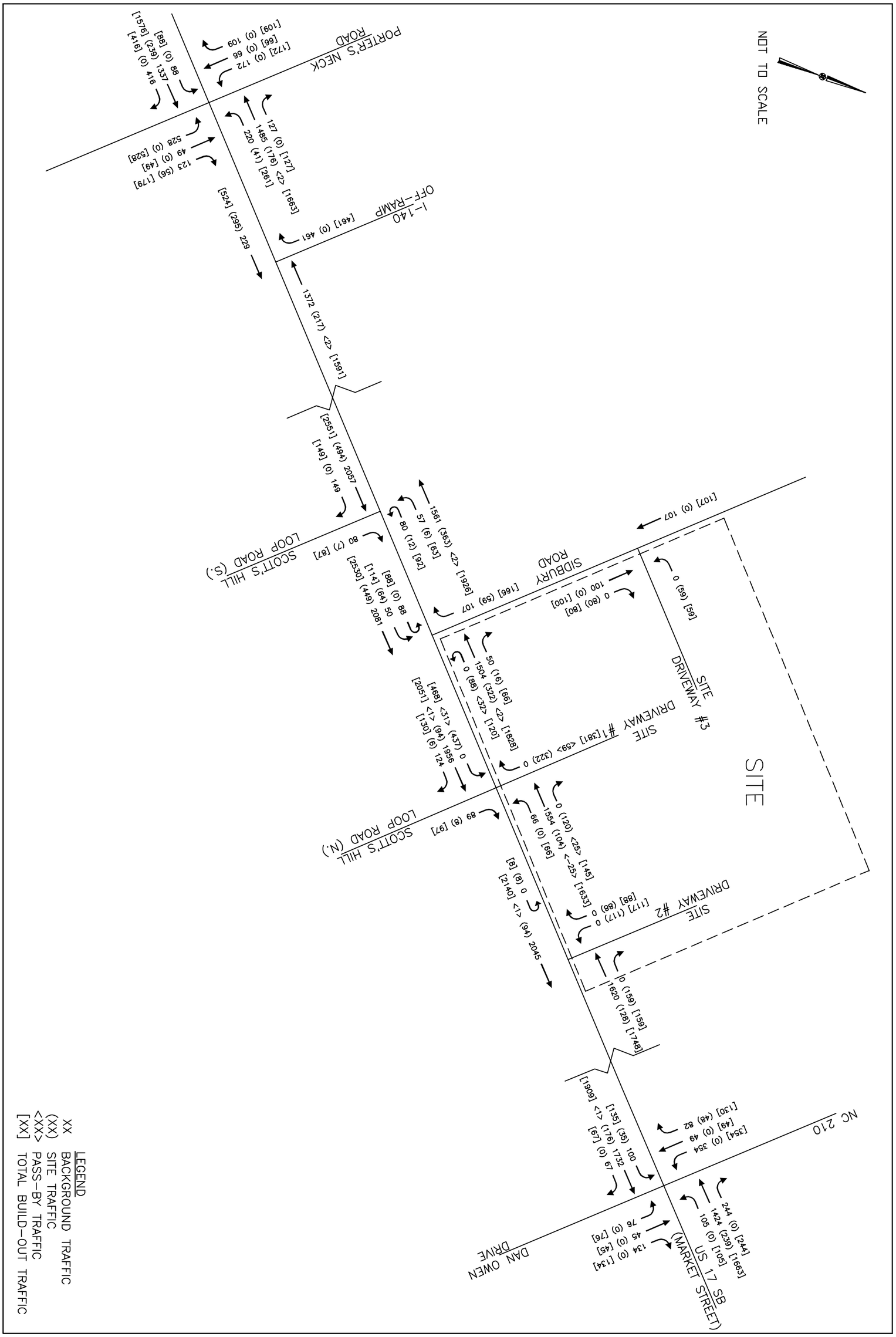
K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg



Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2029) PHASE 2 BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES	FIGURE 11

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg



LEGEND

XX	BACKGROUND TRAFFIC
(XX)	SITE TRAFFIC
<XX>	PASS-BY TRAFFIC
[XX]	TOTAL BUILD-OUT TRAFFIC

Kimley»Horn	BLAKE FARM PENDER COUNTY, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2029) PHASE 2 BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 12

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

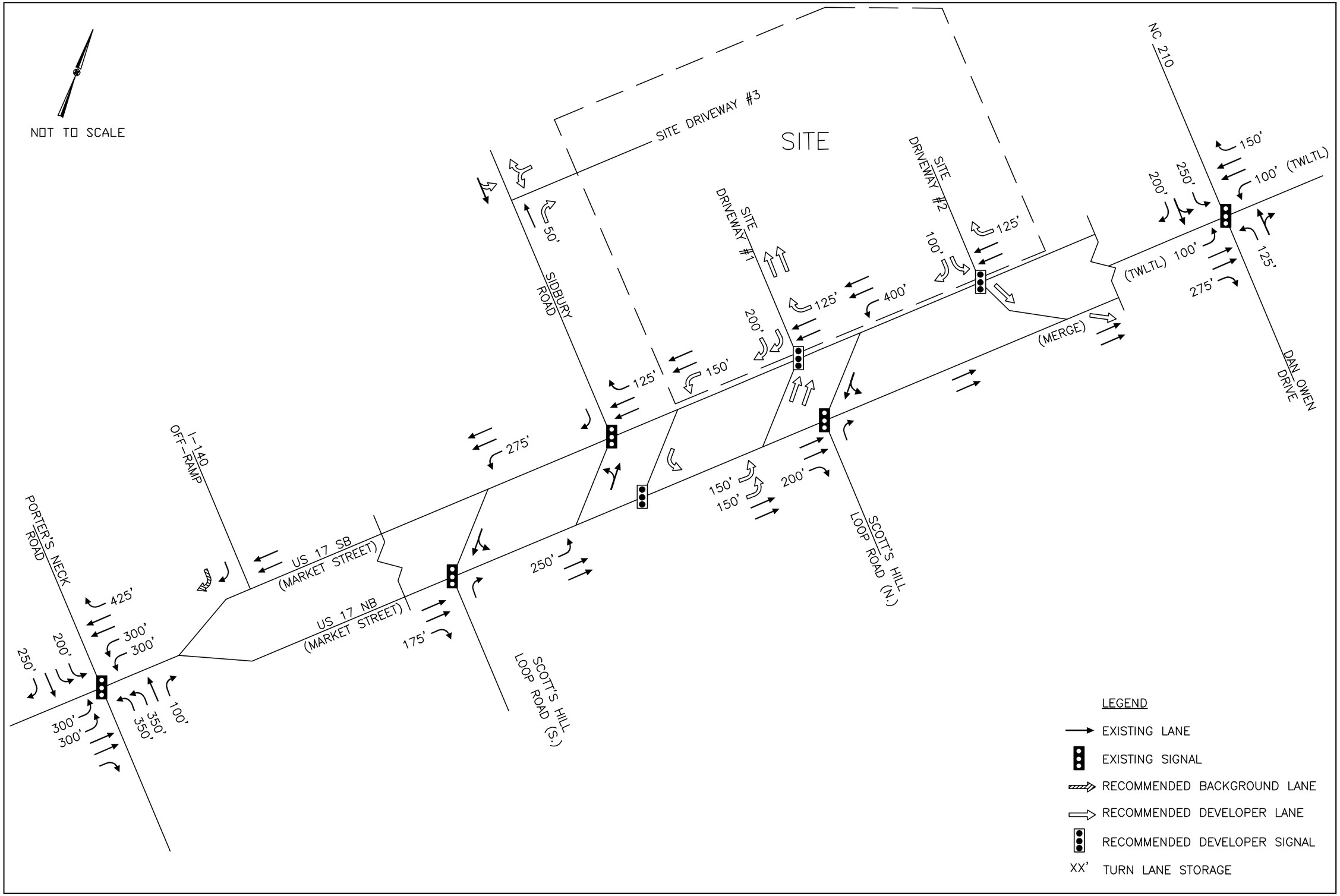


FIGURE 13

RECOMMENDED ROADWAY LANEAGE – PHASE 2 (2029)

BLAKE FARM
PENDER COUNTY, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

K:\RAL_TPTO_Traffic\018837000 Blake Farm\T5 - Report-Submittals\TIA_Figures\BlakeFarm_TIAFigures_FINAL.dwg

Appendix

Traffic Count Data

Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Sidbury Road
Date: Dec. 10, 2013
Counter:JG
Weather: Clear

File Name : SidburyRdUS17
Site Code : 00013703
Start Date : 12/10/2013
Page No : 1

Groups Printed- Vehicles

	US 17 From North					Sidbury Rd. From East					US 17 From South						Sidbury Rd. From West					
Start Time	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	23	306	0	0	329	0	0	0	0	0	2	206	5	20	0	233	7	0	0	0	7	569
07:15 AM	31	488	0	1	520	0	0	0	0	0	2	183	13	29	0	227	8	0	0	0	8	755
07:30 AM	48	426	0	0	474	0	0	0	0	0	0	182	21	21	4	228	11	0	0	0	11	713
07:45 AM	34	376	0	1	411	0	0	0	0	0	2	208	17	26	2	255	16	0	0	0	16	682
Total	136	1596	0	2	1734	0	0	0	0	0	6	779	56	96	6	943	42	0	0	0	42	2719
08:00 AM	11	321	0	0	332	1	0	0	0	1	4	188	11	21	0	224	22	0	0	0	22	579
08:15 AM	19	395	0	0	414	0	0	0	0	0	2	183	14	23	0	222	22	0	0	0	22	658
08:30 AM	25	333	0	0	358	3	0	0	0	3	4	198	13	27	0	242	16	0	0	0	16	619
08:45 AM	18	307	0	0	325	0	0	0	0	0	3	221	19	27	0	270	34	0	0	0	34	629
Total	73	1356	0	0	1429	4	0	0	0	4	13	790	57	98	0	958	94	0	0	0	94	2485
*** BREAK ***																						
04:00 PM	10	254	0	1	265	2	0	0	0	2	3	302	10	26	1	342	19	0	0	0	19	628
04:15 PM	8	259	0	0	267	1	0	0	0	1	3	355	8	18	2	386	28	0	0	0	28	682
04:30 PM	9	269	0	1	279	3	0	0	0	3	1	352	11	15	0	379	20	0	0	1	21	682
04:45 PM	11	267	0	1	279	0	0	0	0	0	3	358	8	22	2	393	22	0	0	1	23	695
Total	38	1049	0	3	1090	6	0	0	0	6	10	1367	37	81	5	1500	89	0	0	2	91	2687
05:00 PM	10	276	0	0	286	5	0	0	0	5	0	393	5	12	0	410	25	0	0	0	25	726
05:15 PM	9	285	0	0	294	0	0	0	0	0	0	437	12	14	0	463	23	0	0	0	23	780
05:30 PM	10	251	0	0	261	1	0	0	0	1	0	426	15	23	0	464	16	0	0	0	16	742
05:45 PM	11	240	0	0	251	0	0	0	0	0	0	338	16	18	1	373	20	0	0	0	20	644
Total	40	1052	0	0	1092	6	0	0	0	6	0	1594	48	67	1	1710	84	0	0	0	84	2892
Grand Total		5053	0	5	5345	16	0	0	0	16	29	4530	198	342	12	5111	309	0	0	2	311	10783
Apprch %	5.4	94.5	0	0.1		100	0	0	0		0.6	88.6	3.9	6.7	0.2		99.4	0	0	0.6		
Total %	2.7	46.9	0	0	49.6	0.1	0	0	0	0.1	0.3	42	1.8	3.2	0.1	47.4	2.9	0	0	0	2.9	

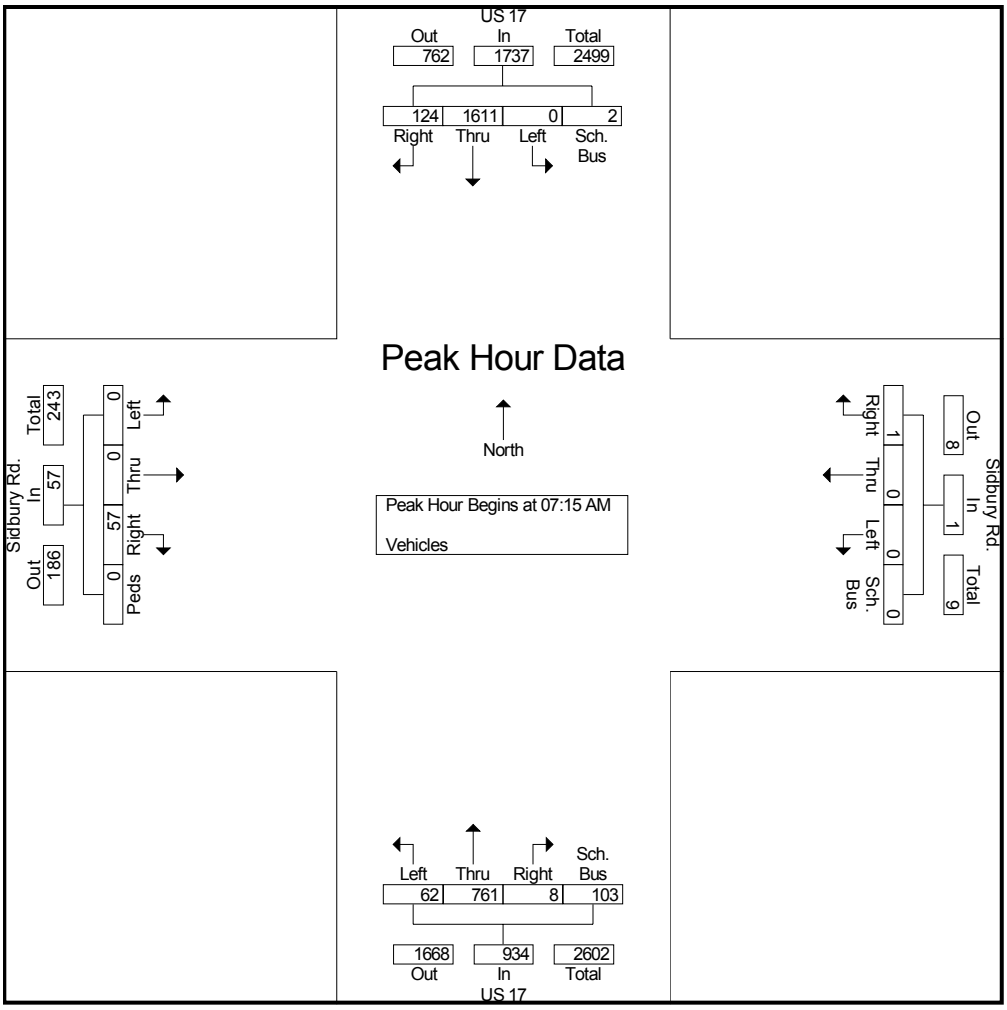
Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Sidbury Road
Date: Dec. 10, 2013
Counter:JG
Weather: Clear

File Name : SidburyRdUS17
Site Code : 00013703
Start Date : 12/10/2013
Page No : 2

	US 17 From North					Sidbury Rd. From East					US 17 From South						Sidbury Rd. From West					
Start Time	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:15 AM																						
07:15 AM	31	**488**	0	**1**	**520**	0	0	0	0	0	2	183	13	**29**	0	227	8	0	0	0	8	**755**
07:30 AM	**48**	426	0	0	474	0	0	0	0	0	0	182	**21**	21	**4**	228	11	0	0	0	11	713
07:45 AM	34	376	0	1	411	0	0	0	0	0	2	**208**	17	26	2	**255**	16	0	0	0	16	682
08:00 AM	11	321	0	0	332	**1**	0	0	0	**1**	**4**	188	11	21	0	224	**22**	0	0	0	**22**	579
Total Volume	124	1611	0	2	1737	1	0	0	0	1	8	761	62	97	6	934	57	0	0	0	57	2729
% App. Total																						
PHF	.646	.825	.000	.500	.835	.250	.000	.000	.000	.250	.500	.915	.738	.836	.375	.916	.648	.000	.000	.000	.648	.904



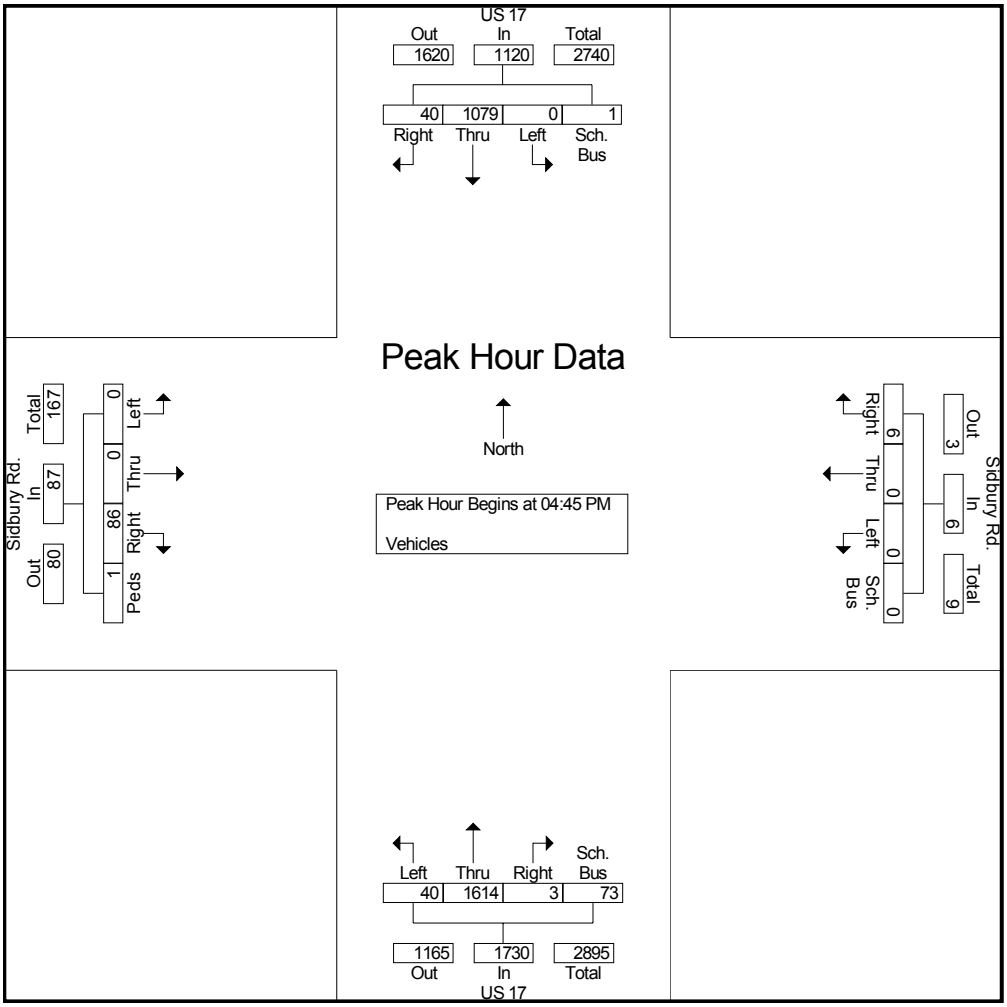
Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Sidbury Road
Date: Dec. 10, 2013
Counter:JG
Weather: Clear

File Name : SidburyRdUS17
Site Code : 00013703
Start Date : 12/10/2013
Page No : 3

	US 17 From North					Sidbury Rd. From East					US 17 From South						Sidbury Rd. From West					
Start Time	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 04:45 PM																						
04:45 PM	**11**	267	0	**1**	279	0	0	0	0	0	**3**	358	8	22	**2**	393	22	0	0	**1**	23	695
05:00 PM	10	276	0	0	286	**5**	0	0	0	**5**	0	393	5	12	0	410	**25**	0	0	0	**25**	726
05:15 PM	9	**285**	0	0	**294**	0	0	0	0	0	0	**437**	12	14	0	463	23	0	0	0	23	**780**
05:30 PM	10	251	0	0	261	1	0	0	0	1	0	426	**15**	**23**	0	**464**	16	0	0	0	16	742
Total Volume	40	1079	0	1	1120	6	0	0	0	6	3	1614	40	71	2	1730	86	0	0	1	87	2943
% App. Total																						
PHF	.909	.946	.000	.250	.952	.300	.000	.000	.000	.300	.250	.923	.667	.772	.250	.932	.860	.000	.000	.250	.870	.943



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

US 17 and Scotts Hill Loop Rd , Hampstead

Date:	6/18/2014
Day:	Wednesday

Project #:	14-9189-001
City:	Hampstead

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (US 17)

Lanes					
AM	0	1629	20	974	AM
NOON	0	0	0	0	NOON
PM	0	1274	54	1651	PM

Eastbound Approach (Scotts Hill Loop Rd)

Lanes	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	128	0	73
	0	0	0
	0	0	0
	46	0	156

CONTROL

Northbound Approach

Lanes					
AM	1629	0	846	26	AM
NOON	0	0	0	0	NOON
PM	1274	0	1578	102	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg		
AM	1649	974	128	0	73	0	0	0
NOON	0	0	46	0	156	0	0	0
PM	1328	1651						
			AM	NOON	PM	AM	NOON	PM

	South Leg	
AM	1629	872
NOON	0	0
PM	1274	1680

Total Volume Per Leg

	North Leg	East Leg			West Leg		
AM	2623	174	0	229	0	0	0
NOON	0						
PM	2979						
		AM	NOON	PM	AM	NOON	PM

	South Leg
AM	2501
NOON	0
PM	2954

Project ID: 14-9189-001
Location: US 17 & Scotts Hill Loop Rd
City: Hampstead

Day: Wednesday
Date: 6/18/2014

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	US 17 Northbound					US 17 Southbound					Scotts Hill Loop Rd Eastbound					Scotts Hill Loop Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	181	1	0	182	2	340	0	0	342	0	0	0	0	0	0	0	37	0	37	561
7:15 AM	0	193	5	0	198	4	459	0	0	463	0	0	0	0	0	0	0	31	0	31	692
7:30 AM	0	210	6	0	216	2	409	0	0	411	0	0	0	0	0	0	0	28	0	28	655
7:45 AM	0	231	7	0	238	10	425	0	0	435	0	0	0	0	0	0	0	34	0	34	707
Total	0	815	19	0	834	18	1633	0	0	1651	0	0	0	0	0	0	0	130	0	130	2615
8:00 AM	0	212	8	0	220	4	336	0	0	340	0	0	0	0	0	0	0	35	0	35	595
8:15 AM	0	224	14	0	238	8	339	0	0	347	0	0	0	0	0	0	0	19	0	19	604
8:30 AM	0	239	8	0	247	4	361	0	0	365	0	0	0	0	0	0	0	30	0	30	642
8:45 AM	0	195	8	0	203	3	298	0	0	301	0	0	0	0	0	0	0	17	0	17	521
Total	0	870	38	0	908	19	1334	0	0	1353	0	0	0	0	0	0	0	101	0	101	2362
BREAK																					
4:00 PM	0	331	13	0	344	9	276	0	0	285	0	0	0	0	0	0	0	18	0	18	647
4:15 PM	0	338	19	0	357	5	278	0	0	283	0	0	0	0	0	0	0	9	0	9	649
4:30 PM	0	404	12	0	416	6	324	0	0	330	0	0	0	0	0	0	0	16	0	16	762
4:45 PM	0	374	15	0	389	18	320	0	0	338	0	0	0	0	0	0	0	20	0	20	747
Total	0	1447	59	0	1506	38	1198	0	0	1236	0	0	0	0	0	0	0	63	0	63	2805
5:00 PM	0	363	18	0	381	7	305	0	0	312	0	0	0	0	0	0	0	22	0	22	715
5:15 PM	0	446	30	0	476	10	333	0	0	343	0	0	0	0	0	0	0	13	0	13	832
5:30 PM	0	395	39	0	434	19	316	0	0	335	0	0	0	0	0	0	0	18	0	18	787
5:45 PM	0	370	21	0	391	11	308	0	0	319	0	0	0	0	0	0	0	20	0	20	730
Total	0	1574	108	0	1682	47	1262	0	0	1309	0	0	0	0	0	0	0	73	0	73	3064
Grand Total	0	4706	224	0	4930	122	5427	0	0	5549	0	0	0	0	0	0	0	367	0	367	10846
Apprch %	0.0	95.5	4.5	0.0		2.2	97.8	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	####	0.0		
Total %	0.0	43.4	2.1	0.0	45.5	1.1	50.0	0.0	0.0	51.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	
Cars, PU, Vans	0	4615	224	0	4839	122	5358	0	0	5480	0	0	0	0	0	0	0	367	0	367	10686
% Cars, PU, Vans	0.0	98.1	####	0.0	98.2	####	98.7	0.0	0.0	98.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	####	0.0	100.0	98.5
Heavy Trucks	0	91	0		91	0	69	0		69	0	0	0		0	0	0	0		0	160
%Heavy Trucks	0.0	1.9	0.0	0.0	1.8	0.0	1.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5

Project ID: 14-9189-001
Location: US 17 & Scotts Hill Loop
City: Hampstead

PEAK HOURS

Day: Wednesday
Date: 6/18/2014

AM

	US 17 Northbound				US 17 Southbound				Scotts Hill Loop Rd Eastbound				Scotts Hill Loop Rd Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	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	193	5	198	4	459	0	463	0	0	0	0	0	0	31	31	692
7:30 AM	0	210	6	216	2	409	0	411	0	0	0	0	0	0	28	28	655
7:45 AM	0	231	7	238	10	425	0	435	0	0	0	0	0	0	34	34	707
8:00 AM	0	212	8	220	4	336	0	340	0	0	0	0	0	0	35	35	595
Total Volume	0	846	26	872	20	1629	0	1649	0	0	0	0	0	0	128	128	2649
% App. Total	0.0	97.0	3.0	100	1.2	98.8	0.0	100	0.0	0.0	0.0	0	0.0	0.0	100.0	100	
PHF				0.916				0.890				0.000				0.914	
Cars, PU, Vans	0	820	26	846	20	1618	0	1638	0	0	0	0	0	0	128	128	2612
% Cars, PU, Vans	0.0	96.9	####	97.0	100.0	99.3	0.0	99.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	98.6
Heavy Trucks	0	26	0	26	0	11	0	11	0	0	0	0	0	0	0	0	37
%Heavy Trucks	0.0	3.1	0.0	3.0	0.0	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4

PM

	US 17 Northbound				US 17 Southbound				Scotts Hill Loop Rd Eastbound				Scotts Hill Loop Rd Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	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	374	15	389	18	320	0	338	0	0	0	0	0	0	20	20	747
5:00 PM	0	363	18	381	7	305	0	312	0	0	0	0	0	0	22	22	715
5:15 PM	0	446	30	476	10	333	0	343	0	0	0	0	0	0	13	13	832
5:30 PM	0	395	39	434	19	316	0	335	0	0	0	0	0	0	18	18	787
Total Volume	0	1578	102	1680	54	1274	0	1328	0	0	0	0	0	0	73	73	3081
% App. Total	0.0	93.9	6.1	100	4.1	95.9	0.0	100	0.0	0.0	0.0	0	0.0	0.0	100.0	100	
PHF				0.882				0.968				0.000				0.830	
Cars, PU, Vans	0	1566	102	1668	54	1263	0	1317	0	0	0	0	0	0	73	73	3058
% Cars, PU, Vans	0.0	99.2	####	99.3	100.0	99.1	0.0	99.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	99.3
Heavy Trucks	0	12	0	12	0	11	0	11	0	0	0	0	0	0	0	0	23
%Heavy Trucks	0.0	0.8	0.0	0.7	0.0	0.9	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7

Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Scott's Hill Loop Rd.
Date: Dec. 12, 2013
Counter:JG
Weather: Clear am/Cloudy/Rain pm

File Name : ScottsHillLoopUS17v2
Site Code : 00013702
Start Date : 12/12/2013
Page No : 1

Groups Printed- Vehicles

	US 17 From North						Scott's Hill loop Rd. From East					US 17 From South					From West					
Start Time	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Int. Total
07:00 AM	0	0	2	4	0	6	30	0	0	0	30	5	188	0	0	193	0	0	0	0	0	229
07:15 AM	0	0	4	5	2	11	35	0	0	0	35	4	214	0	1	219	0	0	0	0	0	265
07:30 AM	0	0	10	6	0	16	33	0	0	2	35	6	210	0	4	220	0	0	0	0	0	271
07:45 AM	0	0	9	10	0	19	24	0	0	0	24	12	238	0	2	252	0	0	0	0	0	295
Total	0	0	25	25	2	52	122	0	0	2	124	27	850	0	7	884	0	0	0	0	0	1060
08:00 AM	0	0	9	18	0	27	34	0	0	0	34	13	186	0	0	199	0	0	0	0	0	260
08:15 AM	0	0	3	16	0	19	22	0	0	0	22	5	228	0	0	233	0	0	0	0	0	274
08:30 AM	0	0	6	14	0	20	17	0	0	0	17	8	212	0	0	220	0	0	0	0	0	257
08:45 AM	0	0	20	11	0	31	49	0	0	0	49	17	188	0	0	205	0	0	0	0	0	285
Total	0	0	38	59	0	97	122	0	0	0	122	43	814	0	0	857	0	0	0	0	0	1076
*** BREAK ***																						
04:00 PM	0	0	9	3	1	13	10	0	0	1	11	28	310	0	1	339	0	0	0	0	0	363
04:15 PM	0	0	6	12	0	18	18	0	0	1	19	18	318	0	0	336	0	0	0	0	0	373
04:30 PM	0	0	7	15	1	23	20	0	0	0	20	26	323	0	1	350	0	0	0	0	0	393
04:45 PM	0	0	12	10	1	23	13	0	0	0	13	22	357	0	1	380	0	0	0	0	0	416
Total	0	0	34	40	3	77	61	0	0	2	63	94	1308	0	3	1405	0	0	0	0	0	1545
05:00 PM	0	0	5	16	0	21	19	0	0	0	19	22	390	0	0	412	0	0	0	0	0	452
05:15 PM	0	0	18	15	0	33	18	0	0	0	18	29	466	0	0	495	0	0	0	0	0	546
05:30 PM	0	0	16	22	0	38	18	0	0	1	19	41	427	0	1	469	0	0	0	0	0	526
05:45 PM	0	0	7	12	0	19	10	0	0	3	13	28	371	0	0	399	0	0	0	0	0	431
Total	0	0	46	65	0	111	65	0	0	4	69	120	1654	0	1	1775	0	0	0	0	0	1955
Grand Total													4626	0	11	4921	0	0	0	0	0	5636
Apprch %	0	0	42.4	56.1	1.5		97.9	0	0	2.1		5.8	94	0	0.2		0	0	0	0		
Total %	0	0	2.5	3.4	0.1	6	6.6	0	0	0.1	6.7	5	82.1	0	0.2	87.3	0	0	0	0	0	

