US 460 Corridor Improvement Study

Town of Richlands/Tazewell County, Virginia

FINAL REPORT

August 2017

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Town of Richlands/Tazewell County, Virginia

August 2017 | Final Report

Prepared for

Prepared by

List of Acronyms

AADT – Annual Average Daily Traffic

CEI – Construction Engineering and Inspection

CLRP – Constrained Long Range Transportation Plan

CMAQ – Congestion Mitigation and Air Quality (CMAQ)

DGP – District Grants Program

HCM – Highway Capacity Manual

HPPP – High-Priority Projects Program

HSIP – Highway Safety Improvement Program

LOS – Level of Service

PCES – Project Cost Estimating System

PDO – Property Damage Only

PHF – Peak Hour Factor

RNS – Roadway Network System

SPS – Statewide Planning System

STIP – Statewide Transportation Improvement Plan

SYIP – Six-Year Improvement Program

SWG – Study Work Group

TIP – Transportation Improvement Plan (TIP)

TOSAM – Traffic Operations and Safety Analysis Manual

TMC – Turning Movement Count

TRB – Transportation Research Board

VDOT – Virginia Department of Transportation

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INTRODUCTION

Background

The Virginia Department of Transportation (VDOT) selected US 460 (Governor George C. Perry Highway) in the Town of Richlands/Tazewell County as a 2016 STARS project because of identified safety concerns along the corridor. This study is entitled the US 460 Corridor Improvement Study and will be referred to as the Study in this report.

Purpose of Study

The purpose of the Study was to identify the existing safety and operational deficiencies in the US 460 study corridor and develop potential projects to improve safety and operations on US 460 and US 460 Business (Front Street) in the Town of Richlands and Tazewell County. The goal of the Study was to identify improvements that can be programmed in the VDOT Six-Year Improvement Program (SYIP).

Study Work Group

A study work group (SWG) was formed for the Study to capture input from local stakeholders and to shape the development of improvement concepts. The SWG provided local and institutional knowledge of the corridor; reviewed study methodologies; provided input on key assumptions; and reviewed and approved proposed improvements created through the study process. The SWG included members representing the following organizations:

- VDOT
- Town of Richlands
- Tazewell County
- Kimley-Horn

Study Area

The study area for the US 460 corridor was approximately 1.7 miles long, located in the Town of Richlands and Tazewell County, and oriented in an east/west direction. The limits of the Study extended along US 460 from Route 67 to Front Street and along Front Street from US 460 to Rockbridge Avenue. **Figure 1** shows the limits of the corridor. In the study area, US 460 overlapped Route 67 and was also called Governor George C. Perry Highway. In addition, Front Street was the overlap of US 460 Business and Route 67. Route 67 on the western end of the study corridor was also known as Raven Road. For the purposes of the Study, US 460/Route 67/Governor George C. Perry Highway is referred to as US 460, Front Street/US 460 Business/Route 67 is referred to as Front Street, and Route 67/Raven Road is referred to as Route 67.

The study area included twelve at-grade intersections. The twelve intersections are listed below and shown in **Figure 1.**

Study Area Intersections

1. US 460 at Route 67
2. US 460 at Acme Road
3. US 460 at Clearview Road
4. US 460 at Baker Hollow Road
5. US 460 at Patteson Street
6. US 460 at Hillcreek Road
7. US 460 at Clinch Valley Medical Center Exit
8. US 460 at Clinch Valley Medical Center Entrance
9. US 460 at Lake Park Drive
10. US 460 at Front Street
11. Front Street at 2nd Street/Kents Ridge Road
12. Front Street at Rockbridge Avenue

The Study was in a rural setting with rolling terrain. The following photos show the nature of the study area. Additional details on the study area are provided in the data collection section of this report.