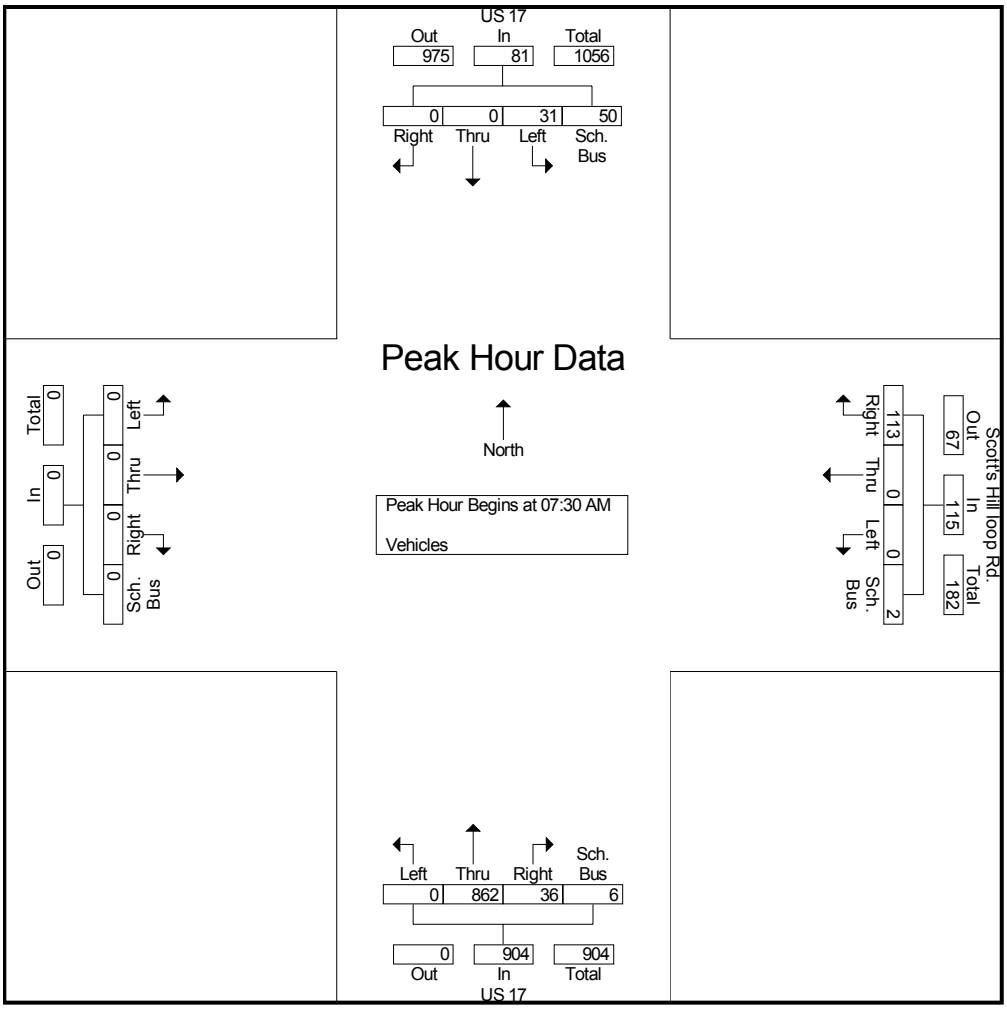
Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Scott's Hill Loop Rd.
Date: Dec. 12, 2013
Counter:JG
Weather: Clear am/Cloudy/Rain pm

File Name : ScottsHillLoopUS17v2
Site Code : 00013702
Start Date : 12/12/2013
Page No : 2

	US 17 From North						Scott's Hill loop Rd. From East					US 17 From South					From West					
Start Time	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:30 AM																						
07:30 AM	0	0	**10**	6	0	16	33	0	0	**2**	**35**	6	210	0	**4**	220	0	0	0	0	0	271
07:45 AM	0	0	9	10	0	19	24	0	0	0	24	12	**238**	0	2	**252**	0	0	0	0	0	**295**
08:00 AM	0	0	9	**18**	0	**27**	**34**	0	0	0	34	**13**	186	0	0	199	0	0	0	0	0	260
08:15 AM	0	0	3	16	0	19	22	0	0	0	22	5	228	0	0	233	0	0	0	0	0	274
Total Volume	0	0	31	50	0	81	113	0	0	2	115	36	862	0	6	904	0	0	0	0	0	1100
% App. Total																						
PHF	.000	.000	.775	.694	.000	.750	.831	.000	.000	.250	.821	.692	.905	.000	.375	.897	.000	.000	.000	.000	.000	.932



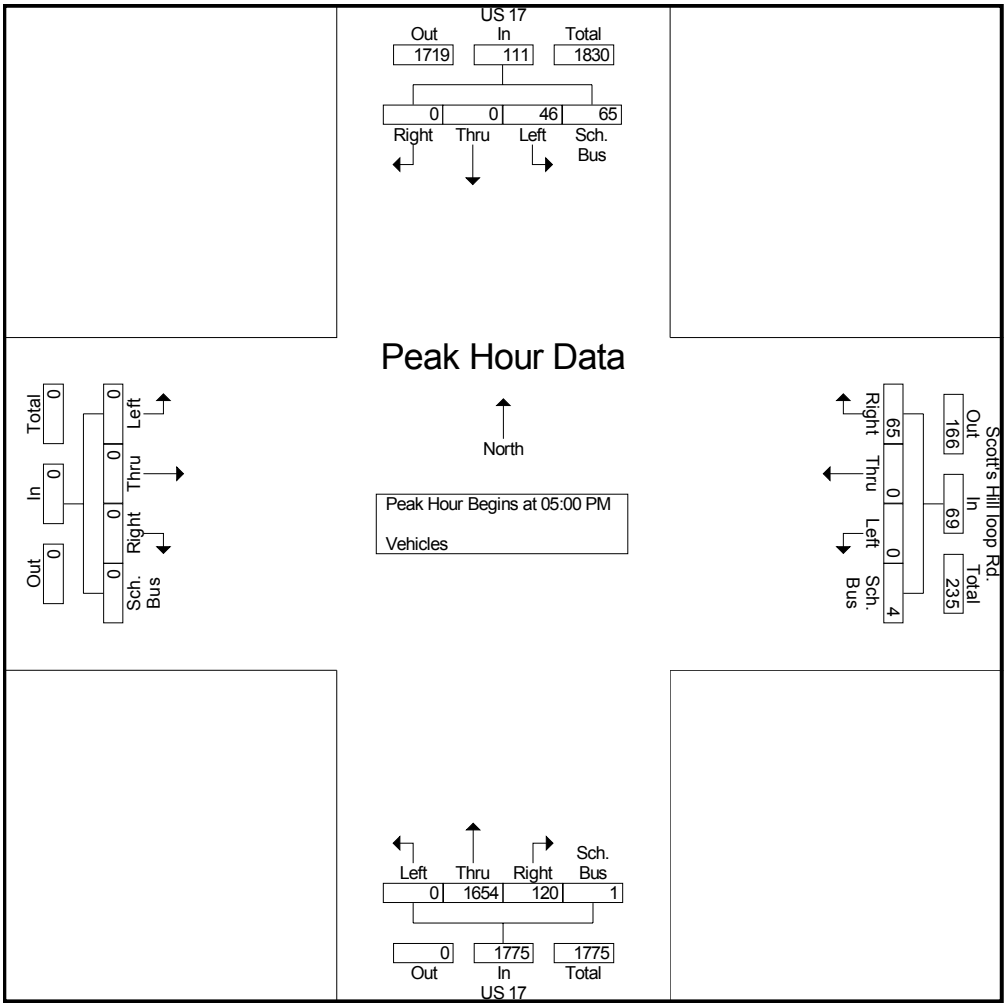
Your Company Name Here

This is your address
Your City, State, Zip Code
Your Tagline Here

US 17 @ Scott's Hill Loop Rd.
Date: Dec. 12, 2013
Counter:JG
Weather: Clear am/Cloudy/Rain pm

File Name : ScottsHillLoopUS17v2
Site Code : 00013702
Start Date : 12/12/2013
Page No : 3

	US 17 From North						Scott's Hill loop Rd. From East					US 17 From South					From West					
Start Time	Right	Thru	Left	"U" Turns	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Right	Thru	Left	Sch. Bus	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 05:00 PM																						
05:00 PM	0	0	5	16	0	21	**19**	0	0	0	**19**	22	390	0	0	412	0	0	0	0	0	452
05:15 PM	0	0	**18**	15	0	33	18	0	0	0	18	29	**466**	0	0	**495**	0	0	0	0	0	**546**
05:30 PM	0	0	16	**22**	0	**38**	18	0	0	1	19	**41**	427	0	**1**	469	0	0	0	0	0	526
05:45 PM	0	0	7	12	0	19	10	0	0	**3**	13	28	371	0	0	399	0	0	0	0	0	431
Total Volume	0	0	46	65	0	111	65	0	0	4	69	120	1654	0	1	1775	0	0	0	0	0	1955
% App. Total																						
PHF	.000	.000	.639	.739	.000	.730	.855	.000	.000	.333	.908	.732	.887	.000	.250	.896	.000	.000	.000	.000	.000	.895



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 872-5115
FX: 878-5416

File Name : US 17 (Market St) @ I 140 Off Ramp
Site Code : 10242012
Start Date : 10/24/2012
Page No : 1

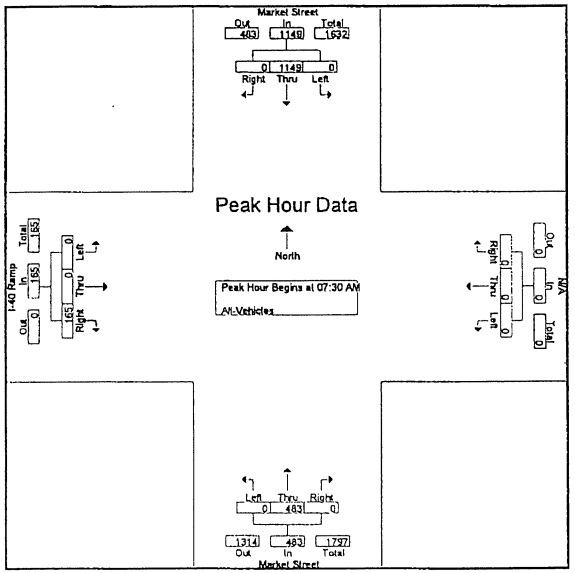
Groups Printed- Vehicles

	Market Street Southbound				N/A Westbound				Market Street Northbound				I-40 Ramp Eastbound						
Start Time	Right	Thru	Left	Trks	Right	Thru	Left	Trks	Right	Thru	Left	Trks	Right	Thru	Left	Trks	Early Total	Prev Total	Int. Total
07:00 AM	0	222	0	0	0	0	0	0	0	69	0	1	27	0	0	0	1	318	319
07:15 AM	0	269	0	0	0	0	0	0	0	80	0	0	39	0	0	1	1	408	409
07:30 AM	0	270	0	1	0	0	0	0	0	141	0	2	34	0	0	3	6	445	451
07:45 AM	0	296	0	0	0	0	0	0	0	167	0	1	40	0	0	1	2	503	505
Total	0	1077	0	1	0	0	0	0	0	457	0	4	140	0	0	5	10	1674	1684
08:00 AM	0	279	0	0	0	0	0	0	0	117	0	0	40	0	0	0	0	436	436
08:15 AM	0	304	0	1	0	0	0	0	0	58	0	0	51	0	0	1	2	413	415
08:30 AM	0	245	0	2	0	0	0	0	0	39	0	0	46	0	0	0	2	330	332
08:45 AM	0	302	0	2	0	0	0	0	0	93	0	2	32	0	0	0	4	427	431
Total	0	1130	0	5	0	0	0	0	0	307	0	2	169	0	0	1	8	1606	1614
BREAK																			
04:00 PM	0	227	0	2	0	0	0	0	0	44	0	1	45	0	0	0	3	316	319
04:15 PM	0	220	0	3	0	0	0	0	0	48	0	1	58	0	0	0	4	326	330
04:30 PM	0	280	0	2	0	0	0	0	0	42	0	0	54	0	0	1	3	376	379
04:45 PM	0	242	0	4	0	0	0	0	0	53	0	0	62	0	0	0	4	357	361
Total	0	969	0	11	0	0	0	0	0	187	0	2	219	0	0	1	14	1375	1389
05:00 PM	0	267	0	3	0	0	0	0	0	49	0	1	96	0	0	0	4	412	416
05:15 PM	0	252	0	0	0	0	0	0	0	48	0	0	109	0	0	0	0	409	409
05:30 PM	0	277	0	3	0	0	0	0	0	53	0	1	80	0	0	0	4	410	414
05:45 PM	0	265	0	3	0	0	0	0	0	31	0	0	78	0	0	0	3	394	397
Total	0	1061	0	9	0	0	0	0	0	181	0	2	363	0	0	0	11	1625	1636
06:00 PM	0	217	0	1	0	0	0	0	0	35	0	0	67	0	0	1	2	319	321
06:15 PM	0	249	0	2	0	0	0	0	0	29	0	0	49	0	0	0	2	327	329
Grand Total	0	4723	0	29	0	0	0	0	0	1196	0	10	1007	0	0	8	47	6926	6973
Apprch %	0	100	0		0	0	0		0	100	0		100	0	0				
Total %	0	68.2	0		0	0	0		0	17.3	0		14.5	0	0		0.7	99.3	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 872-5115
FX: 878-5416

File Name : US 17 (Market St) @ I 140 Off Ramp
Site Code : 10242012
Start Date : 10/24/2012
Page No : 2

	Market Street Southbound				N/A Westbound				Market Street Northbound				I-40 Ramp Eastbound				
Start Time	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	270	0	270	0	0	0	0	0	141	0	141	34	0	0	34	445
07:45 AM	0	296	0	296	0	0	0	0	0	167	0	167	40	0	0	40	503
08:00 AM	0	279	0	279	0	0	0	0	0	117	0	117	40	0	0	40	436
08:15 AM	0	304	0	304	0	0	0	0	0	58	0	58	51	0	0	51	413
Total Volume	0	1149	0	1149	0	0	0	0	0	483	0	483	165	0	0	165	1797
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0		
PHF	.000	.945	.000	.945	.000	.000	.000	.000	.000	.723	.000	.723	.809	.000	.000	.809	.893



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 872-5115
FX: 878-5416

File Name : 10-24-12 Wilmington Market St & Porters Neck Rd
Site Code : 10241211
Start Date : 10/24/2012
Page No : 1

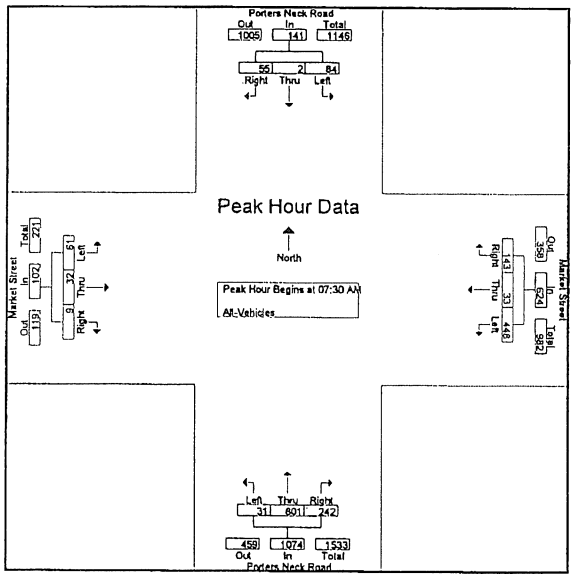
Groups Printed- Vehicles

	Porters Neck Road Southbound				Market Street Westbound				Porters Neck Road Northbound				Market Street Eastbound						
Start Time	Right	Thru	Left	Trks	Right	Thru	Left	Trks	Right	Thru	Left	Trks	Right	Thru	Left	Trks	App. Total	Int. Total	
07:00 AM	4	0	16	1	19	5	70	0	33	161	2	2	1	4	10	0	3	325	328
07:15 AM	12	0	17	1	32	8	131	0	22	162	6	4	1	7	10	0	5	408	413
07:30 AM	12	0	12	3	31	6	135	1	57	206	5	9	1	7	19	2	15	491	506
07:45 AM	18	0	21	3	43	9	92	2	63	239	8	6	2	6	11	2	13	512	525
Total	46	0	66	8	125	28	428	3	175	768	21	21	5	24	50	4	36	1736	1772
08:00 AM	13	0	15	0	41	8	112	0	63	188	6	3	4	9	19	0	3	478	481
08:15 AM	12	2	36	0	28	10	109	1	59	168	12	4	2	10	12	0	5	460	465
08:30 AM	15	0	29	0	23	5	108	0	54	162	8	1	4	9	10	0	1	427	428
08:45 AM	14	0	30	0	20	11	119	1	61	181	13	6	6	10	12	0	7	477	484
Total	54	2	110	0	112	34	448	2	237	699	39	14	16	38	53	0	16	1842	1858
BREAK																			
04:00 PM	14	0	24	0	31	15	106	0	55	239	14	0	12	14	31	1	1	555	556
04:15 PM	25	0	30	1	23	10	128	1	55	209	18	3	6	9	33	1	6	546	552
04:30 PM	19	0	27	0	25	15	107	2	73	242	16	1	6	16	22	0	3	568	571
04:45 PM	23	0	39	1	35	12	95	0	82	263	26	0	34	19	36	1	2	664	666
Total	81	0	120	2	114	52	436	3	265	953	74	4	58	58	122	3	12	2333	2345
05:00 PM	24	0	47	0	35	7	100	1	70	288	22	0	32	14	37	0	1	676	677
05:15 PM	25	0	50	0	19	10	105	2	85	237	20	3	20	20	34	0	5	625	630
05:30 PM	31	0	43	0	25	5	95	0	69	282	14	1	12	7	25	2	3	628	631
05:45 PM	20	0	33	0	18	16	116	1	84	246	13	0	22	11	40	0	1	619	620
Total	100	0	173	0	97	38	416	4	328	1053	69	4	86	52	136	2	10	2548	2558
06:00 PM	25	0	34	0	14	10	86	0	59	220	7	2	16	12	23	0	2	506	508
06:15 PM	29	0	28	0	17	9	79	0	79	232	16	2	6	14	32	0	2	541	543
Grand Total	335	2	531	10	479	171	1893	12	1143	3925	226	47	187	198	416	9	78	9506	9584
Apprch %	38.6	0.2	61.2		18.8	6.7	74.4		21.6	74.1	4.3		23.3	24.7	51.9				
Total %	3.5	0	5.6		5	1.8	19.9		12	41.3	2.4		2	2.1	4.4		0.8	99.2	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 872-5115
FX: 878-5416

File Name : 10-24-12 Wilmington Market St & Porters Neck Rd
Site Code : 10241211
Start Date : 10/24/2012
Page No : 2

	Porters Neck Road Southbound				Market Street Westbound				Porters Neck Road Northbound				Market Street Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	0	12	24	31	6	[illegible]	[illegible]	57	206	5	268	1	7	[illegible]	27	491
07:45 AM	[illegible]	0	21	39	43	9	92	144	63	239	8	310	2	6	11	19	512
08:00 AM	13	0	15	28	41	8	112	161	63	188	6	257	4	9	19	32	478
08:15 AM	12	2	36	50	28	10	109	147	59	168	12	239	2	10	12	24	460
Total Volume	55	2	84	141	143	33	448	624	242	801	31	1074	9	32	61	102	1941
% App. Total	39	1.4	59.6		22.9	5.3	71.8		22.5	74.6	2.9		8.8	31.4	59.8		
PHF	.764	.250	.583	.705	.831	.825	.830	.907	.960	.836	.646	.866	.563	.800	.803	.797	.948



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

US 17 and NC 210_Dan Owen Dr , Hampstead

Date: 5/28/2014

Day: Wednesday

Project #: 14-9173-001

City: Hampstead

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (US 17)

Lanes					
AM	224	1482	50	1362	AM
NOON	0	0	0	0	NOON
PM	200	1168	86	1820	PM

Eastbound Approach (NC 210_Dan Owen Dr)

Lanes	AM	NOON	PM
	275	0	319
	257	0	290
	15	0	40
	82	0	67

Westbound Approach

Lanes	AM	NOON	PM
	33	0	110
	11	0	37
	31	0	62
	90	0	181

Northbound Approach

Lanes					
AM	1595	40	1072	25	AM
NOON	0	0	0	0	NOON
PM	1297	82	1420	55	PM

CONTROL

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1756	1362	AM
	0	0	NOON
	1454	1820	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
275	0	319	75	0	209
354	0	397	90	0	181

	South Leg	
AM	1595	1137
NOON	0	0
PM	1297	1557

Total Volume Per Leg

	North Leg
AM	3118
NOON	0
PM	3274

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
629	0	716	165	0	390

	South Leg
AM	2732
NOON	0
PM	2854

Project ID: 14-9173-001
Location: US 17 & NC 210_Dan Owen Dr
City: Hampstead

Day: Wednesday
Date: 5/28/2014

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	US 17 Northbound					US 17 Southbound					NC 210_Dan Owen Dr Eastbound					NC 210_Dan Owen Dr Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	7	235	4	0	246	11	313	50	0	374	51	3	20	0	74	0	4	5	0	9	703
7:15 AM	8	289	6	0	303	11	430	68	0	509	61	5	19	0	85	6	1	8	0	15	912
7:30 AM	14	207	5	0	226	14	420	79	0	513	53	4	20	0	77	11	2	10	0	23	839
7:45 AM	9	271	9	0	289	11	297	44	0	352	83	6	25	0	114	7	4	6	0	17	772
Total	38	1002	24	0	1064	47	1460	241	0	1748	248	18	84	0	350	24	11	29	0	64	3226
8:00 AM	9	305	5	0	319	14	335	33	0	382	60	0	18	0	78	7	4	9	0	20	799
8:15 AM	14	259	7	0	280	17	282	56	0	355	58	6	18	0	82	6	2	8	0	16	733
8:30 AM	5	219	10	0	234	12	381	65	0	458	56	3	14	0	73	12	5	17	0	34	799
8:45 AM	16	238	12	0	266	16	311	40	0	367	50	4	19	0	73	10	5	17	0	32	738
Total	44	1021	34	0	1099	59	1309	194	0	1562	224	13	69	0	306	35	16	51	0	102	3069
BREAK																					
4:00 PM	20	243	12	0	275	43	299	70	0	412	59	13	26	0	98	30	7	35	0	72	857
4:15 PM	20	324	15	0	359	30	310	43	0	383	62	16	17	0	95	20	11	44	0	75	912
4:30 PM	20	283	19	0	322	27	284	62	0	373	69	9	10	0	88	21	16	46	0	83	866
4:45 PM	21	354	11	0	386	22	303	54	0	379	57	15	12	0	84	13	9	23	0	45	894
Total	81	1204	57	0	1342	122	1196	229	0	1547	247	53	65	0	365	84	43	148	0	275	3529
5:00 PM	24	336	20	0	380	16	293	55	0	364	77	8	19	0	104	20	9	27	0	56	904
5:15 PM	21	370	15	0	406	28	294	42	0	364	78	6	22	0	106	18	14	37	0	69	945
5:30 PM	16	360	9	0	385	20	278	49	0	347	78	11	14	0	103	11	5	23	0	39	874
5:45 PM	20	355	13	0	388	15	266	24	0	305	73	6	21	0	100	15	7	39	0	61	854
Total	81	1421	57	0	1559	79	1131	170	0	1380	306	31	76	0	413	64	35	126	0	225	3577
Grand Total	244	4648	172	0	5064	307	5096	834	0	6237	1025	115	294	0	1434	207	105	354	0	666	13401
Apprch %	4.8	91.8	3.4	0.0		4.9	81.7	13.4	0.0		71.5	8.0	20.5	0.0		31.1	15.8	53.2	0.0		
Total %	1.8	34.7	1.3	0.0	37.8	2.3	38.0	6.2	0.0	46.5	7.6	0.9	2.2	0.0	10.7	1.5	0.8	2.6	0.0	5.0	
Cars, PU, Vans	242	4556	170	0	4968	307	5017	817	0	6141	1014	115	292	0	1421	204	102	354	0	660	13190
% Cars, PU, Vans	99.2	98.0	98.8	0.0	98.1	####	98.4	98.0	0.0	98.5	98.9	100.0	99.3	0.0	99.1	98.6	97.1	####	0.0	99.1	98.4
Heavy Trucks	2	92	2		96	0	79	17		96	11	0	2		13	3	3	0		6	211
%Heavy Trucks	0.8	2.0	1.2	0.0	1.9	0.0	1.6	2.0	0.0	1.5	1.1	0.0	0.7	0.0	0.9	1.4	2.9	0.0	0.0	0.9	1.6

Project ID: 14-9173-001
Location: US 17 & NC 210_Dan Ov
City: Hampstead

PEAK HOURS

Day: Wednesday
Date: 5/28/2014

AM

	US 17 Northbound				US 17 Southbound				NC 210_Dan Owen Dr Eastbound				NC 210_Dan Owen Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	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	8	289	6	303	11	430	68	509	61	5	19	85	6	1	8	15	912
7:30 AM	14	207	5	226	14	420	79	513	53	4	20	77	11	2	10	23	839
7:45 AM	9	271	9	289	11	297	44	352	83	6	25	114	7	4	6	17	772
8:00 AM	9	305	5	319	14	335	33	382	60	0	18	78	7	4	9	20	799
Total Volume	40	1072	25	1137	50	1482	224	1756	257	15	82	354	31	11	33	75	3322
% App. Total	3.5	94.3	2.2	100	2.8	84.4	12.8	100	72.6	4.2	23.2	100	41.3	14.7	44.0	100	
PHF				0.891				0.856				0.776				0.815	
Cars, PU, Vans	40	1034	24	1098	50	1454	217	1721	254	15	82	351	29	11	33	73	3243
% Cars, PU, Vans	####	96.5	96.0	96.6	100.0	98.1	96.9	98.0	98.8	100.0	####	99.2	93.5	####	100.0	97.3	97.6
Heavy Trucks	0	38	1	39	0	28	7	35	3	0	0	3	2	0	0	2	79
%Heavy Trucks	0.0	3.5	4.0	3.4	0.0	1.9	3.1	2.0	1.2	0.0	0.0	0.8	6.5	0.0	0.0	2.7	2.4

PM

	US 17 Northbound				US 17 Southbound				NC 210_Dan Owen Dr Eastbound				NC 210_Dan Owen Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	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	21	354	11	386	22	303	54	379	57	15	12	84	13	9	23	45	894
5:00 PM	24	336	20	380	16	293	55	364	77	8	19	104	20	9	27	56	904
5:15 PM	21	370	15	406	28	294	42	364	78	6	22	106	18	14	37	69	945
5:30 PM	16	360	9	385	20	278	49	347	78	11	14	103	11	5	23	39	874
Total Volume	82	1420	55	1557	86	1168	200	1454	290	40	67	397	62	37	110	209	3617
% App. Total	5.3	91.2	3.5	100	5.9	80.3	13.8	100	73.0	10.1	16.9	100	29.7	17.7	52.6	100	
PHF				0.959				0.959				0.936				0.757	
Cars, PU, Vans	81	1405	55	1541	86	1150	197	1433	287	40	66	393	61	37	110	208	3575
% Cars, PU, Vans	98.8	98.9	####	99.0	100.0	98.5	98.5	98.6	99.0	100.0	98.5	99.0	98.4	####	100.0	99.5	98.8
Heavy Trucks	1	15	0	16	0	18	3	21	3	0	1	4	1	0	0	1	42
%Heavy Trucks	1.2	1.1	0.0	1.0	0.0	1.5	1.5	1.4	1.0	0.0	1.5	1.0	1.6	0.0	0.0	0.5	1.2

Scoping Letter

WILMINGTON URBAN AREA
Metropolitan Planning Organization

P.O. Box 1810
Wilmington, North Carolina 28402
910 341 3258 910 341 7801 FAX

Members:

City of
WILMINGTON
Lead Planning Agency

Town of
CAROLINA BEACH

Town of
KURE BEACH

Town of
WRIGHTSVILLE BEACH

NEW HANOVER
County

Town of
BELVILLE

Town of
LELAND

Town of
NAVASSA

BRUNSWICK
County

PENDER
County

CAPE FEAR
Public Transportation
Authority

North Carolina
BOARD OF
TRANSPORTATION

July 23, 2014

Travis Fluitt, PE
Kimley-Horn and Associates, Inc.
3001 Weston Parkway
Cary, NC 27513

RE: Scope for the Traffic Impact Analysis associated with the proposed
Blake Farm Development
Pender County, NC

Dear Mr. Fluitt:

Based on the information provided, and conversations held to date, it is our understanding that the proposed development will consist of a mixture of uses located on approximately 1,164 acres to the West of US 17 and North of Sidbury Road in Scott's Hill, Pender County, North Carolina. The conceptual land use plan indicates the site will contain the following land uses:

- 500 dwelling units of Single Family Detached Housing
- 700 dwelling units of Senior Adult Housing - Attached
- 1,798 dwelling units of Senior Adult Housing – Detached
- 50,000 square foot of Shopping Center
- 50,000 square foot of Mini-Warehouse
- 300 Room Hotel

Phase 1 will consist of:

- 500 dwelling units of Single Family Detached Housing
- 300 dwelling units of Senior Adult Housing - Attached
- 50,000 square foot of Shopping Center

The site will contain the following external access points:

- Site Access Driveway #1 on US 17
- Site Access Driveway #2 on US 17
- Huggins Road on Sidbury Road

Below please find the scope to be used for the Traffic Impact Analysis:

1. **Data Collection - Analysis Parameters:**

   a. <u>Existing Conditions</u>

      i. Turning movement counts weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods, Signal Timing (if applicable) and Lane Geometry;

         - US 17 (Market St) at Sidbury Road
         - US 17 at Scott's Hill Loop Road North
         - US 17 at Scott's Hill Loop Road South
         - US 17 at I-140
         - US 17 at Porters Neck Road
         - US 17 at NC210/Dan Owen Drive
         - US 17 at Site Access Driveway #1
         - US 17 at Site Access Driveway #2

         Please note that the Wal-Mart traffic counts can only be used for US 17 at I-140, Porters Neck Road and NC 210/Dan Allen.

      ii. Signal plans may be acquired by sending an email request to NCDOT Traffic Services: Ross Kimbro, rkimbro@ncdot.gov or by calling (910) 341-0300

   b. <u>Site Trip Generation, Site Trip Distribution and Background Traffic Assumptions</u>

      i. Site Trip Generation Estimate

         - See below

      ii. Site Trip Distribution

         - To be determined from actual traffic counts

      iii. Adjacent Development (approved (but as of yet to be built)) development including but limited to;

         - Adjacent Developments are not being considered therefore a higher growth rate of 2% is being utilized.

      iv. Planned Roadway Improvements

         - There are no planned roadway improvements

      v. Background Traffic Assumptions

         - Horizon year – 2019 (phase 1) & 2029 Phase II
         - Growth rate – 2% per year (or justify use of another percentage)
         - Pass-by capture – Not Applicable

2. **Capacity Analysis: Week day AM & PM Peak Hour (as listed and for locations per 1.a.i)**
   a. Existing - 2014
   b. Background – 2019 (Phase 1) & 2029 Phase 2[existing + background growth]
   c. Combined - 2029 [existing + background growth + site trips]

3. **Final Report Submittal:**
   a. Completed TIA & Application
   b. Signed and sealed by a Professional Engineer
   c. Five total copies of TIA
   d. Synchro analysis files in digital format
      ***Six Cd's with PDF of TIA and Synchro files
4. **Notes:**
   i. This scope shall remain valid for three months from the date of this letter.
   ii. Please note that if any changes occur (including but not limited to; land use, intensity and/or site access) additional analysis may be required.
   iii. Access schematic shown in TIA should be reflected in construction documents.

Please contact me if you have any questions regarding this scope.

Regards,

Amy L. Kimes, PE
Construction Project Manager
Wilmington MPO

Copy:	Robert Vause, District Engineer, NCDOT	Anthony Law, District Engineer, NCDOT
	Katie Hite, Division Traffic Engineer, NCDOT	Ben Hughes, NCDOT
	Jessi Booker, NCDOT	Bill McDow, WMPO
	Mike Kozlosky, Executive Director, WMPO	Kyle Breuer, Pender Co Planning

Blake Farm

Table 1 - Phase 1 Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
210 Single Family Detached Housing	500	d.u.	4,618	2,309	2,309	360	90	270	447	282	165
252 Senior Adult Housing - Attached	300	d.u.	916	458	458	60	20	40	74	40	34
820 Shopping Center	50,000	s.f.	4,328	2,164	2,164	102	63	39	377	181	196
Subtotal			**9,862**	**4,931**	**4,931**	**522**	**173**	**349**	**898**	**503**	**395**
Internal Capture											
Single Family Detached Housing			362	199	163	0	0	0	34	21	13
Senior Adult Housing - Attached			71	39	32	0	0	0	6	3	3
Shopping Center			433	195	238	0	0	0	40	16	24
Internal Capture Total	**8.91%**		866	433	433	0	0	0	80	40	40
Total External Trips			**8,996**	**4,498**	**4,498**	**522**	**173**	**349**	**818**	**463**	**355**
Pass-By Traffic (ITE)	AM	PM									
820 Shopping Center	0%	34%	1,140	570	570	0	0	0	114	56	58
Total Net New External Trips			**7,856**	**3,928**	**3,928**	**522**	**173**	**349**	**704**	**407**	**297**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 1
Analysis Period: Daily
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	2,767	238	2,529
Exit	2,767	195	2,572
Total	5,534	433	5,101
%	100%	**7.8%**	92.2%

Enter from External: 2,529
Exit to External: 2,572

Land Use B: Office (General Office)

ITE Land Use Code 710
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	2164	195	1969
Exit	2164	238	1926
Total	4328	433	3895
%	100%	**10.0%**	90.0%

Enter from External: 1,969
Exit to External: 1,926

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	3.0%	83	Demand
	0		Balanced
	2.0%	0	Demand

Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand

	15.0%	0	Demand
	0		Balanced
	3.0%	65	Demand

Demand	22.0%	0	
Balanced	0		
Demand	4.0%	87	

Demand	38.0%	1051	
Balanced	195		
Demand	9.0%	195	

Demand	33.0%	913	
Balanced	238		
Demand	11.0%	238	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	2,529	0	1,969	0	4,498
Exit	2,572	0	1,926	0	4,498
Total	5,101	0	3,895	0	**8,996**
Single Use Trip Gen Estimate	5,534	0	4,328	0	**9,862**

ITE Overall Internal Capture Rate = 8.78%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 1
Analysis Period: PM Peak
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	322	24	298
Exit	199	16	183
Total	521	40	481
%	100%	**7.7%**	92.3%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	181	16	165
Exit	196	24	172
Total	377	40	337
%	100%	**10.6%**	89.4%

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External:	298		
Exit to External:	183		
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	2.0%	6	Demand
	0		Balanced
	2.0%	0	Demand
Demand	53.0%	105	
Balanced	16		
Demand	9.0%	16	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	0		
Exit to External:	0		
	31.0%	0	Demand
	0		Balanced
	3.0%	6	Demand
Demand	31.0%	100	
Balanced	24		
Demand	12.0%	24	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	0		
Exit to External:	0		
Demand	23.0%	0	
Balanced	0		
Demand	2.0%	4	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Enter from External:	165		
Exit to External:	172		

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	298	0	165	0	463
Exit	183	0	172	0	355
Total	481	0	337	0	**818**
Single Use Trip Gen Estimate	521	0	377	0	**898**

ITE Overall Internal Capture Rate = 8.91%

Blake Farm

Table 2 - Phase 2 Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
151 Mini-Warehouse	50,000	s.f.	126	63	63	7	4	3	13	7	6
210 Single Family Detached Housing	500	d.u.	4,618	2,309	2,309	360	90	270	447	282	165
251 Senior Adult Housing - Detached	1,798	d.u.	6,186	3,093	3,093	336	118	218	392	239	153
252 Senior Adult Housing - Attached	700	d.u.	2,108	1,054	1,054	140	48	92	170	92	78
310 Hotel	300	rooms	2,312	1,156	1,156	159	94	65	180	92	88
820 Shopping Center	50,000	s.f.	4,328	2,164	2,164	102	63	39	377	181	196
Subtotal			**19,678**	**9,839**	**9,839**	**1,104**	**417**	**687**	**1,579**	**893**	**686**
Internal Capture											
Mini-Warehouse			13	6	7	0	0	0	2	1	1
Single Family Detached Housing			135	74	61	0	0	0	16	10	6
Senior Adult Housing - Detached			181	100	81	0	0	0	13	8	5
Senior Adult Housing - Attached			62	34	28	0	0	0	6	3	3
Hotel			67	37	30	0	0	0	6	3	3
Shopping Center			432	194	238	0	0	0	39	16	23
Internal Capture Total	**5.19%**		890	445	445	0	0	0	82	41	41
Total External Trips			**18,788**	**9,394**	**9,394**	**1,104**	**417**	**687**	**1,497**	**852**	**645**
Pass-By Traffic (ITE)	AM	PM									
820 Shopping Center	0%	34%	1,150	575	575	0	0	0	115	56	59
Total Net New External Trips			**17,638**	**8,819**	**8,819**	**1,104**	**417**	**687**	**1,382**	**796**	**586**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 2
Analysis Period: Daily
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	7,612	245	7,367
Exit	7,612	200	7,412
Total	15,224	445	14,779
%	100%	**2.9%**	97.1%

Enter from External: 7,367
Exit to External: 7,412

Land Use B: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	2227	200	2027
Exit	2227	245	1982
Total	4454	445	4009
%	100%	**10.0%**	90.0%

Enter from External: 2,027
Exit to External: 1,982

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	38.0%	2893	
Balanced	200		
Demand	9.0%	200	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	33.0%	2512	
Balanced	245		
Demand	11.0%	245	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	7,367	0	2,027	0	9,394
Exit	7,412	0	1,982	0	9,394
Total	14,779	0	4,009	0	**18,788**
Single Use Trip Gen Estimate	15,224	0	4,454	0	**19,678**

ITE Overall Internal Capture Rate = 4.52%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 2
Analysis Period: PM Peak
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	705	24	681
Exit	484	17	467
Total	1,189	41	1,148
%	100%	**3.4%**	96.6%

Land Use B: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	188	17	171
Exit	202	24	178
Total	390	41	349
%	100%	**10.5%**	89.5%

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 681
Exit to External: 467

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 53.0% 257
Balanced 17
Demand 9.0% 17

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Enter from External: 0
Exit to External: 0

Demand 0.0% 0
0 Balanced
0.0% 0 Demand

Demand 31.0% 219
Balanced 24
Demand 12.0% 24

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Enter from External: 0
Exit to External: 0

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Enter from External: 171
Exit to External: 178

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	681	0	171	0	852
Exit	467	0	178	0	645
Total	1,148	0	349	0	**1,497**
Single Use Trip Gen Estimate	1,189	0	390	0	**1,579**

ITE Overall Internal Capture Rate = 5.19%

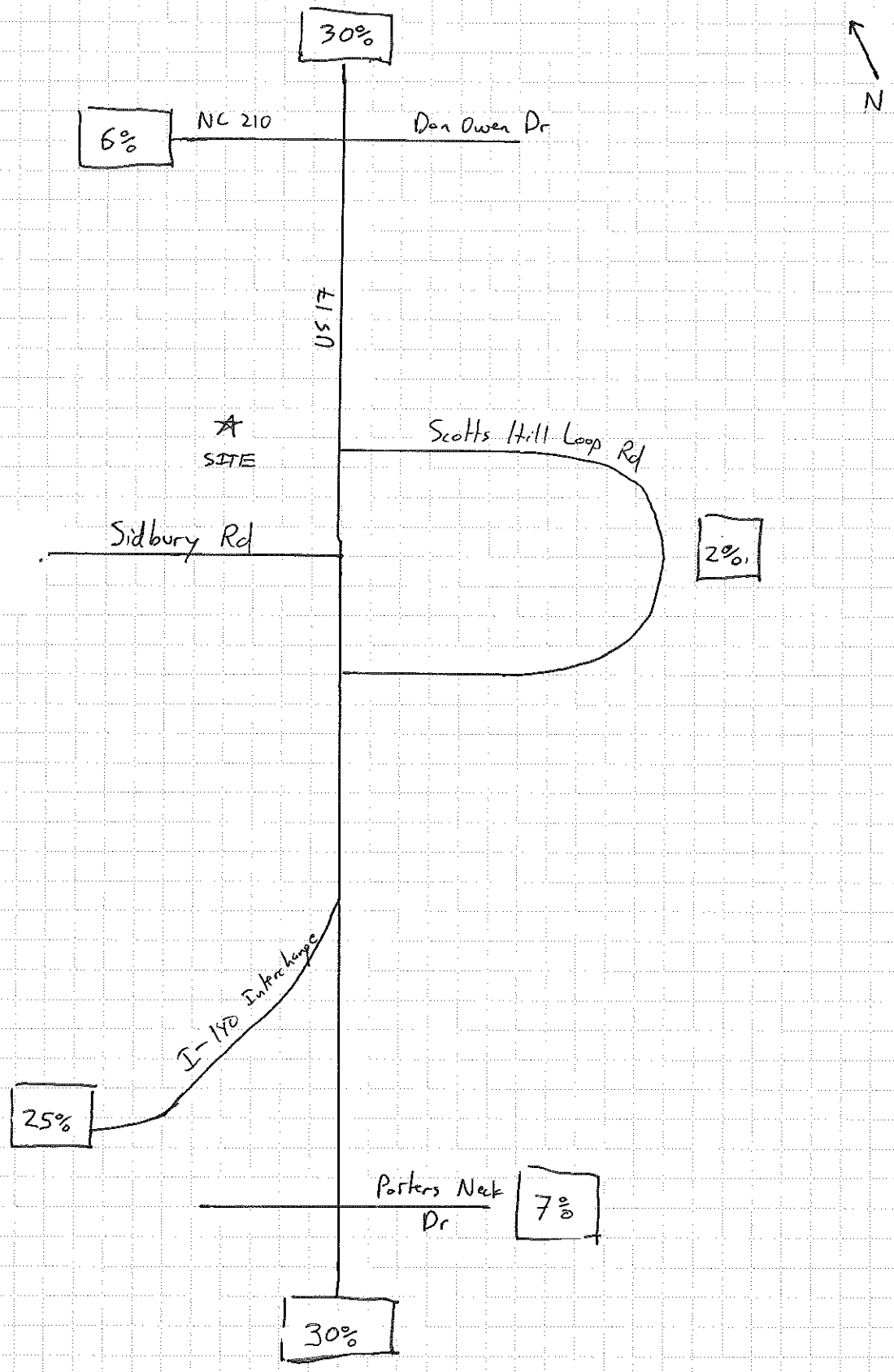
Kimley-Horn and Associates, Inc.

Sheet No. ____ of ____

Job ____ Subject ____ Job No. ____

Designed by ____ Date ____ Checked by ____ Date ____

Blake Farm TIA – Proposed Site Traffic Distribution



Trip Generation

Blake Farm

Table 1 - Phase 1 Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
210 Single Family Detached Housing	500	d.u.	4,618	2,309	2,309	360	90	270	447	282	165
252 Senior Adult Housing - Attached	300	d.u.	916	458	458	60	20	40	74	40	34
820 Shopping Center	50,000	s.f.	4,328	2,164	2,164	102	63	39	377	181	196
Subtotal			**9,862**	**4,931**	**4,931**	**522**	**173**	**349**	**898**	**503**	**395**
Internal Capture											
Single Family Detached Housing			362	199	163	0	0	0	34	21	13
Senior Adult Housing - Attached			71	39	32	0	0	0	6	3	3
Shopping Center			433	195	238	0	0	0	40	16	24
Internal Capture Total	**8.91%**		866	433	433	0	0	0	80	40	40
Total External Trips			**8,996**	**4,498**	**4,498**	**522**	**173**	**349**	**818**	**463**	**355**
Pass-By Traffic (ITE)	AM	PM									
820 Shopping Center	0%	34%	1,140	570	570	0	0	0	114	56	58
Total Net New External Trips			**7,856**	**3,928**	**3,928**	**522**	**173**	**349**	**704**	**407**	**297**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 1
Analysis Period: Daily
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	2,767	238	2,529
Exit	2,767	195	2,572
Total	5,534	433	5,101
%	100%	**7.8%**	92.2%

Enter from External: 2,529
Exit to External: 2,572

Land Use B: Office (General Office)

ITE Land Use Code 710
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	2164	195	1969
Exit	2164	238	1926
Total	4328	433	3895
%	100%	**10.0%**	90.0%

Enter from External: 1,969
Exit to External: 1,926

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	3.0%	83	Demand
	0		Balanced
	2.0%	0	Demand

Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand

	15.0%	0	Demand
	0		Balanced
	3.0%	65	Demand

Demand	22.0%	0	
Balanced	0		
Demand	4.0%	87	

Demand	38.0%	1051	
Balanced	195		
Demand	9.0%	195	

Demand	33.0%	913	
Balanced	238		
Demand	11.0%	238	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	2,529	0	1,969	0	4,498
Exit	2,572	0	1,926	0	4,498
Total	5,101	0	3,895	0	**8,996**
Single Use Trip Gen Estimate	5,534	0	4,328	0	**9,862**

ITE Overall Internal Capture Rate = 8.78%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 1
Analysis Period: PM Peak
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	322	24	298
Exit	199	16	183
Total	521	40	481
%	100%	**7.7%**	92.3%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	181	16	165
Exit	196	24	172
Total	377	40	337
%	100%	**10.6%**	89.4%

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External:	298		
Exit to External:	183		
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	2.0%	6	Demand
	0		Balanced
	2.0%	0	Demand
Demand	53.0%	105	
Balanced	16		
Demand	9.0%	16	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	0		
Exit to External:	0		
	31.0%	0	Demand
	0		Balanced
	3.0%	6	Demand
Demand	31.0%	100	
Balanced	24		
Demand	12.0%	24	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	0		
Exit to External:	0		
Demand	23.0%	0	
Balanced	0		
Demand	2.0%	4	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Enter from External:	165		
Exit to External:	172		

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	298	0	165	0	463
Exit	183	0	172	0	355
Total	481	0	337	0	**818**
Single Use Trip Gen Estimate	521	0	377	0	**898**

ITE Overall Internal Capture Rate = 8.91%

Blake Farm

Table 2 - Phase 2 Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
151 Mini-Warehouse	50,000	s.f.	126	63	63	7	4	3	13	7	6
210 Single Family Detached Housing	500	d.u.	4,618	2,309	2,309	360	90	270	447	282	165
251 Senior Adult Housing - Detached	1,798	d.u.	6,186	3,093	3,093	336	118	218	392	239	153
252 Senior Adult Housing - Attached	700	d.u.	2,108	1,054	1,054	140	48	92	170	92	78
310 Hotel	300	rooms	2,312	1,156	1,156	159	94	65	180	92	88
820 Shopping Center	50,000	s.f.	4,328	2,164	2,164	102	63	39	377	181	196
Subtotal			**19,678**	**9,839**	**9,839**	**1,104**	**417**	**687**	**1,579**	**893**	**686**
Internal Capture											
Mini-Warehouse			13	6	7	0	0	0	2	1	1
Single Family Detached Housing			135	74	61	0	0	0	16	10	6
Senior Adult Housing - Detached			181	100	81	0	0	0	13	8	5
Senior Adult Housing - Attached			62	34	28	0	0	0	6	3	3
Hotel			67	37	30	0	0	0	6	3	3
Shopping Center			432	194	238	0	0	0	39	16	23
Internal Capture Total	**5.19%**		890	445	445	0	0	0	82	41	41
Total External Trips			**18,788**	**9,394**	**9,394**	**1,104**	**417**	**687**	**1,497**	**852**	**645**
Pass-By Traffic (ITE)	AM	PM									
820 Shopping Center	0%	34%	1,150	575	575	0	0	0	115	56	59
Total Net New External Trips			**17,638**	**8,819**	**8,819**	**1,104**	**417**	**687**	**1,382**	**796**	**586**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 2
Analysis Period: Daily
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	7,612	245	7,367
Exit	7,612	200	7,412
Total	15,224	445	14,779
%	100%	**2.9%**	97.1%

Enter from External: 7,367
Exit to External: 7,412

Land Use B: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	2227	200	2027
Exit	2227	245	1982
Total	4454	445	4009
%	100%	**10.0%**	90.0%

Enter from External: 2,027
Exit to External: 1,982

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	38.0%	2893	
Balanced	200		
Demand	9.0%	200	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	33.0%	2512	
Balanced	245		
Demand	11.0%	245	

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	7,367	0	2,027	0	9,394
Exit	7,412	0	1,982	0	9,394
Total	14,779	0	4,009	0	**18,788**
Single Use Trip Gen Estimate	15,224	0	4,454	0	**19,678**

ITE Overall Internal Capture Rate = 4.52%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook, 2nd Edition* , June 2004)

Project Number: 018837000
Project Name: Blake Farm
Scenario: Phase 2
Analysis Period: PM Peak
Analyst: Kimley-Horn

Land Use A: Residential (Residential)

ITE Land Use Code 210
Size:

	Total	Internal	External
Enter	705	24	681
Exit	484	17	467
Total	1,189	41	1,148
%	100%	**3.4%**	96.6%

Land Use B: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use C: Retail (Retail)

ITE Land Use Code 820
Size:

	Total	Internal	External
Enter	188	17	171
Exit	202	24	178
Total	390	41	349
%	100%	**10.5%**	89.5%

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 681
Exit to External: 467

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 53.0% 257
Balanced 17
Demand 9.0% 17

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Enter from External: 0
Exit to External: 0

Demand 0.0% 0
0 Balanced
0.0% 0 Demand

Demand 31.0% 219
Balanced 24
Demand 12.0% 24

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

Enter from External: 0
Exit to External: 0

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

0.0% 0 Demand
0 Balanced
0.0% 0 Demand

Enter from External: 171
Exit to External: 178

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	681	0	171	0	852
Exit	467	0	178	0	645
Total	1,148	0	349	0	**1,497**
Single Use Trip Gen Estimate	1,189	0	390	0	**1,579**

ITE Overall Internal Capture Rate = 5.19%

Intersection Volume Spreadsheets – Phase 1

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**Sidbury Rd.**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

	US-17 (Market St.) **Northbound**				US-17 (Market St.) **Southbound**			Sidbury Rd. **Eastbound**			- **Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	97	62	761	8	0	1611	124	0	0	57	0	0	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	99	63	776	8	0	1643	126	0	0	58	0	0	0
Count Balancing	0	0	107	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	99	63	883	8	0	1643	126	0	0	58	0	0	0
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	10	7	92	1	0	171	13	0	0	6	0	0	0
2019 Background Traffic	109	70	975	9	0	1814	139	0	0	64	0	0	0
Project Traffic													
Percent Assignment Inbound	0.00%	0.00%	63.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	109	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	63.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	129	220	0	0	0	0	0	0	0
Total Project Traffic	0	0	109	0	129	220	0	0	0	0	0	0	0
2019 Buildout Total	109	70	1084	9	129	2034	139	0	0	64	0	0	0

PM PEAK HOUR

	US-17 (Market St.) **Northbound**				US-17 (Market St.) **Southbound**			Sidbury Rd. **Eastbound**			- **Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	71	40	1614	3	0	1079	40	0	0	86	0	0	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	72	41	1646	3	0	1101	41	0	0	88	0	0	0
Count Balancing	0	0	60	0	0	132	0	0	0	0	0	0	0
2014 Existing Traffic	72	41	1706	3	0	1233	41	0	0	88	0	0	0
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	7	4	178	0	0	128	4	0	0	9	0	0	0
2019 Background Traffic	79	45	1884	3	0	1361	45	0	0	97	0	0	0
Project Traffic													
Percent Assignment Inbound	0.00%	0.00%	63.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	256	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	63.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	110	187	0	0	0	0	0	0	0
Total External Site Traffic	0	0	256	0	110	187	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	32	1	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	32	1	0	0	0	0	0	0	0
Total Project Traffic	0	0	256	0	142	188	0	0	0	0	0	0	0
2019 Buildout Total	79	45	2140	3	142	1549	45	0	0	97	0	0	0

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**Scotts Hill Loop Rd. (N.)**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

	US-17 (Market St.) Northbound			US-17 (Market St.) Southbound			Site Driveway #1 Eastbound			Scotts Hill Loop Rd. (N.) Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	0	846	26	20	1629	0	0	0	0	0	0	128
Count Balancing	0	11	0	0	140	0	0	0	0	0	0	0
2014 Existing Traffic	0	857	26	20	1769	0	0	0	0	0	0	128
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	89	3	2	184	0	0	0	0	0	0	13
2019 Background Traffic	0	946	29	22	1953	0	0	0	0	0	0	141
Project Traffic												
Percent Assignment Inbound	63.00%	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	109	0	0	0	0	64	0	0	0	0	0	2
Percent Assignment Outbound	0.00%	36.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	126	3	0	0	0	0	0	349	0	0	0
Total Project Traffic	109	126	3	0	0	64	0	0	349	0	0	2
2019 Buildout Total	109	1072	32	22	1953	64	0	0	349	0	0	143

PM PEAK HOUR

	US-17 (Market St.) Northbound			US-17 (Market St.) Southbound			Site Driveway #1 Eastbound			Scotts Hill Loop Rd. (N.) Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	0	1578	102	54	1274	0	0	0	0	0	0	73
Count Balancing	0	26	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	1604	102	54	1274	0	0	0	0	0	0	73
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	167	11	6	133	0	0	0	0	0	0	8
2019 Background Traffic	0	1771	113	60	1407	0	0	0	0	0	0	81
Project Traffic												
Percent Assignment Inbound	63.00%	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	256	0	0	0	0	151	0	0	0	0	0	4
Percent Assignment Outbound	0.00%	36.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	107	3	0	0	0	0	0	297	0	0	0
Total External Site Traffic	256	107	3	0	0	151	0	0	297	0	0	4
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	31	1	0	0	-25	25	0	0	58	0	0	0
Total Pass-By Traffic	31	1	0	0	-25	25	0	0	58	0	0	0
Total Project Traffic	287	108	3	0	-25	176	0	0	355	0	0	4
2019 Buildout Total	287	1879	116	60	1382	176	0	0	355	0	0	85

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**Scotts Hill Loop Rd. (S.)**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)						Scotts Hill Loop Rd. (S.)		
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	U-Turn	Through	Right	U-Turn	Left	Through	Left	Through	Right	Left	Through	Right
2013 Traffic Count	0	862	36	50	31	1684	0	0	0	0	0	113
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	879	37	51	32	1718	0	0	0	0	0	115
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	879	37	51	32	1718	0	0	0	0	0	115
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	91	4	5	3	179	0	0	0	0	0	12
2019 Background Traffic	0	970	41	56	35	1897	0	0	0	0	0	127
Project Traffic												
Percent Assignment Inbound	0.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	0	107	0	0	0	0	0	0	0	0	0	2
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	1.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	3	217	0	0	0	0	0	0
Total Project Traffic	0	107	0	0	3	217	0	0	0	0	0	2
2019 Buildout Total	0	1077	41	56	38	2114	0	0	0	0	0	129

PM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)						Scotts Hill Loop Rd. (S.)		
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	U-Turn	Through	Right	U-Turn	Left	Through	Left	Through	Right	Left	Through	Right
2013 Traffic Count	0	1654	120	65	46	1125	0	0	0	0	0	65
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	1687	122	66	47	1148	0	0	0	0	0	66
Count Balancing	0	0	0	0	0	132	0	0	0	0	0	0
2014 Existing Traffic	0	1687	122	66	47	1280	0	0	0	0	0	66
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	176	13	7	5	133	0	0	0	0	0	7
2019 Background Traffic	0	1863	135	73	52	1413	0	0	0	0	0	73
Project Traffic												
Percent Assignment Inbound	0.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	0	252	0	0	0	0	0	0	0	0	0	4
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	1.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	3	184	0	0	0	0	0	0
Total External Site Traffic	0	252	0	0	3	184	0	0	0	0	0	4
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	1	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	1	0	0	0	0	0	0
Total Project Traffic	0	252	0	0	3	185	0	0	0	0	0	4
2019 Buildout Total	0	2115	135	73	55	1598	0	0	0	0	0	77

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**I-140 Interchange**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)			I-140 Interchange					
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	0	483	0	0	1149	0	0	0	165	0	0	0
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	0	503	0	0	1195	0	0	0	172	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	503	0	0	1195	0	0	0	172	0	0	0
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	52	0	0	124	0	0	0	18	0	0	0
2019 Background Traffic	0	555	0	0	1319	0	0	0	190	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	64	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	129	0	0	0	0	0	0	0
Total Project Traffic	0	64	0	0	129	0	0	0	0	0	0	0
2019 Buildout Total	0	619	0	0	1448	0	0	0	190	0	0	0

PM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)			I-140 Interchange					
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	0	181	0	0	1081	0	0	0	363	0	0	0
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	0	188	0	0	1125	0	0	0	378	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	188	0	0	1125	0	0	0	378	0	0	0
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	0	20	0	0	117	0	0	0	39	0	0	0
2019 Background Traffic	0	208	0	0	1242	0	0	0	417	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	151	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	110	0	0	0	0	0	0	0
Total External Site Traffic	0	151	0	0	110	0	0	0	0	0	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	1	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	1	0	0	0	0	0	0	0
Total Project Traffic	0	151	0	0	111	0	0	0	0	0	0	0
2019 Buildout Total	0	359	0	0	1353	0	0	0	417	0	0	0

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**Porters Neck Rd**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

Description	US-17 (Market St.) Northbound			US-17 (Market St.) Southbound			Porters Neck Rd Eastbound			Porters Neck Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	31	801	242	84	1175	55	61	32	9	448	33	143
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	32	833	252	87	1222	57	63	33	9	466	34	149
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	32	833	252	87	1222	57	63	33	9	466	34	149
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	3	87	26	9	127	6	7	3	1	49	4	16
2019 Background Traffic	35	920	278	96	1349	63	70	36	10	515	38	165
Project Traffic												
Percent Assignment Inbound	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%
Inbound Project Traffic	0	52	0	0	0	0	0	0	0	0	0	12
Percent Assignment Outbound	0.00%	0.00%	0.00%	7.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	24	105	0	0	0	0	0	0	0
Total Project Traffic	0	52	0	24	105	0	0	0	0	0	0	12
2019 Buildout Total	35	972	278	120	1454	63	70	36	10	515	38	177

PM PEAK HOUR

Description	US-17 (Market St.) Northbound			US-17 (Market St.) Southbound			Porters Neck Rd Eastbound			Porters Neck Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	69	1053	328	173	1171	100	136	52	86	416	38	97
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	72	1096	341	180	1218	104	141	54	89	433	40	101
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	72	1096	341	180	1218	104	141	54	89	433	40	101
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	7	114	35	19	127	11	15	6	9	45	4	11
2019 Background Traffic	79	1210	376	199	1345	115	156	60	98	478	44	112
Project Traffic												
Percent Assignment Inbound	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%
Inbound Project Traffic	0	123	0	0	0	0	0	0	0	0	0	28
Percent Assignment Outbound	0.00%	0.00%	0.00%	7.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	21	89	0	0	0	0	0	0	0
Total External Site Traffic	0	123	0	21	89	0	0	0	0	0	0	28
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	1	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	1	0	0	0	0	0	0	0
Total Project Traffic	0	123	0	21	90	0	0	0	0	0	0	28
2019 Buildout Total	79	1333	376	220	1435	115	156	60	98	478	44	140

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	173	349	407	297
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	58

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate:**	2.0%	**Existing Year:**	2014
E/W Street:	**NC 210/Dan Owen Dr.**	**Growth Factor:**	0.104081	**Buildout Year:**	2019

AM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			NC 210 **Eastbound**			Dan Owen Dr. **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	40	1072	25	50	1482	224	257	15	82	31	11	33
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	40	1072	25	50	1482	224	257	15	82	31	11	33
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	4	112	3	5	154	23	27	2	9	3	1	3
2019 Background Traffic	44	1184	28	55	1636	247	284	17	91	34	12	36
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	52	0	0	0	10	0	0	0
Percent Assignment Outbound	6.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	21	105	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	21	105	0	0	52	0	0	0	10	0	0	0
2019 Buildout Total	65	1289	28	55	1688	247	284	17	101	34	12	36

PM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			NC 210 **Eastbound**			Dan Owen Dr. **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	82	1420	55	86	1168	200	290	40	67	62	37	110
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	82	1420	55	86	1168	200	290	40	67	62	37	110
Growth Factor (0.02 per year)	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104	0.104
2019 Background Growth	9	148	6	9	122	21	30	4	7	6	4	11
2019 Background Traffic	91	1568	61	95	1290	221	320	44	74	68	41	121
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	123	0	0	0	24	0	0	0
Percent Assignment Outbound	6.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	18	89	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	18	89	0	0	123	0	0	0	24	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	1	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	1	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	18	90	0	0	123	0	0	0	24	0	0	0
2019 Buildout Total	109	1658	61	95	1413	221	320	44	98	68	41	121

Intersection Volume Spreadsheets – Phase 2

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Sidbury Rd.**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

	US-17 (Market St.) Northbound				US-17 (Market St.) Southbound			Sidbury Rd. Eastbound			- Westbound		
Description	U-Turn	Left	Through	Right	U-Turn	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	97	62	761	8	0	1611	124	0	0	57	0	0	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	99	63	776	8	0	1643	126	0	0	58	0	0	0
Count Balancing	0	0	107	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	99	63	883	8	0	1643	126	0	0	58	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	22	14	194	2	0	361	28	0	0	13	0	0	0
2029 Background Traffic	121	77	1077	10	0	2004	154	0	0	71	0	0	0
Project Traffic													
Percent Assignment Inbound	0.00%	8.00%	55.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	33	230	0	0	0	8	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	2.00%	0.00%	15.00%	55.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	14	0	103	378	0	0	0	69	0	0	0
Total Project Traffic	0	33	244	0	103	378	8	0	0	69	0	0	0
2029 Buildout Total	121	110	1321	10	103	2382	162	0	0	140	0	0	0

PM PEAK HOUR

	US-17 (Market St.) Northbound				US-17 (Market St.) Southbound			Sidbury Rd. Eastbound			- Westbound		
Description	U-Turn	Left	Through	Right	U-Turn	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	71	40	1614	3	0	1079	40	0	0	86	0	0	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	72	41	1646	3	0	1101	41	0	0	88	0	0	0
Count Balancing	0	0	60	0	0	132	0	0	0	0	0	0	0
2014 Existing Traffic	72	41	1706	3	0	1233	41	0	0	88	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	16	9	375	1	0	271	9	0	0	19	0	0	0
2029 Background Traffic	88	50	2081	4	0	1504	50	0	0	107	0	0	0
Project Traffic													
Percent Assignment Inbound	0.00%	8.00%	55.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	64	437	0	0	0	16	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	2.00%	0.00%	15.00%	55.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	12	0	88	322	0	0	0	59	0	0	0
Total External Site Traffic	0	64	449	0	88	322	16	0	0	59	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	32	2	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	32	2	0	0	0	0	0	0	0
Total Project Traffic	0	64	449	0	120	324	16	0	0	59	0	0	0
2029 Buildout Total	88	114	2530	4	120	1828	66	0	0	166	0	0	0

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Scotts Hill Loop Rd. (N.)**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			Site Driveway #1 **Eastbound**			Scotts Hill Loop Rd. (N.) **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	0	846	26	20	1629	0	0	0	0	0	0	128
Count Balancing	0	11	0	0	140	0	0	0	0	0	0	0
2014 Existing Traffic	0	857	26	20	1769	0	0	0	0	0	0	128
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	188	6	4	388	0	0	0	0	0	0	28
2029 Background Traffic	0	1045	32	24	2157	0	0	0	0	0	0	156
Project Traffic												
Percent Assignment Inbound	55.00%	0.00%	0.00%	0.00%	2.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	230	0	0	0	8	63	0	0	0	0	0	4
Percent Assignment Outbound	0.00%	16.00%	1.00%	0.00%	15.00%	0.00%	0.00%	0.00%	55.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	110	7	0	103	0	0	0	378	0	0	0
Total Project Traffic	230	110	7	0	111	63	0	0	378	0	0	4
2029 Buildout Total	230	1155	39	24	2268	63	0	0	378	0	0	160

PM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			Site Driveway #1 **Eastbound**			Scotts Hill Loop Rd. (N.) **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	0	1578	102	54	1274	0	0	0	0	0	0	73
Count Balancing	0	26	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	1604	102	54	1274	0	0	0	0	0	0	73
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	352	22	12	280	0	0	0	0	0	0	16
2029 Background Traffic	0	1956	124	66	1554	0	0	0	0	0	0	89
Project Traffic												
Percent Assignment Inbound	55.00%	0.00%	0.00%	0.00%	2.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	437	0	0	0	16	120	0	0	0	0	0	8
Percent Assignment Outbound	0.00%	16.00%	1.00%	0.00%	15.00%	0.00%	0.00%	0.00%	55.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	94	6	0	88	0	0	0	322	0	0	0
Total External Site Traffic	437	94	6	0	104	120	0	0	322	0	0	8
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	31	1	0	0	-25	25	0	0	59	0	0	0
Total Pass-By Traffic	31	1	0	0	-25	25	0	0	59	0	0	0
Total Project Traffic	468	95	6	0	79	145	0	0	381	0	0	8
2029 Buildout Total	468	2051	130	66	1633	145	0	0	381	0	0	97

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Scotts Hill Loop Rd. (S.)**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

Description	US-17 (Market St.) Northbound U-Turn	Through	Right	US-17 (Market St.) Southbound U-Turn	Left	Through	Eastbound Left	Through	Right	Scotts Hill Loop Rd. (S.) Westbound Left	Through	Right
2013 Traffic Count	0	862	36	50	31	1684	0	0	0	0	0	113
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	879	37	51	32	1718	0	0	0	0	0	115
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	879	37	51	32	1718	0	0	0	0	0	115
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	193	8	11	7	377	0	0	0	0	0	25
2029 Background Traffic	0	1072	45	62	39	2095	0	0	0	0	0	140
Project Traffic												
Percent Assignment Inbound	0.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	0	259	0	0	0	0	0	0	0	0	0	4
Percent Assignment Outbound	0.00%	0.00%	0.00%	2.00%	1.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	14	7	426	0	0	0	0	0	0
Total Project Traffic	0	259	0	14	7	426	0	0	0	0	0	4
2029 Buildout Total	0	1331	45	76	46	2521	0	0	0	0	0	144

PM PEAK HOUR

Description	US-17 (Market St.) Northbound U-Turn	Through	Right	US-17 (Market St.) Southbound U-Turn	Left	Through	Eastbound Left	Through	Right	Scotts Hill Loop Rd. (S.) Westbound Left	Through	Right
2013 Traffic Count	0	1654	120	65	46	1125	0	0	0	0	0	65
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	1687	122	66	47	1148	0	0	0	0	0	66
Count Balancing	0	0	0	0	0	132	0	0	0	0	0	0
2014 Existing Traffic	0	1687	122	66	47	1280	0	0	0	0	0	66
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	370	27	14	10	281	0	0	0	0	0	14
2029 Background Traffic	0	2057	149	80	57	1561	0	0	0	0	0	80
Project Traffic												
Percent Assignment Inbound	0.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%
Inbound Project Traffic	0	494	0	0	0	0	0	0	0	0	0	7
Percent Assignment Outbound	0.00%	0.00%	0.00%	2.00%	1.00%	62.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	12	6	363	0	0	0	0	0	0
Total External Site Traffic	0	494	0	12	6	363	0	0	0	0	0	7
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	2	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	2	0	0	0	0	0	0
Total Project Traffic	0	494	0	12	6	365	0	0	0	0	0	7
2029 Buildout Total	0	2551	149	92	63	1926	0	0	0	0	0	87

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**I-140 Interchange**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)			I-140 Interchange					
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	0	483	0	0	1149	0	0	0	165	0	0	0
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	0	503	0	0	1195	0	0	0	172	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	503	0	0	1195	0	0	0	172	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	110	0	0	262	0	0	0	38	0	0	0
2029 Background Traffic	0	613	0	0	1457	0	0	0	210	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	154	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	254	0	0	0	0	0	0	0
Total Project Traffic	0	154	0	0	254	0	0	0	0	0	0	0
2029 Buildout Total	0	767	0	0	1711	0	0	0	210	0	0	0

PM PEAK HOUR

	US-17 (Market St.)			US-17 (Market St.)			I-140 Interchange					
	Northbound			**Southbound**			**Eastbound**			**Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	0	181	0	0	1081	0	0	0	363	0	0	0
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	0	188	0	0	1125	0	0	0	378	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	188	0	0	1125	0	0	0	378	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	41	0	0	247	0	0	0	83	0	0	0
2029 Background Traffic	0	229	0	0	1372	0	0	0	461	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	295	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	0.00%	0.00%	0.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	0	217	0	0	0	0	0	0	0
Total External Site Traffic	0	295	0	0	217	0	0	0	0	0	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	2	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	2	0	0	0	0	0	0	0
Total Project Traffic	0	295	0	0	219	0	0	0	0	0	0	0
2029 Buildout Total	0	524	0	0	1591	0	0	0	461	0	0	0

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Porters Neck Rd**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			Porters Neck Rd **Eastbound**			Porters Neck Rd **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2012 Traffic Count	31	801	242	84	1175	55	61	32	9	448	33	143
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	32	833	252	87	1222	57	63	33	9	466	34	149
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	32	833	252	87	1222	57	63	33	9	466	34	149
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	7	183	55	19	268	13	14	7	2	102	7	33
2029 Background Traffic	39	1016	307	106	1490	70	77	40	11	568	41	182
Project Traffic												
Percent Assignment Inbound	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%
Inbound Project Traffic	0	125	0	0	0	0	0	0	0	0	0	29
Percent Assignment Outbound	0.00%	0.00%	0.00%	7.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	48	206	0	0	0	0	0	0	0
Total Project Traffic	0	125	0	48	206	0	0	0	0	0	0	29
2029 Buildout Total	39	1141	307	154	1696	70	77	40	11	568	41	211

PM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			Porters Neck Rd **Eastbound**			Porters Neck Rd **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2013 Traffic Count	69	1053	328	173	1171	100	136	52	86	416	38	97
Growth Factor (0.02 per year)	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
2014 Traffic Count	72	1096	341	180	1218	104	141	54	89	433	40	101
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	72	1096	341	180	1218	104	141	54	89	433	40	101
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	16	241	75	40	267	23	31	12	20	95	9	22
2029 Background Traffic	88	1337	416	220	1485	127	172	66	109	528	49	123
Project Traffic												
Percent Assignment Inbound	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%
Inbound Project Traffic	0	239	0	0	0	0	0	0	0	0	0	56
Percent Assignment Outbound	0.00%	0.00%	0.00%	7.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	41	176	0	0	0	0	0	0	0
Total External Site Traffic	0	239	0	41	176	0	0	0	0	0	0	56
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	2	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	2	0	0	0	0	0	0	0
Total Project Traffic	0	239	0	41	178	0	0	0	0	0	0	56
2029 Buildout Total	88	1576	416	261	1663	127	172	66	109	528	49	179

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**NC 210/Dan Owen Dr.**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			NC 210 **Eastbound**			Dan Owen Dr. **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	40	1072	25	50	1482	224	257	15	82	31	11	33
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	40	1072	25	50	1482	224	257	15	82	31	11	33
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	9	235	5	11	325	49	56	3	18	7	2	7
2029 Background Traffic	49	1307	30	61	1807	273	313	18	100	38	13	40
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	125	0	0	0	25	0	0	0
Percent Assignment Outbound	6.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	41	206	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	41	206	0	0	125	0	0	0	25	0	0	0
2029 Buildout Total	90	1513	30	61	1932	273	313	18	125	38	13	40

PM PEAK HOUR

	US-17 (Market St.) **Northbound**			US-17 (Market St.) **Southbound**			NC 210 **Eastbound**			Dan Owen Dr. **Westbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2014 Traffic Count	82	1420	55	86	1168	200	290	40	67	62	37	110
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	82	1420	55	86	1168	200	290	40	67	62	37	110
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	18	312	12	19	256	44	64	9	15	14	8	24
2029 Background Traffic	100	1732	67	105	1424	244	354	49	82	76	45	134
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	239	0	0	0	48	0	0	0
Percent Assignment Outbound	6.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	35	176	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	35	176	0	0	239	0	0	0	48	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	1	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	1	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	35	177	0	0	239	0	0	0	48	0	0	0
2029 Buildout Total	135	1909	67	105	1663	244	354	49	130	76	45	134

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**US-17 (Market St.)**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Site Driveway #2**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

Description	US-17 (Market St.) Northbound Left	Through	Right	US-17 (Market St.) Southbound Left	Through	Right	Site Driveway #2 Eastbound Left	Through	Right	- Westbound Left	Through	Right
2014 Traffic Count	0	974	0	0	1649	0	0	0	0	0	0	0
Count Balancing	0	11	0	0	140	0	0	0	0	0	0	0
2014 Existing Traffic	0	985	0	0	1789	0	0	0	0	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	216	0	0	393	0	0	0	0	0	0	0
2029 Background Traffic	0	1201	0	0	2182	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	16.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	67	83	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	16.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	15.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	110	0	0	0	0	137	0	103	0	0	0
Total Project Traffic	0	110	0	0	67	83	137	0	103	0	0	0
2029 Buildout Total	0	1311	0	0	2249	83	137	0	103	0	0	0

PM PEAK HOUR

Description	US-17 (Market St.) Northbound Left	Through	Right	US-17 (Market St.) Southbound Left	Through	Right	Site Driveway #2 Eastbound Left	Through	Right	- Westbound Left	Through	Right
2014 Traffic Count	0	1651	0	0	1328	0	0	0	0	0	0	0
Count Balancing	0	26	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	1677	0	0	1328	0	0	0	0	0	0	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	368	0	0	292	0	0	0	0	0	0	0
2029 Background Traffic	0	2045	0	0	1620	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0.00%	0.00%	0.00%	0.00%	16.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Inbound Project Traffic	0	0	0	0	128	159	0	0	0	0	0	0
Percent Assignment Outbound	0.00%	16.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	15.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	94	0	0	0	0	117	0	88	0	0	0
Total External Site Traffic	0	94	0	0	128	159	117	0	88	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	1	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	1	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	95	0	0	128	159	117	0	88	0	0	0
2029 Buildout Total	0	2140	0	0	1748	159	117	0	88	0	0	0

INTERSECTION ANALYSIS SHEET

			AM In	AM Out	PM In	PM Out
Project:	**Blake Farm**	**Net New Trips:**	417	687	796	586
Location:	**Wilmington, NC**	**Pass-By Trips:**	0	0	56	59

N/S Street:	**Site Driveway #3**	**Annual Growth Rate (Net):**	1.3%	**Existing Year:**	2014
E/W Street:	**Sidbury Rd.**	**Growth Factor:**	0.219592	**Buildout Year:**	2029

AM PEAK HOUR

Description	- Northbound Left	Northbound Through	Northbound Right	Site Driveway #3 Southbound Left	Southbound Through	Southbound Right	Sidbury Rd. Eastbound Left	Eastbound Through	Eastbound Right	Sidbury Rd. Westbound Left	Westbound Through	Westbound Right
2013 Traffic Count	0	0	0	0	0	0	0	57	0	0	186	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	0	0	0	0	0	0	58	0	0	190	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	0	0	0	0	0	0	58	0	0	190	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	0	0	0	0	0	0	13	0	0	42	0
2029 Background Traffic	0	0	0	0	0	0	0	71	0	0	232	0
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%	0.00%	10.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	41
Percent Assignment Outbound	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	69	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	69	0	0	0	0	0	0	0	41
2029 Buildout Total	0	0	0	69	0	0	0	71	0	0	232	41

PM PEAK HOUR

Description	- Northbound Left	Northbound Through	Northbound Right	Site Driveway #3 Southbound Left	Southbound Through	Southbound Right	Sidbury Rd. Eastbound Left	Eastbound Through	Eastbound Right	Sidbury Rd. Westbound Left	Westbound Through	Westbound Right
2013 Traffic Count	0	0	0	0	0	0	0	86	0	0	80	0
Growth Factor (0.02 per year)	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
2014 Traffic Count	0	0	0	0	0	0	0	88	0	0	82	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2014 Existing Traffic	0	0	0	0	0	0	0	88	0	0	82	0
Growth Factor (0.013 per year)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
2029 Background Growth	0	0	0	0	0	0	0	19	0	0	18	0
2029 Background Traffic	0	0	0	0	0	0	0	107	0	0	100	0
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%	0.00%	10.00%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	80
Percent Assignment Outbound	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outbound Project Traffic	0	0	0	59	0	0	0	0	0	0	0	0
Total External Site Traffic	0	0	0	59	0	0	0	0	0	0	0	80
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	59	0	0	0	0	0	0	0	80
2029 Buildout Total	0	0	0	59	0	0	0	107	0	0	100	80

Signal Warrant Spreadsheets

Blake Farm - Phase 1

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: US 17 at US 17 NB Left

COUNT DATE: 18-Jun-14

INTERSECTION CONDITION: Build

MAJOR STREET: US 17

OF APPROACH LANES: 2

MINOR STREET: US 17 NB Left/Site Driveway

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
									CONDITION A			CONDITION B				
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →			420	105		630	53		336	84		504	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	2,017	109	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	0	0														
05:00 PM TO 06:00 PM	1,589	287	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	3,606	396			**2**			**2**			**2**			**2**	**2**	**2**
			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS OF BOTH COND. A AND COND. B NEEDED **NOT SATISFIED**						4 HRS NEEDED **NOT SATISFIED**	1 HR NEEDED **SATISFIED**

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant

Condition A : Minimum Vehicular Volume

Condition B : Interruption of Continuous Traffic

Combination : Combination of Condition A and Condition B

WARRANT 2 -- Four-Hour Vehicular Volume Warrant

WARRANT 3 -- Peak Hour Warrant

Blake Farm - Phase 2

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: US 17 at Site Driveway #2

COUNT DATE: 18-Jun-14

INTERSECTION CONDITION: Build

MAJOR STREET: US 17 — # OF APPROACH LANES: 2

MINOR STREET: Site Driveway #2 — # OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
									CONDITION A			CONDITION B				
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →			420	105		630	53		336	84		504	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	2,249	137	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	0	0														
05:00 PM TO 06:00 PM	1,748	117	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	3,997	254			**2**			**2**			**2**			**2**	**2**	**2**
			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS OF BOTH COND. A AND COND. B NEEDED **NOT SATISFIED**						4 HRS NEEDED **NOT SATISFIED**	1 HR NEEDED **SATISFIED**

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant

Condition A : Minimum Vehicular Volume

Condition B : Interruption of Continuous Traffic

Combination : Combination of Condition A and Condition B

WARRANT 2 -- Four-Hour Vehicular Volume Warrant

WARRANT 3 -- Peak Hour Warrant

Blake Farm - Phase 2

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: US 17 at US 17 SB U-Turn

COUNT DATE: 10-Dec-13

INTERSECTION CONDITION: Build

MAJOR STREET: US 17 — # OF APPROACH LANES: 2

MINOR STREET: US 17 SB U-Turn — # OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
									CONDITION A			CONDITION B				
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →			420	105		630	53		336	84		504	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	1,321	103	Y			Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	0	0														
05:00 PM TO 06:00 PM	2,530	120	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	3,851	223			**1**			**2**			**2**			**2**	**2**	**2**
			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS NEEDED **NOT SATISFIED**			8 HOURS OF BOTH COND. A AND COND. B NEEDED **NOT SATISFIED**						4 HRS NEEDED **NOT SATISFIED**	1 HR NEEDED **SATISFIED**

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant

Condition A : Minimum Vehicular Volume

Condition B : Interruption of Continuous Traffic

Combination : Combination of Condition A and Condition B

WARRANT 2 -- Four-Hour Vehicular Volume Warrant

WARRANT 3 -- Peak Hour Warrant

Synchro Output:

Existing (2014) AM Peak Hour

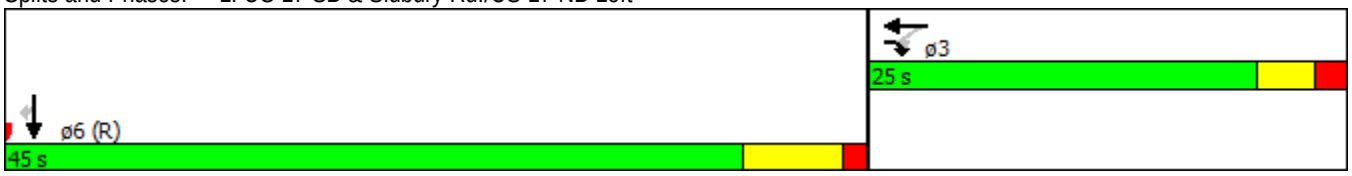
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	58	99	63	0	0	0	0	0	1643	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Flt Permitted					0.970							
Satd. Flow (perm)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			56		56							105
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	64	0	180	0	0	0	0	0	1826	140
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			25.0	25.0	25.0						45.0	45.0
Total Split (%)			35.7%	35.7%	35.7%						64.3%	64.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			10.4		10.4						49.6	49.6
Actuated g/C Ratio			0.15		0.15						0.71	0.71
v/c Ratio			0.22		0.57						0.73	0.12
Control Delay			10.9		25.6						9.0	1.8
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			10.9		25.6						9.0	1.8
LOS			B		C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					25.6						8.5	
Approach LOS					C						A	
Queue Length 50th (ft)			3		50						195	4
Queue Length 95th (ft)			31		99						356	21
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			498		556						2508	1152
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.13		0.32						0.73	0.12

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 41 (59%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 10.0 Intersection LOS: A
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0988

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	20	0	0	0	128	0	857	26	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						94			39			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	22	0	0	0	138	0	922	28	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		30.0	30.0			
Total Split (%)		40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		7.5				7.5		35.8	35.8			
Actuated g/C Ratio		0.15				0.15		0.72	0.72			
v/c Ratio		0.08				0.43		0.36	0.02			
Control Delay		18.2				12.7		2.2	0.4			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		18.2				12.7		2.2	0.4			
LOS		B				B		A	A			

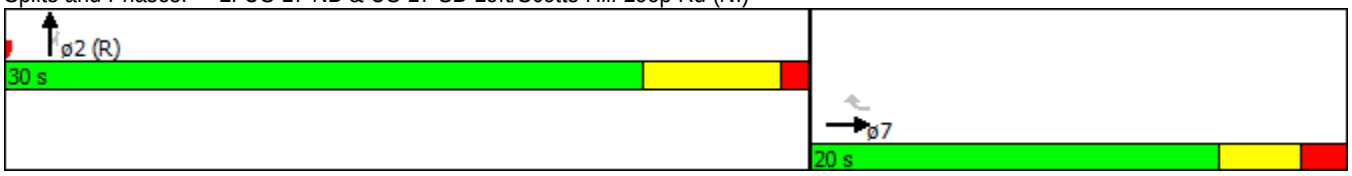
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.3						2.2				
Approach LOS		B						A				
Queue Length 50th (ft)		6				12		22	0			
Queue Length 95th (ft)		19				48		40	m1			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		555				544		2536	1145			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.04				0.25		0.36	0.02			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 15 (30%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 3.8 Intersection LOS: A
Intersection Capacity Utilization 90.0% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



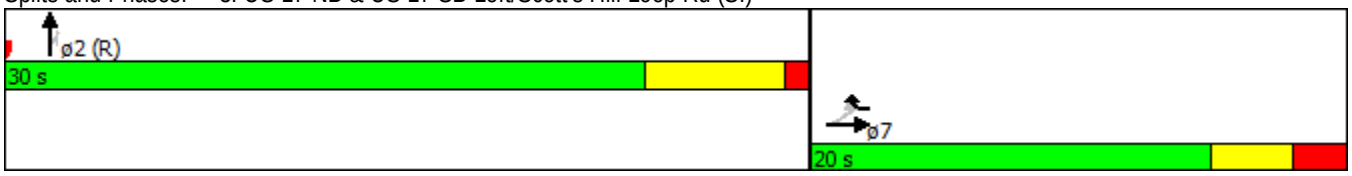
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	32	0	0	0	115	0	879	37	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.970										
Satd. Flow (perm)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				88			46			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	89	0	0	0	124	0	945	40	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	20.0	20.0				20.0		30.0	30.0			
Total Split (%)	40.0%	40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		7.7				7.7		35.8	35.8			
Actuated g/C Ratio		0.15				0.15		0.72	0.72			
v/c Ratio		0.27				0.39		0.37	0.03			
Control Delay		9.8				12.0		4.5	1.5			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		9.8				12.0		4.5	1.5			
LOS		A				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.8						4.4				
Approach LOS		A						A				
Queue Length 50th (ft)		5				10		52	0			
Queue Length 95th (ft)		33				43		95	7			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		591				537		2531	1145			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.15				0.23		0.37	0.03			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 39 (78%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	172	0	503	1195	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	193	0	565	1343	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	172	0	503	1195	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	193	0	565	1343	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1625	671	1343			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1625	671	1343			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	52	100			
cM capacity (veh/h)	93	399	509			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	193	283	283	671	671
Volume Left	0	0	0	0	0
Volume Right	193	0	0	0	0
cSH	399	1700	1700	1700	1700
Volume to Capacity	0.48	0.17	0.17	0.39	0.39
Queue Length 95th (ft)	64	0	0	0	0
Control Delay (s)	22.2	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	22.2	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	33	9	466	34	149	32	833	252	87	1222	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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			155			262			93
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	66	34	9	485	35	155	33	868	262	91	1273	59
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	11.3	9.5	16.8	17.9	14.9	21.9	10.0	34.7	58.2	9.6	43.0	61.3
Actuated g/C Ratio	0.13	0.11	0.20	0.21	0.17	0.26	0.12	0.40	0.68	0.11	0.50	0.72
v/c Ratio	0.15	0.17	0.02	0.69	0.11	0.30	0.08	0.61	0.23	0.24	0.72	0.05
Control Delay	43.8	46.7	0.1	41.0	36.5	6.4	45.0	22.0	1.2	44.8	22.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	46.7	0.1	41.0	36.5	6.4	45.0	22.0	1.2	44.8	22.7	0.7
LOS	D	D	A	D	D	A	D	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.1			32.8			18.0			23.2	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	20	20	0	146	18	0	9	213	0	27	372	0
Queue Length 95th (ft)	46	56	0	#256	52	47	27	288	24	59	476	7
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	653	354	393	871	474	537	440	2465	1216	442	2477	1224
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.10	0.02	0.56	0.07	0.29	0.07	0.35	0.22	0.21	0.51	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 85.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 23.9 Intersection LOS: C
Intersection Capacity Utilization 65.5% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	257	15	82	31	11	33	40	1072	25	50	1482	224
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1685	1575	1662	1627	0	1778	3489	1561	1752	3504	1552
Flt Permitted	0.950	0.957		0.950			0.078			0.182		
Satd. Flow (perm)	1673	1685	1575	1662	1627	0	146	3489	1561	336	3504	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		36				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	4%	4%	2%	2%	3%
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 (%)	47%											
Lane Group Flow (vph)	149	149	90	34	48	0	44	1178	27	55	1629	246
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	29.0	29.0	19.0	30.0	30.0		19.0	62.0	62.0	19.0	62.0	62.0
Total Split (%)	20.7%	20.7%	13.6%	21.4%	21.4%		13.6%	44.3%	44.3%	13.6%	44.3%	44.3%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.2	17.2	25.5	8.9	8.9		97.1	91.2	91.2	97.2	89.3	89.3
Actuated g/C Ratio	0.12	0.12	0.18	0.06	0.06		0.69	0.65	0.65	0.69	0.64	0.64
v/c Ratio	0.73	0.72	0.25	0.32	0.35		0.24	0.52	0.03	0.18	0.73	0.24
Control Delay	78.5	77.8	7.7	70.7	32.5		10.7	16.1	0.0	8.7	21.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.5	77.8	7.7	70.7	32.5		10.7	16.1	0.0	8.7	21.5	7.1
LOS	E	E	A	E	C		B	B	A	A	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		61.8			48.4			15.6			19.3	
Approach LOS		E			D			B			B	
Queue Length 50th (ft)	140	140	0	30	11		11	308	0	14	521	44
Queue Length 95th (ft)	210	210	37	67	52		28	436	0	34	729	102
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	286	288	431	296	320		268	2273	1059	385	2234	1033
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.21	0.11	0.15		0.16	0.52	0.03	0.14	0.73	0.24

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 69 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 65.1% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0283

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

Synchro Output:

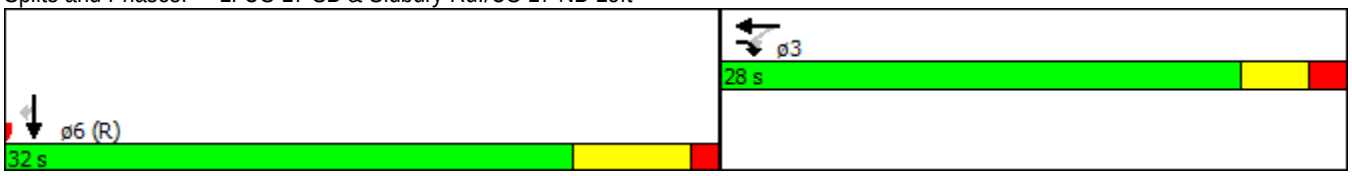
Existing (2014) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	88	72	41	0	0	0	0	0	1233	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 (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Flt Permitted					0.969							
Satd. Flow (perm)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			65		65							42
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
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)	0	0	94	0	121	0	0	0	0	0	1312	44
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			28.0	28.0	28.0						32.0	32.0
Total Split (%)			46.7%	46.7%	46.7%						53.3%	53.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			8.0		8.0						45.3	45.3
Actuated g/C Ratio			0.13		0.13						0.76	0.76
v/c Ratio			0.35		0.41						0.49	0.04
Control Delay			14.1		16.7						4.9	1.5
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			14.1		16.7						4.9	1.5
LOS			B		B						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.7						4.8	
Approach LOS					B						A	
Queue Length 50th (ft)			10		19						84	0
Queue Length 95th (ft)			43		56						157	8
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			654		732						2674	1206
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.14		0.17						0.49	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 3 (5%), Referenced to phase 2: and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	
Description: 03-0988	

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	54	0	0	0	73	0	1604	102	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						51			111			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
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
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)	0	59	0	0	0	79	0	1743	111	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		50.0	50.0			
Total Split (%)		28.6%				28.6%		71.4%	71.4%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		7.4				7.4		56.0	56.0			
Actuated g/C Ratio		0.11				0.11		0.80	0.80			
v/c Ratio		0.30				0.37		0.62	0.09			
Control Delay		32.9				19.2		1.6	0.1			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		32.9				19.2		1.6	0.1			
LOS		C				B		A	A			

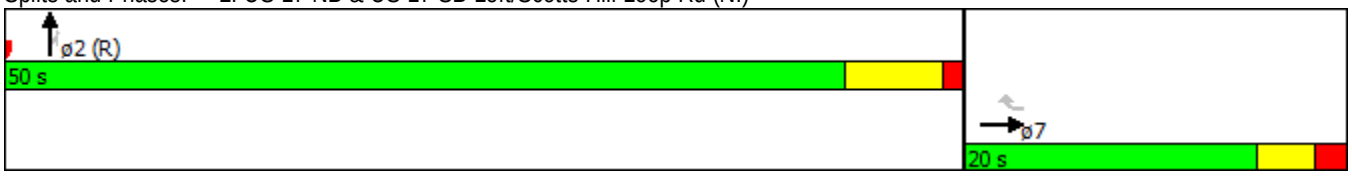
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.9						1.5				
Approach LOS		C						A				
Queue Length 50th (ft)		24				11		30	0			
Queue Length 95th (ft)		55				47		43	m1			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		397				381		2829	1287			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.15				0.21		0.62	0.09			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 66 (94%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 3.1 Intersection LOS: A
Intersection Capacity Utilization 94.9% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



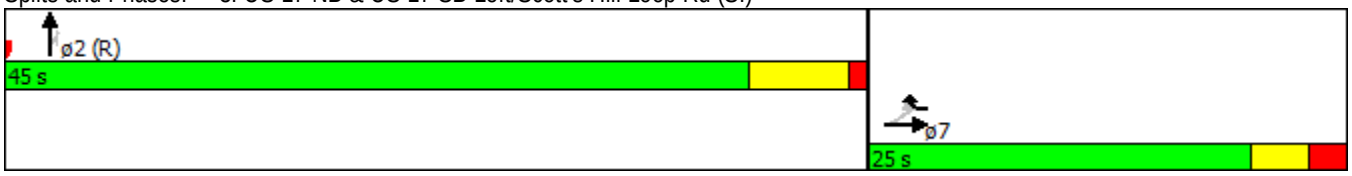
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	47	0	0	0	66	0	1687	122	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.972										
Satd. Flow (perm)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				50			132			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	125	0	0	0	73	0	1874	136	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	25.0	25.0				25.0		45.0	45.0			
Total Split (%)	35.7%	35.7%				35.7%		64.3%	64.3%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.5				8.5		55.0	55.0			
Actuated g/C Ratio		0.12				0.12		0.79	0.79			
v/c Ratio		0.48				0.31		0.67	0.11			
Control Delay		24.2				16.4		6.6	1.0			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		24.2				16.4		6.6	1.0			
LOS		C				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.2						6.2				
Approach LOS		C						A				
Queue Length 50th (ft)		31				9		167	0			
Queue Length 95th (ft)		73				42		310	13			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		553				489		2778	1271			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.23				0.15		0.67	0.11			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 71.1% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	378	0	188	1125	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	382	0	190	1136	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	378	0	188	1125	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	382	0	190	1136	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1231	568	1136			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1231	568	1136			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	18	100			
cM capacity (veh/h)	170	466	611			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	382	95	95	568	568
Volume Left	0	0	0	0	0
Volume Right	382	0	0	0	0
cSH	466	1700	1700	1700	1700
Volume to Capacity	0.82	0.06	0.06	0.33	0.33
Queue Length 95th (ft)	195	0	0	0	0
Control Delay (s)	39.2	0.0	0.0	0.0	0.0
Lane LOS	E				
Approach Delay (s)	39.2	0.0		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	54	89	433	40	101	72	1096	341	180	1218	104
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85			355			108
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	147	56	93	451	42	105	75	1142	355	188	1269	108
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	16.4	9.9	20.8	17.9	14.2	22.6	9.8	40.8	64.0	10.0	41.0	62.6
Actuated g/C Ratio	0.17	0.10	0.22	0.19	0.15	0.24	0.10	0.43	0.67	0.10	0.43	0.66
v/c Ratio	0.25	0.30	0.23	0.71	0.15	0.24	0.21	0.76	0.30	0.53	0.84	0.10
Control Delay	42.2	49.8	10.9	46.0	40.6	10.9	47.4	27.7	1.4	50.8	30.6	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	49.8	10.9	46.0	40.6	10.9	47.4	27.7	1.4	50.8	30.6	2.0
LOS	D	D	B	D	D	B	D	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.8			39.4			22.7			31.1	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	45	34	4	137	22	8	23	325	0	59	373	0
Queue Length 95th (ft)	87	82	48	#232	62	53	52	428	28	111	500	21
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	670	302	418	744	403	441	375	2131	1211	377	2141	1114
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.19	0.22	0.61	0.10	0.24	0.20	0.54	0.29	0.50	0.59	0.10

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 95.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

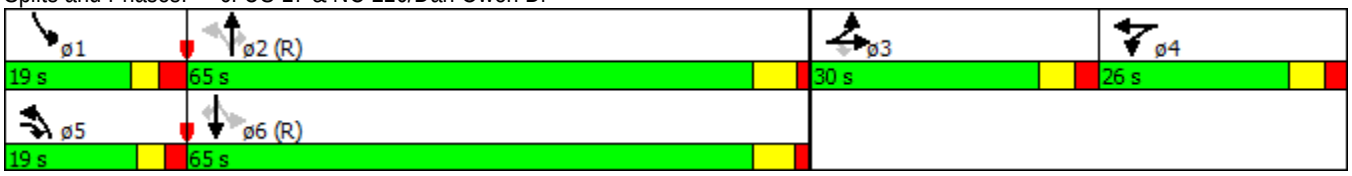
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	40	67	62	37	110	82	1420	55	86	1168	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1697	1575	1743	1629	0	1778	3557	1591	1752	3504	1567
Flt Permitted	0.950	0.964		0.950			0.155			0.086		
Satd. Flow (perm)	1673	1697	1575	1743	1629	0	290	3557	1591	159	3504	1567
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		89				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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 (%)	43%											
Lane Group Flow (vph)	172	172	70	65	154	0	85	1479	57	90	1217	208
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	30.0	30.0	19.0	26.0	26.0		19.0	65.0	65.0	19.0	65.0	65.0
Total Split (%)	21.4%	21.4%	13.6%	18.6%	18.6%		13.6%	46.4%	46.4%	13.6%	46.4%	46.4%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.9	18.9	26.7	11.8	11.8		88.1	80.3	80.3	90.6	81.6	81.6
Actuated g/C Ratio	0.14	0.14	0.19	0.08	0.08		0.63	0.57	0.57	0.65	0.58	0.58
v/c Ratio	0.76	0.75	0.19	0.45	0.71		0.32	0.72	0.06	0.44	0.60	0.22
Control Delay	79.3	78.0	6.4	69.4	44.3		13.0	26.2	0.1	16.5	21.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	78.0	6.4	69.4	44.3		13.0	26.2	0.1	16.5	21.8	7.6
LOS	E	E	A	E	D		B	C	A	B	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		66.4			51.8			24.6			19.5	
Approach LOS		E			D			C			B	
Queue Length 50th (ft)	161	161	0	58	58		24	477	0	26	347	33
Queue Length 95th (ft)	237	236	27	103	130		57	752	0	60	541	93
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	298	303	425	261	320		342	2041	964	266	2041	963
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.57	0.16	0.25	0.48		0.25	0.72	0.06	0.34	0.60	0.22

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 84 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 28.7 Intersection LOS: C
Intersection Capacity Utilization 79.6% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0283

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr



Synchro Output:

Projected (2019) Phase 1 Background

AM Peak Hour

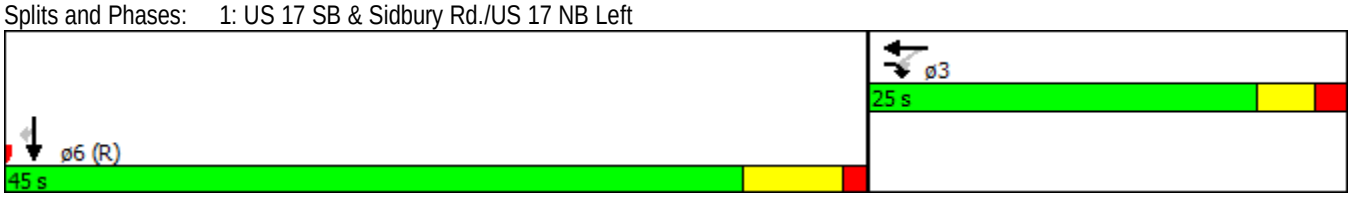
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	64	109	70	0	0	0	0	0	1814	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Flt Permitted					0.970							
Satd. Flow (perm)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			56		56							105
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	71	0	199	0	0	0	0	0	2016	154
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			25.0	25.0	25.0						45.0	45.0
Total Split (%)			35.7%	35.7%	35.7%						64.3%	64.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			11.0		11.0						49.0	49.0
Actuated g/C Ratio			0.16		0.16						0.70	0.70
v/c Ratio			0.24		0.60						0.81	0.14
Control Delay			11.7		26.6						12.2	2.1
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			11.7		26.6						12.2	2.1
LOS			B		C						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					26.6						11.5	
Approach LOS					C						B	
Queue Length 50th (ft)			6		57						253	5
Queue Length 95th (ft)			35		109						#512	26
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			498		556						2476	1139
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.14		0.36						0.81	0.14

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 41 (59%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 78.2% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0988
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	22	0	0	0	141	0	946	29	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						72			39			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	24	0	0	0	152	0	1017	31	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		30.0	30.0			
Total Split (%)		40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		8.0				8.0		35.3	35.3			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.08				0.48		0.41	0.03			
Control Delay		17.4				16.1		2.5	0.4			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		17.4				16.1		2.5	0.4			
LOS		B				B		A	A			

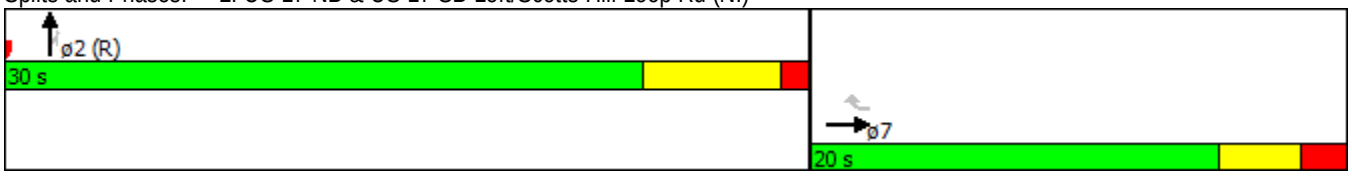
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.4						2.4				
Approach LOS		B						A				
Queue Length 50th (ft)		6				22		28	0			
Queue Length 95th (ft)		20				58		46	m1			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		555				528		2501	1130			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.04				0.29		0.41	0.03			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 15 (30%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 4.4 Intersection LOS: A
Intersection Capacity Utilization 98.4% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



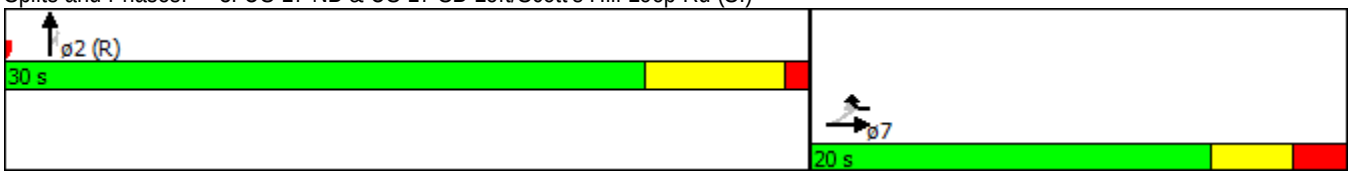
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	35	0	0	0	127	0	970	41	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.970										
Satd. Flow (perm)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				70			46			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	98	0	0	0	137	0	1043	44	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	20.0	20.0				20.0		30.0	30.0			
Total Split (%)	40.0%	40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.1				8.1		35.3	35.3			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.28				0.43		0.42	0.04			
Control Delay		10.2				14.9		5.1	1.7			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		10.2				14.9		5.1	1.7			
LOS		B				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.2						4.9				
Approach LOS		B						A				
Queue Length 50th (ft)		7				18		60	0			
Queue Length 95th (ft)		36				53		117	8			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		591				525		2499	1131			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.17				0.26		0.42	0.04			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 39 (78%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 6.4 Intersection LOS: A
Intersection Capacity Utilization 53.0% ICU Level of Service A
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	190	0	555	1319	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	213	0	624	1482	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	190	0	555	1319	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	213	0	624	1482	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1794	741	1482			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1794	741	1482			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	40	100			
cM capacity (veh/h)	72	359	450			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	213	312	312	741	741
Volume Left	0	0	0	0	0
Volume Right	213	0	0	0	0
cSH	359	1700	1700	1700	1700
Volume to Capacity	0.60	0.18	0.18	0.44	0.44
Queue Length 95th (ft)	92	0	0	0	0
Control Delay (s)	28.8	0.0	0.0	0.0	0.0
Lane LOS	D				
Approach Delay (s)	28.8	0.0		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	190	0	555	1319	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	213	0	624	1482	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	190	0	555	1319	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	213	0	624	1482	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1794	741	1482			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1794	741	1482			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	40	100			
cM capacity (veh/h)	72	359	450			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	107	107	312	312	741	741
Volume Left	0	0	0	0	0	0
Volume Right	107	107	0	0	0	0
cSH	359	359	1700	1700	1700	1700
Volume to Capacity	0.30	0.30	0.18	0.18	0.44	0.44
Queue Length 95th (ft)	31	31	0	0	0	0
Control Delay (s)	19.2	19.2	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	19.2		0.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	36	10	515	38	165	35	920	278	96	1349	63
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			157			290			93
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	73	38	10	536	40	172	36	958	290	100	1405	66
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	12.5	9.5	16.9	20.0	14.8	22.1	9.8	38.7	64.1	9.6	46.8	66.1
Actuated g/C Ratio	0.14	0.10	0.18	0.22	0.16	0.24	0.11	0.42	0.70	0.10	0.51	0.72
v/c Ratio	0.16	0.20	0.03	0.73	0.14	0.35	0.10	0.65	0.24	0.28	0.78	0.06
Control Delay	45.6	49.2	0.1	44.4	39.1	8.2	47.2	22.9	1.2	47.6	24.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	49.2	0.1	44.4	39.1	8.2	47.2	22.9	1.2	47.6	24.6	1.0
LOS	D	D	A	D	D	A	D	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		43.0			35.8			18.7			25.0	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	24	25	0	181	23	7	11	245	0	33	436	0
Queue Length 95th (ft)	50	62	0	#302	57	59	29	328	25	64	561	9
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	639	325	373	800	436	513	404	2292	1212	406	2303	1246
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.12	0.03	0.67	0.09	0.34	0.09	0.42	0.24	0.25	0.61	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 91.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.6 Intersection LOS: C
Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	17	91	34	12	36	44	1184	28	55	1636	247
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1687	1575	1662	1627	0	1778	3489	1561	1752	3504	1552
Flt Permitted	0.950	0.958		0.950			0.047			0.147		
Satd. Flow (perm)	1673	1687	1575	1662	1627	0	88	3489	1561	271	3504	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		40				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	4%	4%	2%	2%	3%
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 (%)	47%											
Lane Group Flow (vph)	165	166	100	37	53	0	48	1301	31	60	1798	271
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	29.0	29.0	19.0	30.0	30.0		19.0	62.0	62.0	19.0	62.0	62.0
Total Split (%)	20.7%	20.7%	13.6%	21.4%	21.4%		13.6%	44.3%	44.3%	13.6%	44.3%	44.3%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.2	18.2	26.5	9.1	9.1		95.7	89.9	89.9	96.2	88.1	88.1
Actuated g/C Ratio	0.13	0.13	0.19	0.06	0.06		0.68	0.64	0.64	0.69	0.63	0.63
v/c Ratio	0.76	0.76	0.26	0.35	0.37		0.32	0.58	0.03	0.22	0.82	0.27
Control Delay	80.0	79.6	7.4	71.3	31.8		17.2	18.2	0.0	9.6	25.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	79.6	7.4	71.3	31.8		17.2	18.2	0.0	9.6	25.6	8.1
LOS	E	E	A	E	C		B	B	A	A	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		63.0			48.1			17.7			22.9	
Approach LOS		E			D			B			C	
Queue Length 50th (ft)	154	155	0	33	11		12	369	0	16	649	56
Queue Length 95th (ft)	230	231	38	71	56		39	522	0	37	894	120
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	286	289	449	296	323		232	2239	1045	342	2205	1021
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.57	0.22	0.13	0.16		0.21	0.58	0.03	0.18	0.82	0.27

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 69 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 26.0 Intersection LOS: C
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0283

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

Synchro Output:

Projected (2019) Phase 1 Background

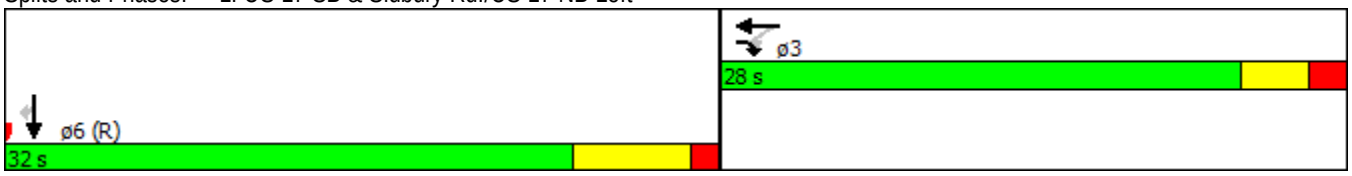
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	97	79	45	0	0	0	0	0	1361	45
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 (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Flt Permitted					0.969							
Satd. Flow (perm)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			65		65							41
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
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)	0	0	103	0	132	0	0	0	0	0	1448	48
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			28.0	28.0	28.0						32.0	32.0
Total Split (%)			46.7%	46.7%	46.7%						53.3%	53.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			8.3		8.3						45.1	45.1
Actuated g/C Ratio			0.14		0.14						0.75	0.75
v/c Ratio			0.37		0.43						0.54	0.04
Control Delay			14.9		17.6						5.5	1.7
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			14.9		17.6						5.5	1.7
LOS			B		B						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.6						5.4	
Approach LOS					B						A	
Queue Length 50th (ft)			13		23						103	1
Queue Length 95th (ft)			47		61						191	9
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			654		732						2657	1199
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.16		0.18						0.54	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 3 (5%), Referenced to phase 2: and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	
Description: 03-0988	

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	60	0	0	0	81	0	1771	113	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						51			123			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
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
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)	0	65	0	0	0	88	0	1925	123	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		50.0	50.0			
Total Split (%)		28.6%				28.6%		71.4%	71.4%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		7.6				7.6		55.8	55.8			
Actuated g/C Ratio		0.11				0.11		0.80	0.80			
v/c Ratio		0.33				0.41		0.68	0.10			
Control Delay		33.0				20.7		1.9	0.1			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		33.0				20.7		1.9	0.1			
LOS		C				C		A	A			

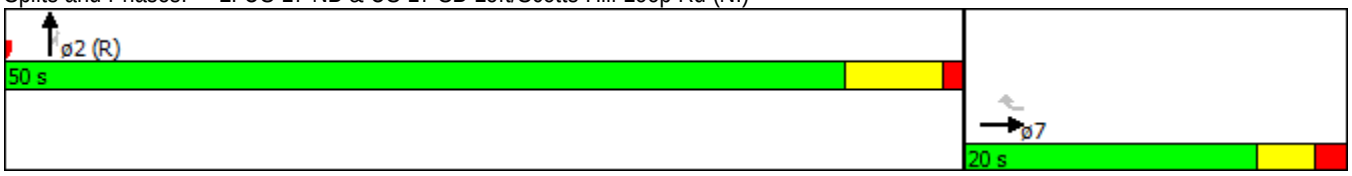
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.0						1.8				
Approach LOS		C						A				
Queue Length 50th (ft)		27				15		35	0			
Queue Length 95th (ft)		59				53		55	m0			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		397				381		2820	1286			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.16				0.23		0.68	0.10			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 66 (94%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 3.5 Intersection LOS: A
Intersection Capacity Utilization 103.2% ICU Level of Service G
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



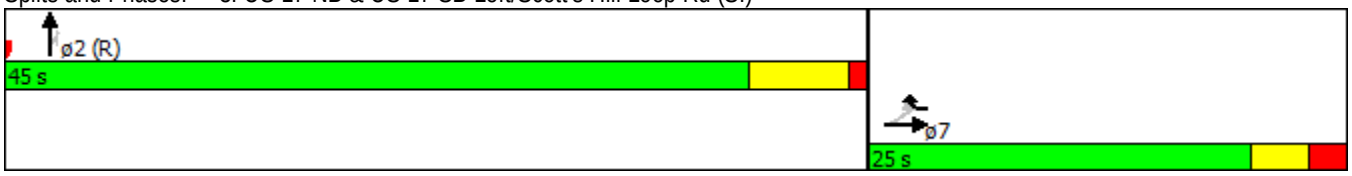
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	52	0	0	0	73	0	1863	135	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.972										
Satd. Flow (perm)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				50			132			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	139	0	0	0	81	0	2070	150	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	25.0	25.0				25.0		45.0	45.0			
Total Split (%)	35.7%	35.7%				35.7%		64.3%	64.3%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.9				8.9		54.6	54.6			
Actuated g/C Ratio		0.13				0.13		0.78	0.78			
v/c Ratio		0.51				0.33		0.75	0.12			
Control Delay		25.2				17.3		8.6	1.2			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		25.2				17.3		8.6	1.2			
LOS		C				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.2						8.1				
Approach LOS		C						A				
Queue Length 50th (ft)		36				12		218	2			
Queue Length 95th (ft)		81				46		416	17			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		553				489		2758	1262			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.25				0.17		0.75	0.12			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	417	0	208	1242	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	421	0	210	1255	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	417	0	208	1242	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	421	0	210	1255	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1360	627	1255			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1360	627	1255			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	1	100			
cM capacity (veh/h)	140	426	550			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	421	105	105	627	627
Volume Left	0	0	0	0	0
Volume Right	421	0	0	0	0
cSH	426	1700	1700	1700	1700
Volume to Capacity	0.99	0.06	0.06	0.37	0.37
Queue Length 95th (ft)	307	0	0	0	0
Control Delay (s)	72.2	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	72.2	0.0		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	16.1		
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	417	0	208	1242	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	421	0	210	1255	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	417	0	208	1242	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	421	0	210	1255	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1360	627	1255			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1360	627	1255			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	1	100			
cM capacity (veh/h)	140	426	550			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	211	211	105	105	627	627
Volume Left	0	0	0	0	0	0
Volume Right	211	211	0	0	0	0
cSH	426	426	1700	1700	1700	1700
Volume to Capacity	0.49	0.49	0.06	0.06	0.37	0.37
Queue Length 95th (ft)	67	67	0	0	0	0
Control Delay (s)	21.4	21.4	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	21.4		0.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	60	98	478	44	112	79	1210	376	199	1345	115
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85			379			120
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	162	62	102	498	46	117	82	1260	392	207	1401	120
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	18.0	10.2	21.2	19.2	14.1	22.6	9.8	45.9	70.3	9.9	46.0	69.2
Actuated g/C Ratio	0.18	0.10	0.21	0.19	0.14	0.22	0.10	0.45	0.69	0.10	0.45	0.68
v/c Ratio	0.27	0.34	0.26	0.78	0.18	0.28	0.25	0.80	0.33	0.62	0.88	0.11
Control Delay	43.9	53.3	12.9	51.7	43.9	13.1	50.7	29.2	1.6	56.9	33.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	53.3	12.9	51.7	43.9	13.1	50.7	29.2	1.6	56.9	33.5	1.8
LOS	D	D	B	D	D	B	D	C	A	E	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.0			44.4			24.0			34.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	55	41	9	172	28	16	27	384	3	73	448	0
Queue Length 95th (ft)	94	88	56	#282	67	64	56	501	33	#129	588	21
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	641	280	400	690	374	418	348	1976	1221	350	1986	1131
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.22	0.26	0.72	0.12	0.28	0.24	0.64	0.32	0.59	0.71	0.11

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 102.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 31.8 Intersection LOS: C
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

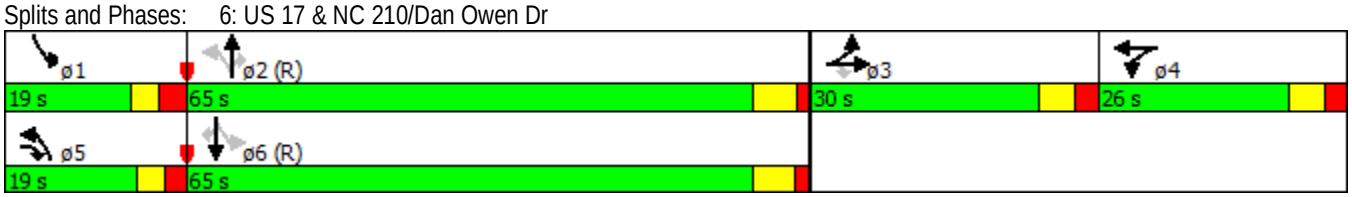
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	44	74	68	41	121	91	1568	61	95	1290	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1697	1575	1743	1629	0	1778	3557	1591	1752	3504	1567
Flt Permitted	0.950	0.964		0.950			0.115			0.051		
Satd. Flow (perm)	1673	1697	1575	1743	1629	0	215	3557	1591	94	3504	1567
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			77		89				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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 (%)	43%											
Lane Group Flow (vph)	190	189	77	71	169	0	95	1633	64	99	1344	230
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	30.0	30.0	19.0	26.0	26.0		19.0	65.0	65.0	19.0	65.0	65.0
Total Split (%)	21.4%	21.4%	13.6%	18.6%	18.6%		13.6%	46.4%	46.4%	13.6%	46.4%	46.4%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	20.0	20.0	28.3	12.8	12.8		86.2	77.8	77.8	88.3	78.9	78.9
Actuated g/C Ratio	0.14	0.14	0.20	0.09	0.09		0.62	0.56	0.56	0.63	0.56	0.56
v/c Ratio	0.80	0.78	0.20	0.45	0.74		0.42	0.83	0.07	0.58	0.68	0.25
Control Delay	81.0	79.1	6.3	67.7	47.6		16.5	31.7	0.1	37.0	25.8	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	79.1	6.3	67.7	47.6		16.5	31.7	0.1	37.0	25.8	9.4
LOS	F	E	A	E	D		B	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		67.6			53.6			29.7			24.2	
Approach LOS		E			D			C			C	
Queue Length 50th (ft)	177	176	0	63	72		29	602	0	36	429	44
Queue Length 95th (ft)	262	260	28	109	146		65	#977	0	106	663	117
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	298	303	440	261	320		296	1977	938	227	1974	935
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.62	0.17	0.27	0.53		0.32	0.83	0.07	0.44	0.68	0.25

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 84 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr



Synchro Output:

Projected (2019) Phase 1 Build-Out

AM Peak Hour

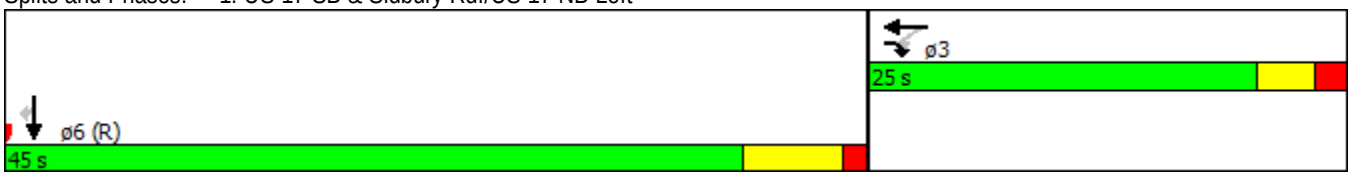
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	64	109	70	0	0	0	0	0	2034	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Flt Permitted					0.970							
Satd. Flow (perm)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			56		56							154
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			183	
Travel Time (s)		15.9			1.2			10.7			2.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	71	0	199	0	0	0	0	0	2260	154
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			25.0	25.0	25.0						45.0	45.0
Total Split (%)			35.7%	35.7%	35.7%						64.3%	64.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			11.0		11.0						49.0	49.0
Actuated g/C Ratio			0.16		0.16						0.70	0.70
v/c Ratio			0.24		0.60						0.91	0.13
Control Delay			11.7		26.6						10.4	0.3
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			11.7		26.6						10.4	0.3
LOS			B		C						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					26.6						9.8	
Approach LOS					C						A	
Queue Length 50th (ft)			6		57						77	1
Queue Length 95th (ft)			35		109						m#659	m0
Internal Link Dist (ft)		1202			15			782			103	
Turn Bay Length (ft)												125
Base Capacity (vph)			498		556						2476	1154
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.14		0.36						0.91	0.13

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 41 (59%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 84.3% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0988
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: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	22	0	0	0	143	0	1072	32	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						72			39			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			130			740	
Travel Time (s)		1.3			6.4			1.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	24	0	0	0	154	0	1153	34	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		30.0	30.0			
Total Split (%)		40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		8.0				8.0		35.3	35.3			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.08				0.49		0.46	0.03			
Control Delay		17.3				16.3		2.8	0.5			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		17.3				16.3		2.8	0.5			
LOS		B				B		A	A			

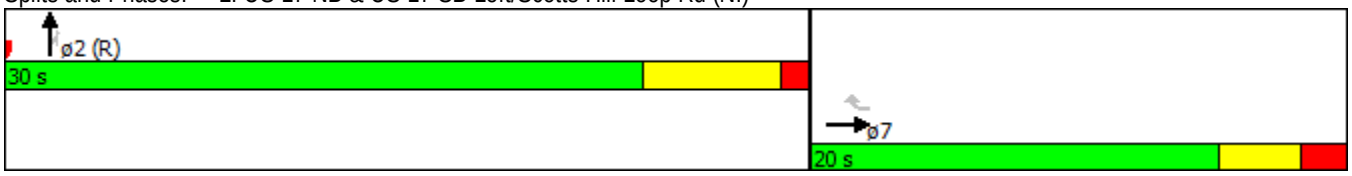
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.3						2.8				
Approach LOS		B						A				
Queue Length 50th (ft)		6				22		34	0			
Queue Length 95th (ft)		20				59		55	m1			
Internal Link Dist (ft)		9			342			50			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		555				528		2499	1129			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.04				0.29		0.46	0.03			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 15 (30%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 4.6 Intersection LOS: A
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



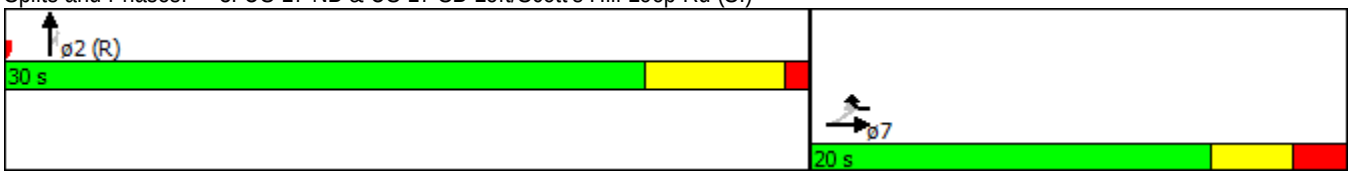
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	38	0	0	0	129	0	1077	41	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1809	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.971										
Satd. Flow (perm)	0	1809	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				70			46			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	101	0	0	0	139	0	1158	44	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	20.0	20.0				20.0		30.0	30.0			
Total Split (%)	40.0%	40.0%				40.0%		60.0%	60.0%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.1				8.1		35.3	35.3			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.29				0.44		0.46	0.04			
Control Delay		10.4				15.0		5.4	1.7			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		10.4				15.0		5.4	1.7			
LOS		B				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.4						5.3				
Approach LOS		B						A				
Queue Length 50th (ft)		8				19		70	0			
Queue Length 95th (ft)		37				54		137	8			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		591				525		2497	1130			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.17				0.26		0.46	0.04			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 39 (78%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 56.1% ICU Level of Service B
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	190	0	619	1448	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	213	0	696	1627	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	190	0	619	1448	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	213	0	696	1627	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1975	813	1627			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1975	813	1627			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	34	100			
cM capacity (veh/h)	54	321	396			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	213	348	348	813	813
Volume Left	0	0	0	0	0
Volume Right	213	0	0	0	0
cSH	321	1700	1700	1700	1700
Volume to Capacity	0.66	0.20	0.20	0.48	0.48
Queue Length 95th (ft)	112	0	0	0	0
Control Delay (s)	35.8	0.0	0.0	0.0	0.0
Lane LOS	E				
Approach Delay (s)	35.8	0.0		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	190	0	619	1448	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	213	0	696	1627	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	190	0	619	1448	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	213	0	696	1627	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1975	813	1627			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1975	813	1627			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	34	100			
cM capacity (veh/h)	54	321	396			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	107	107	348	348	813	813
Volume Left	0	0	0	0	0	0
Volume Right	107	107	0	0	0	0
cSH	321	321	1700	1700	1700	1700
Volume to Capacity	0.33	0.33	0.20	0.20	0.48	0.48
Queue Length 95th (ft)	35	35	0	0	0	0
Control Delay (s)	21.7	21.7	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	21.7		0.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	36	10	515	38	177	35	972	278	120	1454	63
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			149			290			93
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	73	38	10	536	40	184	36	1012	290	125	1515	66
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	12.7	9.4	16.9	20.5	14.8	22.3	9.7	40.3	66.2	9.8	48.5	68.0
Actuated g/C Ratio	0.14	0.10	0.18	0.22	0.16	0.24	0.10	0.43	0.71	0.10	0.52	0.72
v/c Ratio	0.16	0.21	0.03	0.73	0.14	0.38	0.10	0.67	0.24	0.35	0.83	0.06
Control Delay	46.4	50.1	0.2	45.2	39.8	10.4	48.0	23.5	1.2	48.6	26.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	50.1	0.2	45.2	39.8	10.4	48.0	23.5	1.2	48.6	26.7	1.0
LOS	D	D	A	D	D	B	D	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		43.7			36.5			19.3			27.3	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	26	26	0	196	25	18	12	270	0	44	495	0
Queue Length 95th (ft)	50	62	0	#302	57	73	29	353	25	77	635	9
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	633	316	366	777	423	498	392	2227	1210	394	2237	1248
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.12	0.03	0.69	0.09	0.37	0.09	0.45	0.24	0.32	0.68	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 93.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 26.9 Intersection LOS: C
Intersection Capacity Utilization 79.9% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

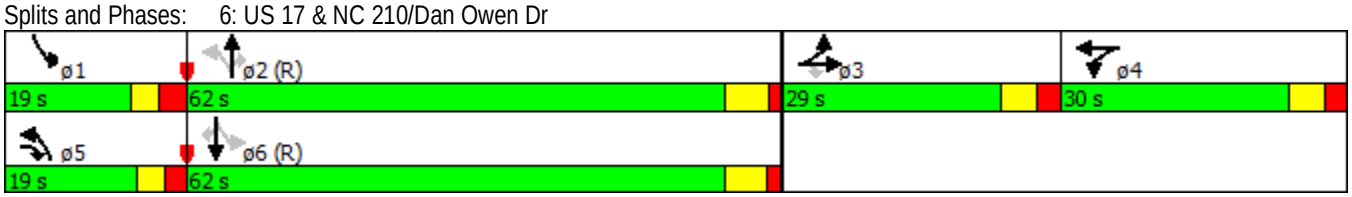
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	17	101	34	12	36	65	1289	28	55	1688	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1687	1575	1662	1627	0	1778	3489	1561	1752	3504	1552
Flt Permitted	0.950	0.958		0.950			0.046			0.120		
Satd. Flow (perm)	1673	1687	1575	1662	1627	0	86	3489	1561	221	3504	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			111		40				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	4%	4%	2%	2%	3%
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 (%)	47%											
Lane Group Flow (vph)	165	166	111	37	53	0	71	1416	31	60	1855	271
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	29.0	29.0	19.0	30.0	30.0		19.0	62.0	62.0	19.0	62.0	62.0
Total Split (%)	20.7%	20.7%	13.6%	21.4%	21.4%		13.6%	44.3%	44.3%	13.6%	44.3%	44.3%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.2	18.2	26.6	9.1	9.1		95.8	89.9	89.9	96.1	88.0	88.0
Actuated g/C Ratio	0.13	0.13	0.19	0.06	0.06		0.68	0.64	0.64	0.69	0.63	0.63
v/c Ratio	0.76	0.76	0.29	0.35	0.37		0.48	0.63	0.03	0.25	0.84	0.27
Control Delay	80.0	79.6	7.1	71.3	31.8		28.7	19.4	0.0	10.3	27.0	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	79.6	7.1	71.3	31.8		28.7	19.4	0.0	10.3	27.0	8.1
LOS	E	E	A	E	C		C	B	A	B	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		61.6			48.1			19.5			24.2	
Approach LOS		E			D			B			C	
Queue Length 50th (ft)	154	155	0	33	11		18	424	0	16	693	56
Queue Length 95th (ft)	230	231	40	71	56		71	597	0	37	#1023	121
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	286	289	458	296	323		230	2239	1045	311	2202	1020
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.57	0.24	0.13	0.16		0.31	0.63	0.03	0.19	0.84	0.27

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 69 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 26.9 Intersection LOS: C
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	129	0	0	1084	0	0
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)	1770	0	0	3539	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	3539	0	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	98			178	865	
Travel Time (s)	2.2			2.2	10.7	
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)	143	0	0	1204	0	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	129	0	0	1084	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	143	0	0	1204	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1034		
pX, platoon unblocked	0.92					
vC, conflicting volume	602	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	385	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	74	100	100			
cM capacity (veh/h)	542	1084	1622			

Direction, Lane #	EB 1	NB 1	NB 2
Volume Total	143	602	602
Volume Left	143	0	0
Volume Right	0	0	0
cSH	542	1700	1700
Volume to Capacity	0.26	0.35	0.35
Queue Length 95th (ft)	26	0	0
Control Delay (s)	14.0	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.0	0.0	
Approach LOS	B		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

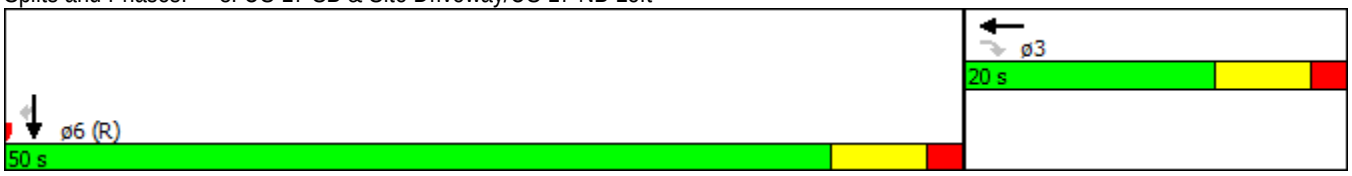
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	349	0	109	0	0	0	0	0	1953	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	2787	0	1863	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	1863	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			62									71
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		602			102			1250			112	
Travel Time (s)		13.7			2.3			15.5			1.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	388	0	121	0	0	0	0	0	2170	71
Turn Type			custom		NA						NA	Perm
Protected Phases					3						6	
Permitted Phases			3									6
Detector Phase			3		3						6	6
Switch Phase												
Minimum Initial (s)			7.0		7.0						14.0	14.0
Minimum Split (s)			14.0		14.0						23.0	23.0
Total Split (s)			20.0		20.0						50.0	50.0
Total Split (%)			28.6%		28.6%						71.4%	71.4%
Yellow Time (s)			5.0		5.0						5.0	5.0
All-Red Time (s)			2.0		2.0						2.0	2.0
Lost Time Adjust (s)			-2.0		-2.0						-2.0	-2.0
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None		None						C-Max	C-Max
Act Effct Green (s)			13.9		13.9						46.1	46.1
Actuated g/C Ratio			0.20		0.20						0.66	0.66
v/c Ratio			0.64		0.33						0.93	0.07
Control Delay			26.7		26.2						20.7	1.5
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			26.7		26.2						20.7	1.5
LOS			C		C						C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					26.2						20.1	
Approach LOS					C						C	
Queue Length 50th (ft)			71		44						390	0
Queue Length 95th (ft)			118		88						#632	11
Internal Link Dist (ft)		522			22			1170			32	
Turn Bay Length (ft)			150									
Base Capacity (vph)			645		399						2328	1066
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.60		0.30						0.93	0.07

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 16 (23%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 21.3 Intersection LOS: C
Intersection Capacity Utilization 95.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: US 17 SB & Site Driveway/US 17 NB Left



Synchro Output:

Projected (2019) Phase 1 Build-Out

PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	97	79	45	0	0	0	0	0	1549	45
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 (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Flt Permitted					0.969							
Satd. Flow (perm)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			65		65							48
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			183	
Travel Time (s)		15.9			1.2			10.7			2.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
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)	0	0	103	0	132	0	0	0	0	0	1648	48
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			28.0	28.0	28.0						32.0	32.0
Total Split (%)			46.7%	46.7%	46.7%						53.3%	53.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			8.3		8.3						45.1	45.1
Actuated g/C Ratio			0.14		0.14						0.75	0.75
v/c Ratio			0.37		0.43						0.62	0.04
Control Delay			14.9		17.6						2.5	0.7
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			14.9		17.6						2.5	0.7
LOS			B		B						A	A

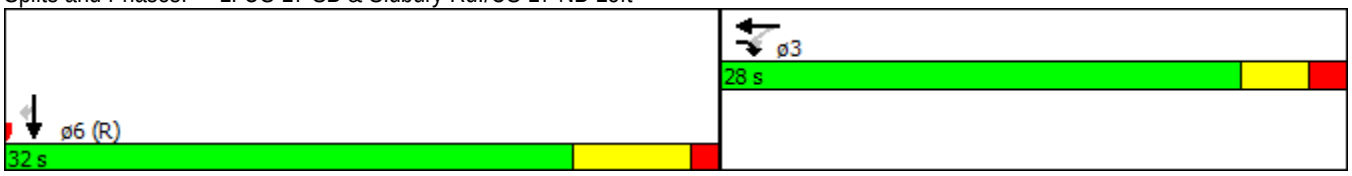
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.6						2.4	
Approach LOS					B						A	
Queue Length 50th (ft)			13		23						60	1
Queue Length 95th (ft)			47		61						80	m1
Internal Link Dist (ft)		1202			15			782			103	
Turn Bay Length (ft)												125
Base Capacity (vph)			654		732						2657	1201
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.16		0.18						0.62	0.04

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 3 (5%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 4.1 Intersection LOS: A
Intersection Capacity Utilization 68.1% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0988

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

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	60	0	0	0	85	0	1879	116	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						51			126			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			141			740	
Travel Time (s)		1.3			6.4			1.7			9.2	
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
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)	0	65	0	0	0	92	0	2042	126	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		20.0				20.0		50.0	50.0			
Total Split (%)		28.6%				28.6%		71.4%	71.4%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		7.6				7.6		55.7	55.7			
Actuated g/C Ratio		0.11				0.11		0.80	0.80			
v/c Ratio		0.32				0.42		0.72	0.10			
Control Delay		32.8				21.5		2.3	0.1			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		32.8				21.5		2.3	0.1			
LOS		C				C		A	A			

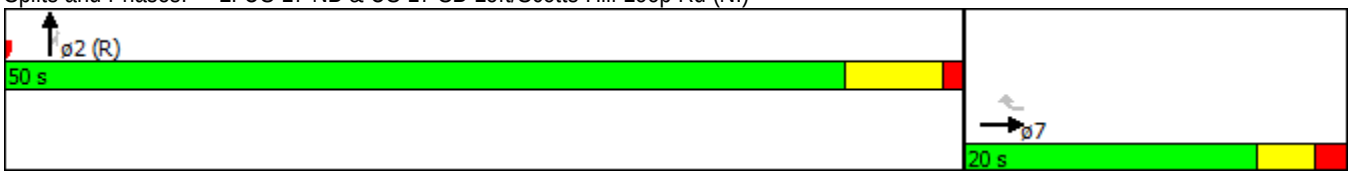
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.8						2.2				
Approach LOS		C						A				
Queue Length 50th (ft)		27				17		41	0			
Queue Length 95th (ft)		59				55		65	m0			
Internal Link Dist (ft)		9			342			61			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		397				381		2817	1285			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.16				0.24		0.72	0.10			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 66 (94%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 3.8 Intersection LOS: A
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



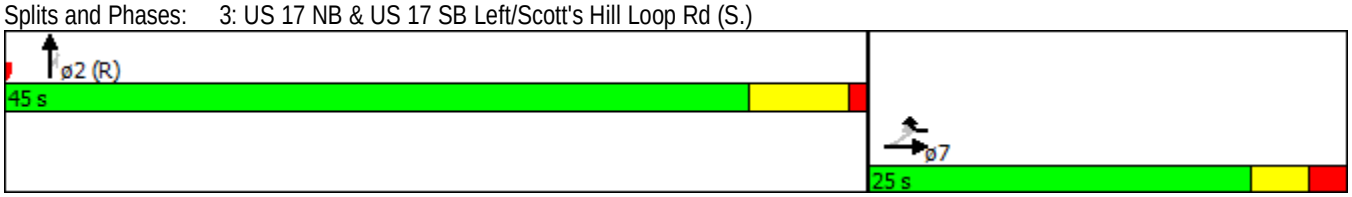
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	55	0	0	0	77	0	2115	135	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.972										
Satd. Flow (perm)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				50			116			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	142	0	0	0	86	0	2350	150	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	25.0	25.0				25.0		45.0	45.0			
Total Split (%)	35.7%	35.7%				35.7%		64.3%	64.3%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.9				8.9		54.5	54.5			
Actuated g/C Ratio		0.13				0.13		0.78	0.78			
v/c Ratio		0.52				0.35		0.85	0.12			
Control Delay		25.5				18.0		12.5	1.4			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		25.5				18.0		12.5	1.4			
LOS		C				B		B	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.5						11.8				
Approach LOS		C						B				
Queue Length 50th (ft)		38				14		310	3			
Queue Length 95th (ft)		83				49		#690	19			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		553				489		2754	1257			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.26				0.18		0.85	0.12			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 83.7% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0987
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	417	0	359	1353	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	421	0	363	1367	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	417	0	359	1353	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	421	0	363	1367	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1548	683	1367			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1548	683	1367			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	105	392	498			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	421	181	181	683	683
Volume Left	0	0	0	0	0
Volume Right	421	0	0	0	0
cSH	392	1700	1700	1700	1700
Volume to Capacity	1.08	0.11	0.11	0.40	0.40
Queue Length 95th (ft)	364	0	0	0	0
Control Delay (s)	100.1	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	100.1	0.0		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	19.6		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	417	0	359	1353	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	421	0	363	1367	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	417	0	359	1353	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	421	0	363	1367	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1548	683	1367			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1548	683	1367			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	105	392	498			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	211	211	181	181	683	683
Volume Left	0	0	0	0	0	0
Volume Right	211	211	0	0	0	0
cSH	392	392	1700	1700	1700	1700
Volume to Capacity	0.54	0.54	0.11	0.11	0.40	0.40
Queue Length 95th (ft)	77	77	0	0	0	0
Control Delay (s)	24.4	24.4	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	24.4		0.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	60	98	478	44	140	79	1333	376	220	1435	115
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85			85			375			120
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	162	62	102	498	46	146	82	1389	392	229	1495	120
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	20.0	20.0	15.0	25.0	25.0	15.0	15.0	60.0	25.0	15.0	60.0	20.0
Total Split (%)	16.7%	16.7%	12.5%	20.8%	20.8%	12.5%	12.5%	50.0%	20.8%	12.5%	50.0%	16.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	18.0	10.2	21.2	19.3	14.1	22.9	9.7	48.9	73.4	10.1	49.3	72.4
Actuated g/C Ratio	0.17	0.10	0.20	0.18	0.13	0.22	0.09	0.46	0.70	0.10	0.47	0.69
v/c Ratio	0.28	0.35	0.27	0.80	0.19	0.36	0.26	0.85	0.32	0.70	0.90	0.11
Control Delay	45.0	54.6	13.0	54.5	44.9	17.8	51.8	31.7	1.6	61.4	35.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	54.6	13.0	54.5	44.9	17.8	51.8	31.7	1.6	61.4	35.4	1.8
LOS	D	D	B	D	D	B	D	C	A	E	D	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.8			46.1			26.3			36.4	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	58	44	10	184	29	33	29	449	3	86	501	0
Queue Length 95th (ft)	94	88	56	#282	67	89	56	582	34	#150	#667	21
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	616	269	390	663	360	409	334	1900	1226	336	1909	1143
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.23	0.26	0.75	0.13	0.36	0.25	0.73	0.32	0.68	0.78	0.10

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 105.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 33.8 Intersection LOS: C
Intersection Capacity Utilization 78.3% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

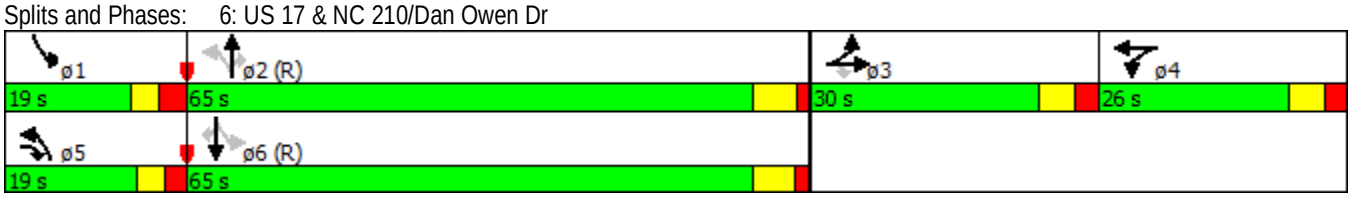
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	44	98	68	41	121	109	1658	61	95	1413	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1697	1575	1743	1629	0	1778	3557	1591	1752	3504	1567
Flt Permitted	0.950	0.964		0.950			0.083			0.051		
Satd. Flow (perm)	1673	1697	1575	1743	1629	0	155	3557	1591	94	3504	1567
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		89				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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 (%)	43%											
Lane Group Flow (vph)	190	189	102	71	169	0	114	1727	64	99	1472	230
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	30.0	30.0	19.0	26.0	26.0		19.0	65.0	65.0	19.0	65.0	65.0
Total Split (%)	21.4%	21.4%	13.6%	18.6%	18.6%		13.6%	46.4%	46.4%	13.6%	46.4%	46.4%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	20.0	20.0	29.0	12.8	12.8		86.9	77.8	77.8	87.6	78.2	78.2
Actuated g/C Ratio	0.14	0.14	0.21	0.09	0.09		0.62	0.56	0.56	0.63	0.56	0.56
v/c Ratio	0.80	0.78	0.25	0.45	0.74		0.57	0.87	0.07	0.59	0.75	0.25
Control Delay	81.0	79.1	5.8	67.7	47.6		25.6	34.3	0.1	37.7	28.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	79.1	5.8	67.7	47.6		25.6	34.3	0.1	37.7	28.6	9.7
LOS	F	E	A	E	D		C	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		64.3			53.6			32.6			26.7	
Approach LOS		E			D			C			C	
Queue Length 50th (ft)	177	176	0	63	72		35	670	0	36	500	44
Queue Length 95th (ft)	262	260	31	109	146		96	#1071	0	108	#836	120
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	298	303	459	261	320		263	1977	938	227	1956	928
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.62	0.22	0.27	0.53		0.43	0.87	0.07	0.44	0.75	0.25

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 84 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 34.8 Intersection LOS: C
Intersection Capacity Utilization 88.0% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	142	0	0	2140	0	0
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)	1770	0	0	3539	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	3539	0	0
Link Speed (mph)	30			55	55	
Link Distance (ft)	98			178	885	
Travel Time (s)	2.2			2.2	11.0	
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)	158	0	0	2378	0	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 88.0%		ICU Level of Service E	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	142	0	0	2140	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	158	0	0	2378	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				1034		
pX, platoon unblocked	0.31					
vC, conflicting volume	1189	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	51	100	100			
cM capacity (veh/h)	319	1084	1622			

Direction, Lane #	EB 1	NB 1	NB 2
Volume Total	158	1189	1189
Volume Left	158	0	0
Volume Right	0	0	0
cSH	319	1700	1700
Volume to Capacity	0.49	0.70	0.70
Queue Length 95th (ft)	65	0	0
Control Delay (s)	26.8	0.0	0.0
Lane LOS	D		
Approach Delay (s)	26.8	0.0	
Approach LOS	D		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

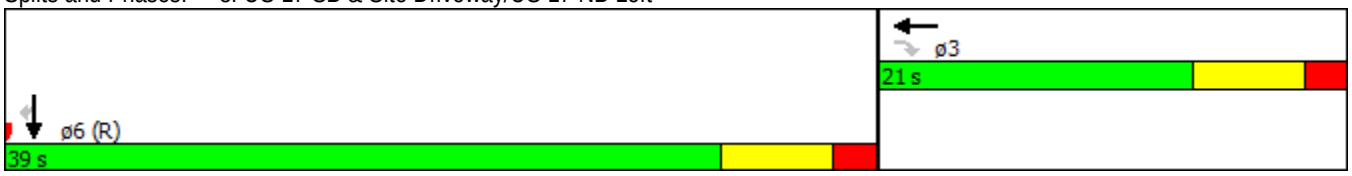
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	355	0	287	0	0	0	0	0	1382	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	2787	0	1863	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	1863	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			73									181
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		602			115			1250			112	
Travel Time (s)		13.7			2.6			15.5			1.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	394	0	319	0	0	0	0	0	1536	230
Turn Type			custom		NA						NA	Perm
Protected Phases					3						6	
Permitted Phases			3									6
Detector Phase			3		3						6	6
Switch Phase												
Minimum Initial (s)			7.0		7.0						14.0	14.0
Minimum Split (s)			14.0		14.0						23.0	23.0
Total Split (s)			21.0		21.0						39.0	39.0
Total Split (%)			35.0%		35.0%						65.0%	65.0%
Yellow Time (s)			5.0		5.0						5.0	5.0
All-Red Time (s)			2.0		2.0						2.0	2.0
Lost Time Adjust (s)			0.0		0.0						0.0	0.0
Total Lost Time (s)			7.0		7.0						7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None		None						C-Max	C-Max
Act Effct Green (s)			13.2		13.2						32.8	32.8
Actuated g/C Ratio			0.22		0.22						0.55	0.55
v/c Ratio			0.59		0.78						0.79	0.24
Control Delay			20.8		37.4						15.2	2.9
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			20.8		37.4						15.2	2.9
LOS			C		D						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					37.4						13.6	
Approach LOS					D						B	
Queue Length 50th (ft)			57		107						217	8
Queue Length 95th (ft)			99		#214						305	35
Internal Link Dist (ft)		522			35			1170			32	
Turn Bay Length (ft)			150									
Base Capacity (vph)			706		434						1936	948
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.56		0.74						0.79	0.24

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 39 (65%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 99.8% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: US 17 SB & Site Driveway/US 17 NB Left



Synchro Output:

Projected (2029) Phase 2 Background

AM Peak Hour

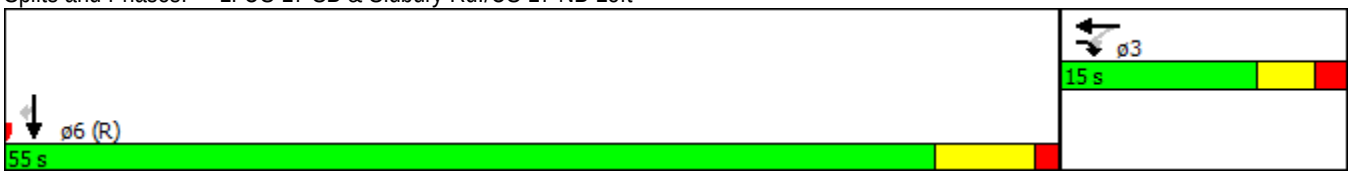
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	71	121	77	0	0	0	0	0	2004	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Flt Permitted					0.970							
Satd. Flow (perm)	0	0	1603	0	1807	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			56		56							158
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	79	0	220	0	0	0	0	0	2227	171
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			15.0	15.0	15.0						55.0	55.0
Total Split (%)			21.4%	21.4%	21.4%						78.6%	78.6%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			9.3		9.3						50.7	50.7
Actuated g/C Ratio			0.13		0.13						0.72	0.72
v/c Ratio			0.30		0.76						0.87	0.14
Control Delay			15.5		40.1						12.7	1.0
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			15.5		40.1						12.7	1.0
LOS			B		D						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					40.1						11.9	
Approach LOS					D						B	
Queue Length 50th (ft)			9		68						307	1
Queue Length 95th (ft)			44		#164						441	14
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			277		306						2560	1189
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.29		0.72						0.87	0.14

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 41 (59%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 84.5% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0988
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	24	0	0	0	156	0	1045	32	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						83			39			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	26	0	0	0	168	0	1124	34	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		16.0				16.0		34.0	34.0			
Total Split (%)		32.0%				32.0%		68.0%	68.0%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		8.1				8.1		35.3	35.3			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.09				0.51		0.45	0.03			
Control Delay		17.5				16.3		2.4	0.4			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		17.5				16.3		2.4	0.4			
LOS		B				B		A	A			

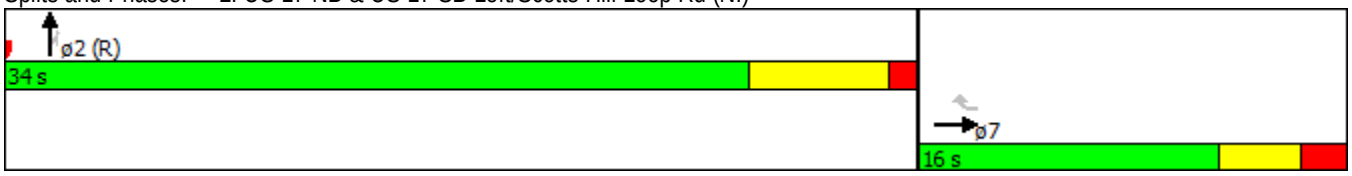
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.5						2.4				
Approach LOS		B						A				
Queue Length 50th (ft)		7				23		20	0			
Queue Length 95th (ft)		21				62		35	m0			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		407				415		2497	1128			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.06				0.40		0.45	0.03			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 19 (38%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 4.4 Intersection LOS: A
Intersection Capacity Utilization 107.7% ICU Level of Service G
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



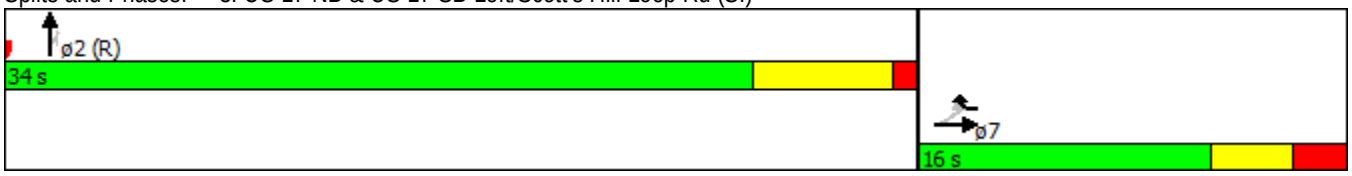
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	39	0	0	0	140	0	1072	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.970										
Satd. Flow (perm)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				77			48			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	109	0	0	0	151	0	1153	48	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	16.0	16.0				16.0		34.0	34.0			
Total Split (%)	32.0%	32.0%				32.0%		68.0%	68.0%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		8.2				8.2		35.2	35.2			
Actuated g/C Ratio		0.16				0.16		0.70	0.70			
v/c Ratio		0.31				0.47		0.46	0.04			
Control Delay		11.0				15.2		5.5	1.8			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		11.0				15.2		5.5	1.8			
LOS		B				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.0						5.3				
Approach LOS		B						A				
Queue Length 50th (ft)		10				20		69	0			
Queue Length 95th (ft)		40				57		137	9			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		452				409		2492	1129			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.24				0.37		0.46	0.04			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 39 (78%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 6.8 Intersection LOS: A
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	210	0	613	1457	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	236	0	689	1637	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 59.9%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	210	0	613	1457	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	236	0	689	1637	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1981	819	1637			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1981	819	1637			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	26	100			
cM capacity (veh/h)	54	319	392			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	236	344	344	819	819
Volume Left	0	0	0	0	0
Volume Right	236	0	0	0	0
cSH	319	1700	1700	1700	1700
Volume to Capacity	0.74	0.20	0.20	0.48	0.48
Queue Length 95th (ft)	139	0	0	0	0
Control Delay (s)	42.6	0.0	0.0	0.0	0.0
Lane LOS	E				
Approach Delay (s)	42.6	0.0		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	210	0	613	1457	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	236	0	689	1637	0
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			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	210	0	613	1457	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	236	0	689	1637	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1981	819	1637			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1981	819	1637			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	26	100			
cM capacity (veh/h)	54	319	392			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	118	118	344	344	819	819
Volume Left	0	0	0	0	0	0
Volume Right	118	118	0	0	0	0
cSH	319	319	1700	1700	1700	1700
Volume to Capacity	0.37	0.37	0.20	0.20	0.48	0.48
Queue Length 95th (ft)	41	41	0	0	0	0
Control Delay (s)	22.8	22.8	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	22.8		0.0		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	40	11	568	41	182	39	1016	307	106	1490	70
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144			85			320			151
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	80	42	11	592	43	190	41	1058	320	110	1552	73
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	14.0	14.0	14.0	29.0	29.0	14.0	14.0	63.0	29.0	14.0	63.0	14.0
Total Split (%)	11.7%	11.7%	11.7%	24.2%	24.2%	11.7%	11.7%	52.5%	24.2%	11.7%	52.5%	11.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	9.3	9.1	19.5	22.7	20.2	30.3	9.7	49.1	77.2	9.4	53.8	68.4
Actuated g/C Ratio	0.09	0.08	0.18	0.21	0.19	0.28	0.09	0.46	0.72	0.09	0.50	0.64
v/c Ratio	0.27	0.27	0.03	0.83	0.12	0.38	0.13	0.66	0.26	0.37	0.87	0.07
Control Delay	55.1	57.3	0.1	54.0	40.3	19.7	52.9	24.5	1.1	56.1	32.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	57.3	0.1	54.0	40.3	19.7	52.9	24.5	1.1	56.1	32.8	0.1
LOS	E	E	A	D	D	B	D	C	A	E	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		51.2			45.4			20.1			32.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	30	31	0	229	27	59	15	306	0	42	561	0
Queue Length 95th (ft)	56	69	0	#325	61	123	34	380	23	73	#686	0
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	304	165	401	812	440	505	307	2044	1259	309	2053	1070
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.25	0.03	0.73	0.10	0.38	0.13	0.52	0.25	0.36	0.76	0.07

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 107.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 31.6 Intersection LOS: C
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	18	100	38	13	40	49	1307	30	61	1807	273
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1685	1575	1662	1626	0	1778	3489	1561	1752	3504	1552
Flt Permitted	0.950	0.957		0.950			0.045			0.120		
Satd. Flow (perm)	1673	1685	1575	1662	1626	0	84	3489	1561	221	3504	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		44				121			132
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	4%	4%	2%	2%	3%
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 (%)	47%											
Lane Group Flow (vph)	182	182	110	42	58	0	54	1436	33	67	1986	300
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	23.0	23.0	13.0	14.0	14.0		13.0	90.0	90.0	13.0	90.0	90.0
Total Split (%)	16.4%	16.4%	9.3%	10.0%	10.0%		9.3%	64.3%	64.3%	9.3%	64.3%	64.3%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	17.2	17.2	25.6	8.6	8.6		97.4	91.5	91.5	97.4	89.5	89.5
Actuated g/C Ratio	0.12	0.12	0.18	0.06	0.06		0.70	0.65	0.65	0.70	0.64	0.64
v/c Ratio	0.88	0.88	0.32	0.42	0.41		0.37	0.63	0.03	0.28	0.89	0.29
Control Delay	98.5	97.7	16.5	75.9	33.2		19.3	17.6	0.1	9.4	28.4	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.5	97.7	16.5	75.9	33.2		19.3	17.6	0.1	9.4	28.4	7.3
LOS	F	F	B	E	C		B	B	A	A	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		79.2			51.1			17.2			25.1	
Approach LOS		E			D			B			C	
Queue Length 50th (ft)	172	172	24	38	12		14	430	0	17	797	62
Queue Length 95th (ft)	#314	#313	70	79	60		44	514	0	33	952	114
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	215	216	354	106	145		155	2280	1062	241	2240	1040
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.84	0.31	0.40	0.40		0.35	0.63	0.03	0.28	0.89	0.29

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 69 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

Synchro Output:

Projected (2029) Phase 2 Background

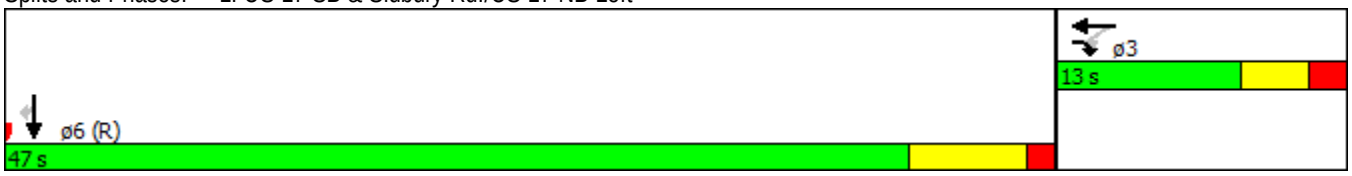
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	107	88	50	0	0	0	0	0	1504	50
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 (%)		1%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Flt Permitted					0.969							
Satd. Flow (perm)	0	0	1603	0	1805	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			65		65							53
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		1282			95			862			1545	
Travel Time (s)		15.9			1.2			10.7			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
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)	0	0	114	0	147	0	0	0	0	0	1600	53
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			13.0	13.0	13.0						47.0	47.0
Total Split (%)			21.7%	21.7%	21.7%						78.3%	78.3%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			7.5		7.5						45.9	45.9
Actuated g/C Ratio			0.12		0.12						0.76	0.76
v/c Ratio			0.44		0.52						0.59	0.04
Control Delay			18.4		21.8						5.4	1.1
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			18.4		21.8						5.4	1.1
LOS			B		C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					21.8						5.2	
Approach LOS					C						A	
Queue Length 50th (ft)			16		27						127	0
Queue Length 95th (ft)			57		74						180	7
Internal Link Dist (ft)		1202			15			782			1465	
Turn Bay Length (ft)												125
Base Capacity (vph)			270		297						2705	1222
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.42		0.49						0.59	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 3 (5%), Referenced to phase 2: and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	
Description: 03-0988	

Splits and Phases: 1: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	66	0	0	0	89	0	1956	124	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						51			135			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			1398			740	
Travel Time (s)		1.3			6.4			17.3			9.2	
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
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)	0	72	0	0	0	97	0	2126	135	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		12.0				12.0		58.0	58.0			
Total Split (%)		17.1%				17.1%		82.9%	82.9%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		6.9				6.9		56.5	56.5			
Actuated g/C Ratio		0.10				0.10		0.81	0.81			
v/c Ratio		0.40				0.48		0.74	0.10			
Control Delay		36.5				25.1		1.8	0.1			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		36.5				25.1		1.8	0.1			
LOS		D				C		A	A			

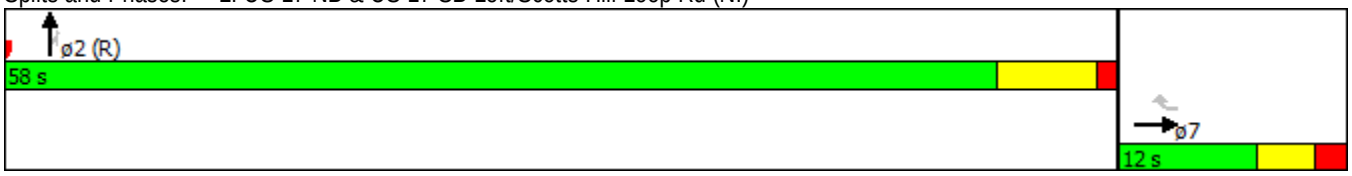
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.5						1.7				
Approach LOS		D						A				
Queue Length 50th (ft)		30				19		27	0			
Queue Length 95th (ft)		67				61		38	m0			
Internal Link Dist (ft)		9			342			1318			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		185				205		2854	1303			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.39				0.47		0.74	0.10			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 2 (3%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 3.6 Intersection LOS: A
Intersection Capacity Utilization 112.4% ICU Level of Service H
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



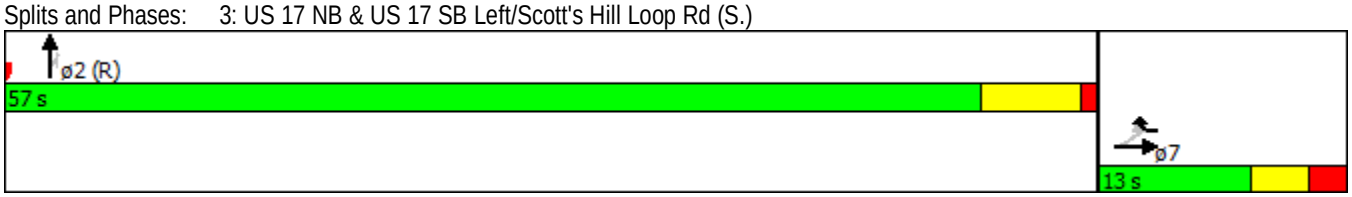
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	57	0	0	0	80	0	2057	149	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.972										
Satd. Flow (perm)	0	1811	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				50			166			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			856	
Travel Time (s)		2.4			4.4			16.9			10.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	152	0	0	0	89	0	2286	166	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	13.0	13.0				13.0		57.0	57.0			
Total Split (%)	18.6%	18.6%				18.6%		81.4%	81.4%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		7.6				7.6		52.4	52.4			
Actuated g/C Ratio		0.11				0.11		0.75	0.75			
v/c Ratio		0.63				0.41		0.86	0.14			
Control Delay		33.0				21.6		11.2	0.7			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		33.0				21.6		11.2	0.7			
LOS		C				C		B	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.0						10.5				
Approach LOS		C						B				
Queue Length 50th (ft)		42				16		284	0			
Queue Length 95th (ft)		#109				55		410	11			
Internal Link Dist (ft)		9			209			1285			776	
Turn Bay Length (ft)									175			
Base Capacity (vph)		251				225		2646	1225			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.61				0.40		0.86	0.14			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 12.2 Intersection LOS: B
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0987
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	461	0	229	1372	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	466	0	231	1386	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	461	0	229	1372	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	466	0	231	1386	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1502	693	1386			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1502	693	1386			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	113	386	490			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	466	116	116	693	693
Volume Left	0	0	0	0	0
Volume Right	466	0	0	0	0
cSH	386	1700	1700	1700	1700
Volume to Capacity	1.21	0.07	0.07	0.41	0.41
Queue Length 95th (ft)	478	0	0	0	0
Control Delay (s)	145.9	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	145.9	0.0		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	32.6		
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	461	0	229	1372	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	466	0	231	1386	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	461	0	229	1372	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	466	0	231	1386	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1502	693	1386			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1502	693	1386			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	113	386	490			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	233	233	116	116	693	693
Volume Left	0	0	0	0	0	0
Volume Right	233	233	0	0	0	0
cSH	386	386	1700	1700	1700	1700
Volume to Capacity	0.60	0.60	0.07	0.07	0.41	0.41
Queue Length 95th (ft)	95	95	0	0	0	0
Control Delay (s)	27.5	27.5	0.0	0.0	0.0	0.0
Lane LOS	D	D				
Approach Delay (s)	27.5		0.0		0.0	
Approach LOS	D					

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	66	109	528	49	123	88	1337	416	220	1485	127
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144			85			186			151
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	179	69	114	550	51	128	92	1393	433	229	1547	132
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	16.0	14.0	14.0	28.0	26.0	15.0	14.0	63.0	28.0	15.0	64.0	16.0
Total Split (%)	13.3%	11.7%	11.7%	23.3%	21.7%	12.5%	11.7%	52.5%	23.3%	12.5%	53.3%	13.3%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	12.7	9.0	19.6	21.6	17.9	29.3	9.3	51.9	78.6	10.1	52.7	70.6
Actuated g/C Ratio	0.12	0.08	0.18	0.20	0.16	0.27	0.09	0.47	0.72	0.09	0.48	0.65
v/c Ratio	0.46	0.46	0.29	0.83	0.17	0.27	0.32	0.83	0.37	0.72	0.91	0.12
Control Delay	54.1	63.4	5.2	55.5	43.4	14.0	55.2	30.9	4.3	65.1	35.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	63.4	5.2	55.5	43.4	14.0	55.2	30.9	4.3	65.1	35.6	1.3
LOS	D	E	A	E	D	B	E	C	A	E	D	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		40.5			47.4			26.1			36.8	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	69	52	0	213	34	24	35	471	57	91	552	0
Queue Length 95th (ft)	108	102	29	#300	71	72	62	570	100	#154	666	17
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	396	156	397	736	365	482	291	1934	1212	325	1977	1076
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.44	0.29	0.75	0.14	0.27	0.32	0.72	0.36	0.70	0.78	0.12

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 109.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 81.1% ICU Level of Service D
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	354	49	82	76	45	134	100	1732	67	105	1424	244
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1697	1575	1743	1629	0	1778	3557	1591	1752	3504	1567
Flt Permitted	0.950	0.964		0.950			0.086			0.050		
Satd. Flow (perm)	1673	1697	1575	1743	1629	0	161	3557	1591	92	3504	1567
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		84				121			128
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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 (%)	43%											
Lane Group Flow (vph)	210	210	85	79	187	0	104	1804	70	109	1483	254
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	27.0	27.0	14.0	18.0	18.0		14.0	82.0	82.0	13.0	81.0	81.0
Total Split (%)	19.3%	19.3%	10.0%	12.9%	12.9%		10.0%	58.6%	58.6%	9.3%	57.9%	57.9%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	20.2	20.2	28.1	11.9	11.9		87.7	79.9	79.9	88.0	80.1	80.1
Actuated g/C Ratio	0.14	0.14	0.20	0.08	0.08		0.63	0.57	0.57	0.63	0.57	0.57
v/c Ratio	0.87	0.86	0.23	0.54	0.87		0.54	0.89	0.07	0.72	0.74	0.27
Control Delay	90.7	88.3	9.9	74.7	69.7		22.3	33.6	0.3	51.9	25.9	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.7	88.3	9.9	74.7	69.7		22.3	33.6	0.3	51.9	25.9	8.5
LOS	F	F	A	E	E		C	C	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		76.1			71.2			31.8			25.0	
Approach LOS		E			E			C			C	
Queue Length 50th (ft)	196	195	7	70	94		34	763	0	49	529	54
Queue Length 95th (ft)	#331	#327	43	126	#224		68	892	2	#143	642	107
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	262	266	386	161	227		206	2030	960	152	2003	950
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.79	0.22	0.49	0.82		0.50	0.89	0.07	0.72	0.74	0.27

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 84 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 36.2 Intersection LOS: D
Intersection Capacity Utilization 92.1% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

Synchro Output:

Projected (2029) Phase 2 Build-Out

AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	140	121	110	0	0	0	0	0	2382	162
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 (%)		1%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		125
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1814	0	0	0	0	0	3539	1583
Flt Permitted					0.974							
Satd. Flow (perm)	0	0	1603	0	1814	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			56		56							180
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		2838			107			862			183	
Travel Time (s)		35.2			1.3			10.7			2.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	156	0	256	0	0	0	0	0	2647	180
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			15.0	15.0	15.0						55.0	55.0
Total Split (%)			21.4%	21.4%	21.4%						78.6%	78.6%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			9.7		9.7						50.3	50.3
Actuated g/C Ratio			0.14		0.14						0.72	0.72
v/c Ratio			0.58		0.85						1.04	0.15
Control Delay			27.5		50.5						31.6	0.2
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			27.5		50.5						31.6	0.2
LOS			C		D						C	A

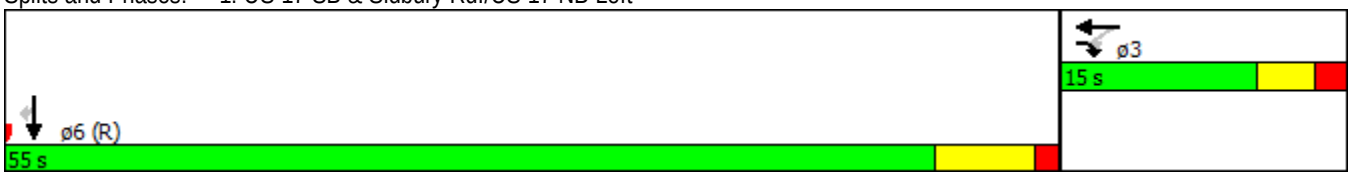
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					50.5						29.6	
Approach LOS					D						C	
Queue Length 50th (ft)			40		85						~672	0
Queue Length 95th (ft)			95		#206						m#685	m0
Internal Link Dist (ft)		2758			27			782			103	
Turn Bay Length (ft)			100									125
Base Capacity (vph)			277		307						2540	1187
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.56		0.83						1.04	0.15

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 37 (53%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 99.5% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0988

~ 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: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	24	0	0	0	160	0	1155	39	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						72			42			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			144			740	
Travel Time (s)		1.3			6.4			1.8			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	26	0	0	0	172	0	1242	42	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		16.0				16.0		34.0	34.0			
Total Split (%)		32.0%				32.0%		68.0%	68.0%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		8.3				8.3		35.1	35.1			
Actuated g/C Ratio		0.17				0.17		0.70	0.70			
v/c Ratio		0.08				0.53		0.50	0.04			
Control Delay		17.2				17.8		1.9	0.2			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		17.2				17.8		1.9	0.2			
LOS		B				B		A	A			

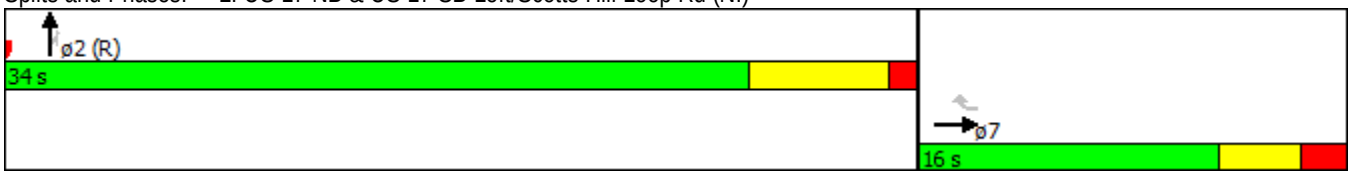
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.3						1.9				
Approach LOS		B						A				
Queue Length 50th (ft)		7				27		11	0			
Queue Length 95th (ft)		21				67		17	m0			
Internal Link Dist (ft)		9			342			64			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		407				407		2484	1123			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.06				0.42		0.50	0.04			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 21 (42%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 4.0 Intersection LOS: A
Intersection Capacity Utilization 96.4% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



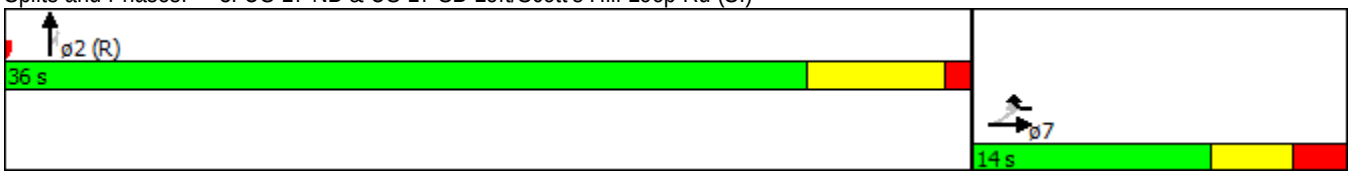
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	46	0	0	0	144	0	1331	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.970										
Satd. Flow (perm)	0	1807	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				70			48			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			839	
Travel Time (s)		2.4			4.4			16.9			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
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)	0	131	0	0	0	155	0	1431	48	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	14.0	14.0				14.0		36.0	36.0			
Total Split (%)	28.0%	28.0%				28.0%		72.0%	72.0%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		7.9				7.9		35.5	35.5			
Actuated g/C Ratio		0.16				0.16		0.71	0.71			
v/c Ratio		0.38				0.50		0.57	0.04			
Control Delay		13.6				17.5		6.2	1.6			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		13.6				17.5		6.2	1.6			
LOS		B				B		A	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.6						6.0				
Approach LOS		B						A				
Queue Length 50th (ft)		16				23		99	0			
Queue Length 95th (ft)		52				64		167	8			
Internal Link Dist (ft)		9			209			1285			759	
Turn Bay Length (ft)									175			
Base Capacity (vph)		382				343		2514	1138			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.34				0.45		0.57	0.04			

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 39 (78%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 64.8% ICU Level of Service C
Analysis Period (min) 15
Description: 03-0987

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	210	0	767	1711	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	236	0	862	1922	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	210	0	767	1711	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	236	0	862	1922	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2353	961	1922			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2353	961	1922			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	8	100			
cM capacity (veh/h)	30	256	303			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	236	431	431	961	961
Volume Left	0	0	0	0	0
Volume Right	236	0	0	0	0
cSH	256	1700	1700	1700	1700
Volume to Capacity	0.92	0.25	0.25	0.57	0.57
Queue Length 95th (ft)	206	0	0	0	0
Control Delay (s)	79.5	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	79.5	0.0		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	210	0	767	1711	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
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%	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)	0	236	0	862	1922	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	210	0	767	1711	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	236	0	862	1922	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2353	961	1922			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2353	961	1922			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	8	100			
cM capacity (veh/h)	30	256	303			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	118	118	431	431	961	961
Volume Left	0	0	0	0	0	0
Volume Right	118	118	0	0	0	0
cSH	256	256	1700	1700	1700	1700
Volume to Capacity	0.46	0.46	0.25	0.25	0.57	0.57
Queue Length 95th (ft)	57	57	0	0	0	0
Control Delay (s)	30.5	30.5	0.0	0.0	0.0	0.0
Lane LOS	D	D				
Approach Delay (s)	30.5		0.0		0.0	
Approach LOS	D					

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	40	11	568	41	211	39	1141	307	154	1696	70
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144			85			319			151
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	80	42	11	592	43	220	41	1189	320	160	1767	73
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	14.0	14.0	14.0	27.0	27.0	15.0	14.0	64.0	27.0	15.0	65.0	14.0
Total Split (%)	11.7%	11.7%	11.7%	22.5%	22.5%	12.5%	11.7%	53.3%	22.5%	12.5%	54.2%	11.7%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	8.9	8.8	19.4	21.9	18.7	29.9	9.2	54.3	81.3	9.8	58.8	72.8
Actuated g/C Ratio	0.08	0.08	0.17	0.20	0.17	0.27	0.08	0.49	0.73	0.09	0.53	0.65
v/c Ratio	0.30	0.29	0.03	0.89	0.14	0.46	0.14	0.69	0.26	0.53	0.95	0.07
Control Delay	55.7	58.4	0.1	62.8	42.4	22.9	53.3	25.1	1.1	58.5	39.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	58.4	0.1	62.8	42.4	22.9	53.3	25.1	1.1	58.5	39.2	0.1
LOS	E	E	A	E	D	C	D	C	A	E	D	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		51.9			51.5			20.9			39.3	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	30	31	0	235	28	80	15	357	0	62	690	0
Queue Length 95th (ft)	56	69	0	#348	62	153	34	440	24	98	#887	0
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	280	151	390	685	371	486	283	1912	1242	316	1954	1089
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.28	0.03	0.86	0.12	0.45	0.14	0.62	0.26	0.51	0.90	0.07

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 111.6
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 35.7 Intersection LOS: D
Intersection Capacity Utilization 88.1% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	18	125	38	13	40	90	1513	30	61	1932	273
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1685	1575	1662	1626	0	1778	3489	1561	1752	3504	1552
Flt Permitted	0.950	0.957		0.950			0.045			0.079		
Satd. Flow (perm)	1673	1685	1575	1662	1626	0	84	3489	1561	146	3504	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		44				121			128
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	4%	4%	2%	2%	3%
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 (%)	47%											
Lane Group Flow (vph)	182	182	137	42	58	0	99	1663	33	67	2123	300
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	21.0	21.0	13.0	14.0	14.0		13.0	92.0	92.0	13.0	92.0	92.0
Total Split (%)	15.0%	15.0%	9.3%	10.0%	10.0%		9.3%	65.7%	65.7%	9.3%	65.7%	65.7%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.0	16.0	24.6	8.6	8.6		98.9	92.8	92.8	98.4	90.5	90.5
Actuated g/C Ratio	0.11	0.11	0.18	0.06	0.06		0.71	0.66	0.66	0.70	0.65	0.65
v/c Ratio	0.95	0.95	0.41	0.42	0.41		0.66	0.72	0.03	0.35	0.94	0.29
Control Delay	114.8	113.6	21.9	75.9	33.2		45.0	19.1	0.1	11.0	32.6	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.8	113.6	21.9	75.9	33.2		45.0	19.1	0.1	11.0	32.6	7.1
LOS	F	F	C	E	C		D	B	A	B	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		88.9			51.1			20.2			28.9	
Approach LOS		F			D			C			C	
Queue Length 50th (ft)	175	175	43	38	12		38	536	0	16	900	61
Queue Length 95th (ft)	#338	#337	98	79	60		#114	639	0	31	#1161	112
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	191	192	341	106	145		156	2311	1075	194	2264	1048
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.95	0.40	0.40	0.40		0.63	0.72	0.03	0.35	0.94	0.29

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 69 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 32.3 Intersection LOS: C
Intersection Capacity Utilization 87.5% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

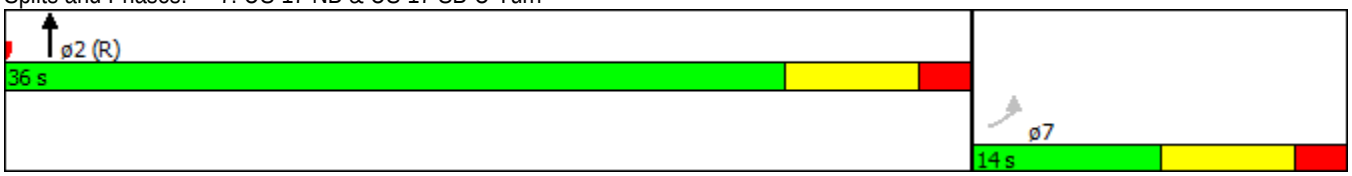
Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	103	0	0	1321	0	0
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)	1770	0	0	3539	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	3539	0	0
Right Turn on Red	Yes	Yes				Yes
Satd. Flow (RTOR)	45					
Link Speed (mph)	30			55	55	
Link Distance (ft)	98			195	936	
Travel Time (s)	2.2			2.4	11.6	
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)	114	0	0	1468	0	0
Turn Type	NA			NA		
Protected Phases				2		
Permitted Phases	7					
Detector Phase	7			2		
Switch Phase						
Minimum Initial (s)	7.0			14.0		
Minimum Split (s)	14.0			21.0		
Total Split (s)	14.0			36.0		
Total Split (%)	28.0%			72.0%		
Yellow Time (s)	5.0			5.0		
All-Red Time (s)	2.0			2.0		
Lost Time Adjust (s)	-2.0			-2.0		
Total Lost Time (s)	5.0			5.0		
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None			C-Max		
Act Effct Green (s)	9.0			34.8		
Actuated g/C Ratio	0.18			0.70		
v/c Ratio	0.32			0.60		
Control Delay	14.9			3.3		
Queue Delay	0.0			0.0		
Total Delay	14.9			3.3		
LOS	B			A		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay	14.9			3.3		
Approach LOS	B			A		
Queue Length 50th (ft)	18			31		
Queue Length 95th (ft)	52			44		
Internal Link Dist (ft)	18			115	856	
Turn Bay Length (ft)						
Base Capacity (vph)	355			2463		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.32			0.60		

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 1 (2%), Referenced to phase 2:NBT and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 4.1	Intersection LOS: A
Intersection Capacity Utilization 50.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: US 17 NB & US 17 SB U-Turn



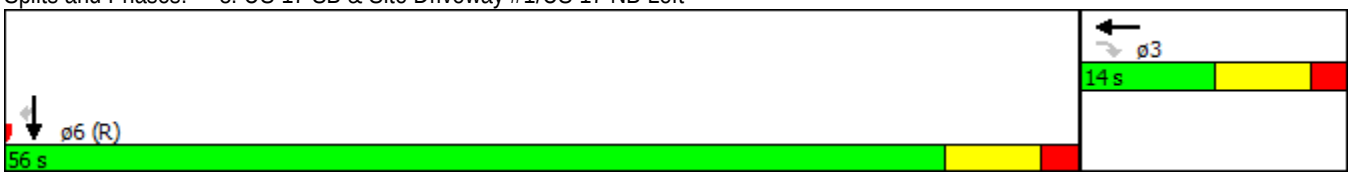
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	378	0	230	0	0	0	0	0	2268	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	2787	0	3539	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	3539	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			62									70
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		602			109			1250			112	
Travel Time (s)		13.7			2.5			15.5			1.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	420	0	256	0	0	0	0	0	2520	70
Turn Type			custom		NA						NA	Perm
Protected Phases					3						6	
Permitted Phases			3									6
Detector Phase			3		3						6	6
Switch Phase												
Minimum Initial (s)			7.0		7.0						14.0	14.0
Minimum Split (s)			14.0		14.0						23.0	23.0
Total Split (s)			14.0		14.0						56.0	56.0
Total Split (%)			20.0%		20.0%						80.0%	80.0%
Yellow Time (s)			5.0		5.0						5.0	5.0
All-Red Time (s)			2.0		2.0						2.0	2.0
Lost Time Adjust (s)			-2.0		-2.0						-2.0	-2.0
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None		None						C-Max	C-Max
Act Effct Green (s)			9.0		9.0						51.0	51.0
Actuated g/C Ratio			0.13		0.13						0.73	0.73
v/c Ratio			1.02		0.56						0.98	0.06
Control Delay			78.5		34.0						23.8	0.9
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			78.5		34.0						23.8	0.9
LOS			E		C						C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					34.0						23.2	
Approach LOS					C						C	
Queue Length 50th (ft)			~92		55						417	0
Queue Length 95th (ft)			#190		91						#730	8
Internal Link Dist (ft)		522			29			1170			32	
Turn Bay Length (ft)			200									
Base Capacity (vph)			412		455						2578	1172
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			1.02		0.56						0.98	0.06

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 19 (27%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 31.1 Intersection LOS: C
Intersection Capacity Utilization 106.5% ICU Level of Service G
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.

Splits and Phases: 8: US 17 SB & Site Driveway #1/US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	137	103	0	0	0	0	0	0	0	2249	83
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		100	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1863	1583	0	0	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	1863	1583	0	0	0	0	0	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			62									80
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		723			265			625			788	
Travel Time (s)		16.4			6.0			7.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	152	114	0	0	0	0	0	0	0	2499	92
Turn Type		NA	Perm								NA	Perm
Protected Phases		4									6	
Permitted Phases			4									6
Detector Phase		4	4								6	6
Switch Phase												
Minimum Initial (s)		7.0	7.0								14.0	14.0
Minimum Split (s)		14.0	14.0								23.0	23.0
Total Split (s)		14.0	14.0								56.0	56.0
Total Split (%)		20.0%	20.0%								80.0%	80.0%
Yellow Time (s)		5.0	5.0								5.0	5.0
All-Red Time (s)		2.0	2.0								2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0								-2.0	-2.0
Total Lost Time (s)		5.0	5.0								5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None								C-Max	C-Max
Act Effct Green (s)		9.0	9.0								51.0	51.0
Actuated g/C Ratio		0.13	0.13								0.73	0.73
v/c Ratio		0.64	0.44								0.97	0.08
Control Delay		42.7	20.9								22.3	1.1
Queue Delay		0.0	0.0								0.0	0.0
Total Delay		42.7	20.9								22.3	1.1
LOS		D	C								C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.4									21.5	
Approach LOS		C									C	
Queue Length 50th (ft)		63	21								405	1
Queue Length 95th (ft)		#135	65								#720	10
Internal Link Dist (ft)		643			185			545			708	
Turn Bay Length (ft)			100									125
Base Capacity (vph)		239	257								2578	1175
Starvation Cap Reductn		0	0								0	0
Spillback Cap Reductn		0	0								0	0
Storage Cap Reductn		0	0								0	0
Reduced v/c Ratio		0.64	0.44								0.97	0.08

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 22.6 Intersection LOS: C
Intersection Capacity Utilization 77.7% 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.

Splits and Phases: 9: US 17 SB & Site Driveway #2

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	71	232	41	69	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		1%	0%		0%	
Storage Length (ft)	0			50	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1853	1863	1583	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1853	1863	1583	1770	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		534	2838		822	
Travel Time (s)		6.6	35.2		18.7	
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)	0	79	258	46	77	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	71	232	41	69	0
Sign Control		Free	Free		Stop	
Grade		1%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	79	258	46	77	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	303				337	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	303				337	258
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				88	100
cM capacity (veh/h)	1258				659	781

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	79	258	46	77
Volume Left	0	0	0	77
Volume Right	0	0	46	0
cSH	1258	1700	1700	659
Volume to Capacity	0.00	0.15	0.03	0.12
Queue Length 95th (ft)	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	11.2
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.2
Approach LOS				B

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		

Synchro Output:

Projected (2029) Phase 2 Build-Out

PM Peak Hour

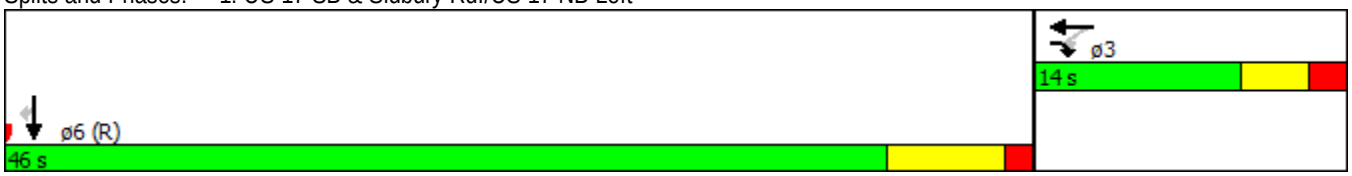
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	166	88	114	0	0	0	0	0	1828	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	0		0	0		125
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	1603	0	1824	0	0	0	0	0	3539	1583
Flt Permitted					0.979							
Satd. Flow (perm)	0	0	1603	0	1824	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			65		65							70
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		2842			120			862			183	
Travel Time (s)		35.2			1.5			10.7			2.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
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)	0	0	177	0	215	0	0	0	0	0	1945	70
Turn Type			custom	Perm	NA						NA	Perm
Protected Phases			3		3						6	
Permitted Phases				3								6
Detector Phase			3	3	3						6	6
Switch Phase												
Minimum Initial (s)			7.0	7.0	7.0						14.0	14.0
Minimum Split (s)			12.0	12.0	12.0						21.0	21.0
Total Split (s)			14.0	14.0	14.0						46.0	46.0
Total Split (%)			23.3%	23.3%	23.3%						76.7%	76.7%
Yellow Time (s)			3.0	3.0	3.0						5.2	5.2
All-Red Time (s)			1.8	1.8	1.8						1.4	1.4
Lost Time Adjust (s)			0.2		0.2						-1.6	-1.6
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None	None	None						C-Max	C-Max
Act Effct Green (s)			8.5		8.5						41.5	41.5
Actuated g/C Ratio			0.14		0.14						0.69	0.69
v/c Ratio			0.63		0.69						0.79	0.06
Control Delay			26.8		30.0						5.3	0.5
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			26.8		30.0						5.3	0.5
LOS			C		C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					30.0						5.2	
Approach LOS					C						A	
Queue Length 50th (ft)			38		51						71	1
Queue Length 95th (ft)			#105		#132						86	m0
Internal Link Dist (ft)		2762			40			782			103	
Turn Bay Length (ft)			100									125
Base Capacity (vph)			295		328						2450	1117
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.60		0.66						0.79	0.06

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 56 (93%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 84.2% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0988
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: US 17 SB & Sidbury Rd./US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	66	0	0	0	97	0	2051	130	0	0	0
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 (%)		1%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1853	0	0	0	1595	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						51			141			
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		89			422			152			740	
Travel Time (s)		1.3			6.4			1.9			9.2	
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
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)	0	72	0	0	0	105	0	2229	141	0	0	0
Turn Type		NA				custom		NA	Perm			
Protected Phases		7						2				
Permitted Phases						7			2			
Detector Phase		7				7		2	2			
Switch Phase												
Minimum Initial (s)		7.0				7.0		14.0	14.0			
Minimum Split (s)		12.0				12.0		21.0	21.0			
Total Split (s)		12.0				12.0		58.0	58.0			
Total Split (%)		17.1%				17.1%		82.9%	82.9%			
Yellow Time (s)		3.0				3.0		5.2	5.2			
All-Red Time (s)		1.8				1.8		1.1	1.1			
Lost Time Adjust (s)		0.2				0.2		-1.3	-1.3			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None				None		C-Max	C-Max			
Act Effct Green (s)		6.9				6.9		56.5	56.5			
Actuated g/C Ratio		0.10				0.10		0.81	0.81			
v/c Ratio		0.40				0.52		0.78	0.11			
Control Delay		36.5				27.2		1.2	0.0			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		36.5				27.2		1.2	0.0			
LOS		D				C		A	A			

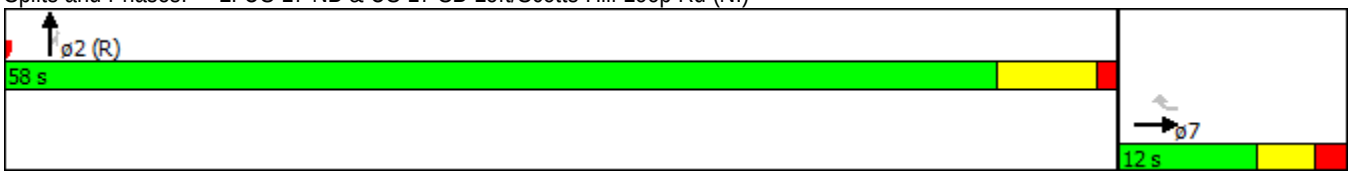
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		36.5						1.1				
Approach LOS		D						A				
Queue Length 50th (ft)		30				22		25	0			
Queue Length 95th (ft)		67				66		m25	m0			
Internal Link Dist (ft)		9			342			72			660	
Turn Bay Length (ft)									200			
Base Capacity (vph)		185				205		2854	1303			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.39				0.51		0.78	0.11			

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 2 (3%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 3.2 Intersection LOS: A
Intersection Capacity Utilization 106.6% ICU Level of Service G
Analysis Period (min) 15
Description: 03-0001

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

Splits and Phases: 2: US 17 NB & US 17 SB Left/Scotts Hill Loop Rd (N.)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	63	0	0	0	87	0	2551	149	0	0	0
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%			3%			0%			0%	
Storage Length (ft)	0		0	0		0	0		175	0		0
Storage Lanes	0		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1809	0	0	0	1587	0	3539	1583	0	0	0
Flt Permitted		0.971										
Satd. Flow (perm)	0	1809	0	0	0	1587	0	3539	1583	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50				50			166			
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		89			289			1365			825	
Travel Time (s)		2.4			4.4			16.9			10.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	172	0	0	0	97	0	2834	166	0	0	0
Turn Type	Perm	NA				custom		NA	Perm			
Protected Phases		7				7		2				
Permitted Phases	7								2			
Detector Phase	7	7				7		2	2			
Switch Phase												
Minimum Initial (s)	7.0	7.0				7.0		14.0	14.0			
Minimum Split (s)	13.0	13.0				13.0		21.0	21.0			
Total Split (s)	13.0	13.0				13.0		57.0	57.0			
Total Split (%)	18.6%	18.6%				18.6%		81.4%	81.4%			
Yellow Time (s)	3.0	3.0				3.0		5.2	5.2			
All-Red Time (s)	2.1	2.1				2.1		1.0	1.0			
Lost Time Adjust (s)		-0.1				-0.1		-1.2	-1.2			
Total Lost Time (s)		5.0				5.0		5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None				None		C-Max	C-Max			
Act Effct Green (s)		7.8				7.8		52.2	52.2			
Actuated g/C Ratio		0.11				0.11		0.75	0.75			
v/c Ratio		0.70				0.44		1.07	0.14			
Control Delay		38.3				23.2		53.5	0.7			
Queue Delay		0.0				0.0		0.0	0.0			
Total Delay		38.3				23.2		53.5	0.7			
LOS		D				C		D	A			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		38.3						50.6				
Approach LOS		D						D				
Queue Length 50th (ft)		51				19		~733	0			
Queue Length 95th (ft)		#134				61		#870	11			
Internal Link Dist (ft)		9			209			1285			745	
Turn Bay Length (ft)									175			
Base Capacity (vph)		251				225		2639	1222			
Starvation Cap Reductn		0				0		0	0			
Spillback Cap Reductn		0				0		0	0			
Storage Cap Reductn		0				0		0	0			
Reduced v/c Ratio		0.69				0.43		1.07	0.14			

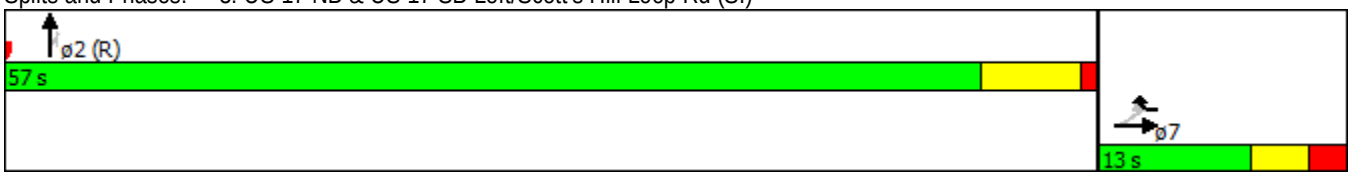
Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 49.1 Intersection LOS: D
Intersection Capacity Utilization 97.3% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0987

~ 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.

Splits and Phases: 3: US 17 NB & US 17 SB Left/Scott's Hill Loop Rd (S.)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	461	0	524	1591	0
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	1	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	1611	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	466	0	529	1607	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	461	0	524	1591	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	466	0	529	1607	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1872	804	1607			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1872	804	1607			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	64	326	403			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	466	265	265	804	804
Volume Left	0	0	0	0	0
Volume Right	466	0	0	0	0
cSH	326	1700	1700	1700	1700
Volume to Capacity	1.43	0.16	0.16	0.47	0.47
Queue Length 95th (ft)	614	0	0	0	0
Control Delay (s)	240.1	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	240.1	0.0		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	43.0		
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	461	0	524	1591	0
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	2	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2787	0	3539	3539	0
Flt Permitted						
Satd. Flow (perm)	0	2787	0	3539	3539	0
Link Speed (mph)	45			45	45	
Link Distance (ft)	753			1372	717	
Travel Time (s)	11.4			20.8	10.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
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)	0	466	0	529	1607	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	461	0	524	1591	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	466	0	529	1607	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1872	804	1607			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1872	804	1607			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	0	100			
cM capacity (veh/h)	64	326	403			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	233	233	265	265	804	804
Volume Left	0	0	0	0	0	0
Volume Right	233	233	0	0	0	0
cSH	326	326	1700	1700	1700	1700
Volume to Capacity	0.71	0.71	0.16	0.16	0.47	0.47
Queue Length 95th (ft)	130	130	0	0	0	0
Control Delay (s)	39.3	39.3	0.0	0.0	0.0	0.0
Lane LOS	E	E				
Approach Delay (s)	39.3		0.0		0.0	
Approach LOS	E					

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	66	109	528	49	179	88	1576	416	261	1663	127
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 (%)		3%			3%			1%			0%	
Storage Length (ft)	200		250	350		100	300		0	300		425
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			300			300			300		
Satd. Flow (prot)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	1835	1560	3382	1835	1560	3416	3522	1575	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			144			85			179			151
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		473			646			839			1372	
Travel Time (s)		9.2			9.8			12.7			20.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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)	179	69	114	550	51	186	92	1642	433	272	1732	132
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.0	14.0	14.0	18.0	14.0
Total Split (s)	16.0	14.0	14.0	26.0	24.0	15.0	14.0	65.0	26.0	15.0	66.0	16.0
Total Split (%)	13.3%	11.7%	11.7%	21.7%	20.0%	12.5%	11.7%	54.2%	21.7%	12.5%	55.0%	13.3%
Yellow Time (s)	3.0	3.1	3.0	3.0	4.3	3.0	3.0	4.4	3.0	3.0	4.5	3.0
All-Red Time (s)	3.4	3.1	4.0	3.4	1.9	3.3	4.0	1.6	3.4	3.3	1.5	3.4
Lost Time Adjust (s)	-1.4	-1.2	-2.0	-1.4	-1.2	-1.3	-2.0	-1.0	-1.4	-1.3	-1.0	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min	None
Act Effct Green (s)	13.1	8.9	19.7	20.7	16.5	28.4	9.1	57.3	83.1	10.1	58.3	76.5
Actuated g/C Ratio	0.11	0.08	0.17	0.18	0.14	0.25	0.08	0.50	0.73	0.09	0.51	0.67
v/c Ratio	0.46	0.49	0.29	0.89	0.19	0.41	0.34	0.93	0.36	0.89	0.96	0.12
Control Delay	54.8	65.5	5.2	65.2	45.9	21.4	56.0	37.4	4.3	83.6	40.8	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	65.5	5.2	65.2	45.9	21.4	56.0	37.4	4.3	83.6	40.8	1.2
LOS	D	E	A	E	D	C	E	D	A	F	D	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.2			53.6			31.5			43.8	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	69	52	0	218	35	60	35	607	59	109	657	0
Queue Length 95th (ft)	108	102	29	#323	73	126	62	#785	102	#195	#845	16
Internal Link Dist (ft)		393			566			759			1292	
Turn Bay Length (ft)	200		250	350		100	300			300		425
Base Capacity (vph)	390	146	388	631	309	451	273	1878	1203	305	1918	1112
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.47	0.29	0.87	0.17	0.41	0.34	0.87	0.36	0.89	0.90	0.12

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 114
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 86.0% ICU Level of Service E
Analysis Period (min) 15
Description: 03-0380
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & Porters Neck Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	354	49	130	76	45	134	135	1909	67	105	1663	244
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 (%)		1%			3%			-1%			2%	
Storage Length (ft)	250		200	125		0	100		275	100		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	50			100			100			100		
Satd. Flow (prot)	1673	1697	1575	1743	1629	0	1778	3557	1591	1752	3504	1567
Flt Permitted	0.950	0.964		0.950			0.049			0.049		
Satd. Flow (perm)	1673	1697	1575	1743	1629	0	92	3557	1591	90	3504	1567
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		82				121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1025			771			1421			1475	
Travel Time (s)		20.0			15.0			21.5			22.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
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 (%)	43%											
Lane Group Flow (vph)	210	210	135	79	187	0	141	1989	70	109	1732	254
Turn Type	Split	NA	pm+ov	Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3	5	4	4		5	2		1	6	
Permitted Phases			3				2		2	6		6
Detector Phase	3	3	5	4	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0	12.0	7.0	12.0	12.0
Minimum Split (s)	14.0	14.0	13.0	14.0	14.0		13.0	19.0	19.0	13.0	18.0	18.0
Total Split (s)	25.0	25.0	15.0	15.0	15.0		15.0	87.0	87.0	13.0	85.0	85.0
Total Split (%)	17.9%	17.9%	10.7%	10.7%	10.7%		10.7%	62.1%	62.1%	9.3%	60.7%	60.7%
Yellow Time (s)	3.8	3.8	3.0	3.7	3.7		3.0	4.6	4.6	3.0	4.3	4.3
All-Red Time (s)	2.5	2.5	2.3	2.6	2.6		2.3	1.5	1.5	2.9	1.7	1.7
Lost Time Adjust (s)	-1.3	-1.3	-0.3	-1.3	-1.3		-0.3	-1.1	-1.1	-0.9	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	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		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.3	19.3	28.5	10.5	10.5		91.5	82.3	82.3	89.0	81.0	81.0
Actuated g/C Ratio	0.14	0.14	0.20	0.08	0.08		0.65	0.59	0.59	0.64	0.58	0.58
v/c Ratio	0.91	0.90	0.36	0.61	0.95		0.83	0.95	0.07	0.72	0.85	0.27
Control Delay	99.1	96.6	18.3	82.9	87.2		66.3	38.7	0.2	52.9	30.2	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.1	96.6	18.3	82.9	87.2		66.3	38.7	0.2	52.9	30.2	8.2
LOS	F	F	B	F	F		E	D	A	D	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		78.5			85.9			39.2			28.7	
Approach LOS		E			F			D			C	
Queue Length 50th (ft)	200	200	38	71	98		75	858	0	48	676	55
Queue Length 95th (ft)	#354	#351	88	#143	#258		#186	#1077	2	#140	793	103
Internal Link Dist (ft)		945			691			1341			1395	
Turn Bay Length (ft)	250		200	125			100		275	100		150
Base Capacity (vph)	239	242	387	130	197		180	2089	985	152	2027	957
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.87	0.35	0.61	0.95		0.78	0.95	0.07	0.72	0.85	0.27

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 84 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 41.6 Intersection LOS: D
Intersection Capacity Utilization 97.0% ICU Level of Service F
Analysis Period (min) 15
Description: 03-0283
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: US 17 & NC 210/Dan Owen Dr

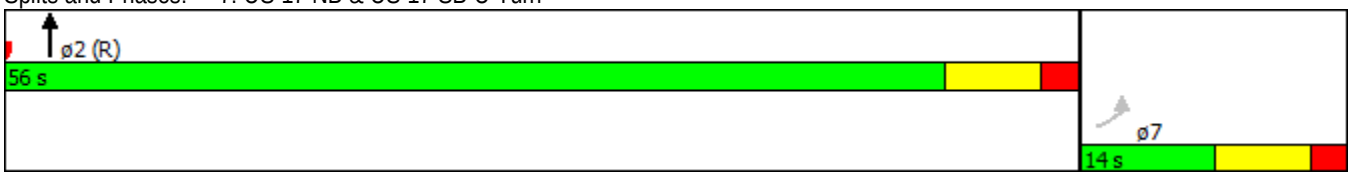
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	0	0	2530	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	25		25			
Satd. Flow (prot)	1770	0	0	3539	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	3539	0	0
Right Turn on Red	Yes	Yes				Yes
Satd. Flow (RTOR)	5					
Link Speed (mph)	30			55	55	
Link Distance (ft)	98			208	855	
Travel Time (s)	2.2			2.6	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)	133	0	0	2811	0	0
Turn Type	NA			NA		
Protected Phases				2		
Permitted Phases	7					
Detector Phase	7			2		
Switch Phase						
Minimum Initial (s)	7.0			14.0		
Minimum Split (s)	14.0			21.0		
Total Split (s)	14.0			56.0		
Total Split (%)	20.0%			80.0%		
Yellow Time (s)	5.0			5.0		
All-Red Time (s)	2.0			2.0		
Lost Time Adjust (s)	-2.0			-2.0		
Total Lost Time (s)	5.0			5.0		
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None			C-Max		
Act Effct Green (s)	9.0			54.8		
Actuated g/C Ratio	0.13			0.78		
v/c Ratio	0.58			1.01		
Control Delay	38.6			20.3		
Queue Delay	0.0			0.0		
Total Delay	38.6			20.3		
LOS	D			C		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay	38.6			20.3		
Approach LOS	D			C		
Queue Length 50th (ft)	53			~728		
Queue Length 95th (ft)	#114			m#660		
Internal Link Dist (ft)	18			128	775	
Turn Bay Length (ft)						
Base Capacity (vph)	231			2770		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.58			1.01		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 56 (80%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 99.3% ICU Level of Service F
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: 7: US 17 NB & US 17 SB U-Turn



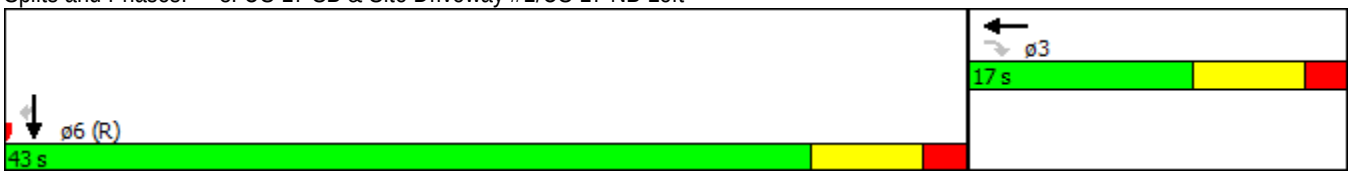
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	381	0	468	0	0	0	0	0	1633	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	2787	0	3539	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	3539	0	0	0	0	0	3539	1583
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			73									73
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		602			121			1250			112	
Travel Time (s)		13.7			2.8			15.5			1.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	0	423	0	520	0	0	0	0	0	1814	161
Turn Type			custom		NA						NA	Perm
Protected Phases					3						6	
Permitted Phases			3									6
Detector Phase			3		3						6	6
Switch Phase												
Minimum Initial (s)			7.0		7.0						14.0	14.0
Minimum Split (s)			14.0		14.0						23.0	23.0
Total Split (s)			17.0		17.0						43.0	43.0
Total Split (%)			28.3%		28.3%						71.7%	71.7%
Yellow Time (s)			5.0		5.0						5.0	5.0
All-Red Time (s)			2.0		2.0						2.0	2.0
Lost Time Adjust (s)			-2.0		-2.0						-2.0	-2.0
Total Lost Time (s)			5.0		5.0						5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode			None		None						C-Max	C-Max
Act Effct Green (s)			12.0		12.0						38.0	38.0
Actuated g/C Ratio			0.20		0.20						0.63	0.63
v/c Ratio			0.69		0.74						0.81	0.16
Control Delay			25.1		30.0						12.0	3.0
Queue Delay			0.0		0.0						0.0	0.0
Total Delay			25.1		30.0						12.0	3.0
LOS			C		C						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					30.0						11.3	
Approach LOS					C						B	
Queue Length 50th (ft)			66		93						217	10
Queue Length 95th (ft)			#114		#146						310	28
Internal Link Dist (ft)		522			41			1170			32	
Turn Bay Length (ft)			200									
Base Capacity (vph)			615		707						2241	1029
Starvation Cap Reductn			0		0						0	0
Spillback Cap Reductn			0		0						0	0
Storage Cap Reductn			0		0						0	0
Reduced v/c Ratio			0.69		0.74						0.81	0.16

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 40 (67%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 107.6% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: US 17 SB & Site Driveway #1/US 17 NB Left



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	117	88	0	0	0	0	0	0	0	1748	159
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		100	0		0	0		0	0		125
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1863	1583	0	0	0	0	0	0	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	1863	1583	0	0	0	0	0	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			73									177
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		723			265			625			788	
Travel Time (s)		16.4			6.0			7.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
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)	0	130	98	0	0	0	0	0	0	0	1942	177
Turn Type		NA	Perm								NA	Perm
Protected Phases		4									6	
Permitted Phases			4									6
Detector Phase		4	4								6	6
Switch Phase												
Minimum Initial (s)		7.0	7.0								14.0	14.0
Minimum Split (s)		14.0	14.0								23.0	23.0
Total Split (s)		14.0	14.0								46.0	46.0
Total Split (%)		23.3%	23.3%								76.7%	76.7%
Yellow Time (s)		5.0	5.0								5.0	5.0
All-Red Time (s)		2.0	2.0								2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0								-2.0	-2.0
Total Lost Time (s)		5.0	5.0								5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None								C-Max	C-Max
Act Effct Green (s)		9.0	9.0								44.8	44.8
Actuated g/C Ratio		0.15	0.15								0.75	0.75
v/c Ratio		0.47	0.33								0.74	0.14
Control Delay		29.5	13.0								8.2	0.9
Queue Delay		0.0	0.0								0.0	0.0
Total Delay		29.5	13.0								8.2	0.9
LOS		C	B								A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.4									7.6	
Approach LOS		C									A	
Queue Length 50th (ft)		44	8								205	0
Queue Length 95th (ft)		90	44								295	13
Internal Link Dist (ft)		643			185			545			708	
Turn Bay Length (ft)			100									125
Base Capacity (vph)		279	299								2642	1226
Starvation Cap Reductn		0	0								0	0
Spillback Cap Reductn		0	0								0	0
Storage Cap Reductn		0	0								0	0
Reduced v/c Ratio		0.47	0.33								0.74	0.14

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 72.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 9: US 17 SB & Site Driveway #2

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	107	100	80	59	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		1%	0%		0%	
Storage Length (ft)	0			50	0	0
Storage Lanes	0			1	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1853	1863	1583	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1853	1863	1583	1770	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		440	2842		509	
Travel Time (s)		5.5	35.2		11.6	
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)	0	119	111	89	66	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	107	100	80	59	0
Sign Control		Free	Free		Stop	
Grade		1%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	119	111	89	66	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	200				230	111
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	200				230	111
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				91	100
cM capacity (veh/h)	1372				758	942

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	119	111	89	66
Volume Left	0	0	0	66
Volume Right	0	0	89	0
cSH	1372	1700	1700	758
Volume to Capacity	0.00	0.07	0.05	0.09
Queue Length 95th (ft)	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	10.2
Lane LOS				B
Approach Delay (s)	0.0	0.0		10.2
Approach LOS				B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		