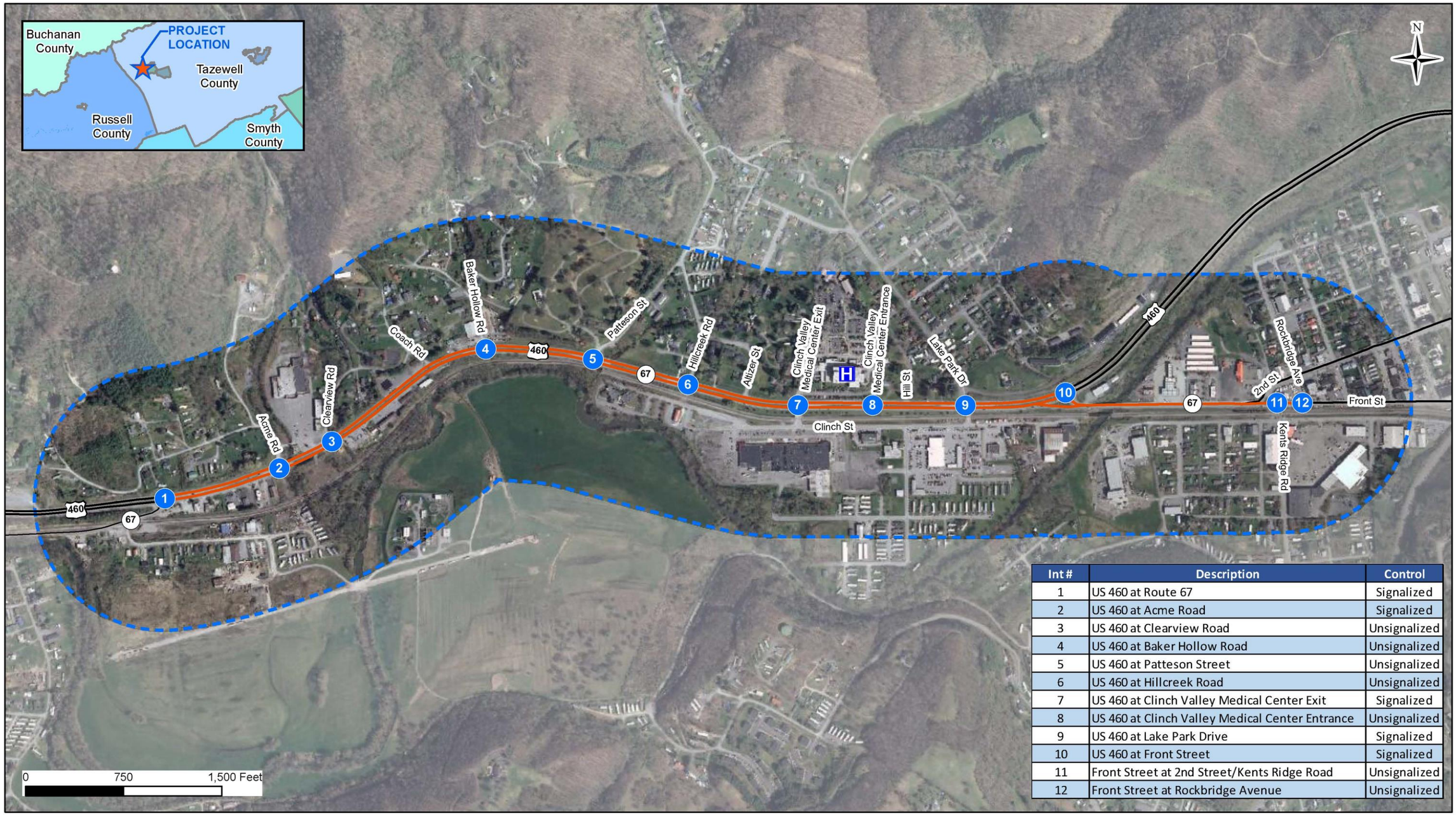
US 460 to the west of Medical Center Exit (facing west)

US 460 at Lake Park Drive (facing east)

US 460 to the west of Clearview Road (facing west)

Front Street east of US 460 (facing east)

Figure 1 – Study Area Location Map



Int #	Description	Control
1	US 460 at Route 67	Signalized
2	US 460 at Acme Road	Signalized
3	US 460 at Clearview Road	Unsignalized
4	US 460 at Baker Hollow Road	Unsignalized
5	US 460 at Patteson Street	Unsignalized
6	US 460 at Hillcreek Road	Unsignalized
7	US 460 at Clinch Valley Medical Center Exit	Signalized
8	US 460 at Clinch Valley Medical Center Entrance	Unsignalized
9	US 460 at Lake Park Drive	Signalized
10	US 460 at Front Street	Signalized
11	Front Street at 2nd Street/Kents Ridge Road	Unsignalized
12	Front Street at Rockbridge Avenue	Unsignalized

Data Collection and Inventory

A preliminary field review of the study area was conducted on July 11, 2016 to verify existing conditions and traffic control devices; and observe peak hour traffic conditions and driver behavior. In addition to the field review, existing traffic volume data was collected from a combination of turning movement counts and vehicle classification tube counts. VDOT provided crash data, existing traffic signal timing plans, and roadway design plans.

The following sections summarize collected data and field review observations.

Description of the Study Area

Field reconnaissance of existing conditions in the study area revealed that the corridor exists within a rural setting with rolling terrain. A railroad track ran parallel to and south of US 460 and Front Street. The following sections provide a summary of US 460 and Front Street.

US 460

Within the study area, US 460 was a four-lane, divided roadway with a posted speed limit of 35 MPH. The two eastbound travel lanes were separated from the two westbound travel lanes by a variable width grass median. According to VDOT's 2014 Functional Classification Map, US 460 between Route 67 and Front Street was classified as an Other Principal Arterial.

The characteristics of US 460 changed immediately to the west and the east of the study area. To the west of Route 67, US 460 was four-lane, undivided roadway with a posted speed limit of 55 MPH. To the east of Front Street, US 460 was a four-lane, limited-access facility with a posted speed limit of 55 MPH.

Front Street

Within the study area, Front Street was a three-lane, undivided roadway with a two-way, left-turn lane and a posted speed limit of 25 MPH. According to VDOT's 2014 Functional Classification Map, Front Street between US 460 and Rockbridge Avenue was classified as a Minor Arterial.

Field Review Observations

During the field review on July 11, 2016, existing conditions and operations were observed, including the following observations:

- The study area signalized intersections were not coordinated and vehicles traveling on US 460 in both directions encountered consecutive red lights
- Railroad preemption was present at all intersections near railroad crossings:
  - US 460 at Route 67 (signalized)
  - US 460 at Clinch Valley Medical Center Exit (signalized)
  - US 460 at Lake Park Drive (signalized)
  - Front Street at 2nd Street/Kents Ridge Road (unsignalized)
- Observed queue lengths extended the full length of storage bays at intersections near railroad crossings when trains were passing

Queue in westbound US 460 left-turn lane at Route 67 intersection during train crossing on Route 67

- There was limited storage for the northbound approaches at the Clinch Valley Medical Center Exit and Lake Park Drive intersections and vehicles on the northbound approaches stopped on railroad tracks

Northbound approach of US 460 at Lake Park Drive intersection

Northbound approach of US 460 at Lake Park Drive intersection

- Poor sight distance due to vertical and horizontal curve was noted at the following intersection approaches:
  - Clearview Road looking east on US 460 (unsignalized)
  - Acme Road looking east on US 460 (signalized)

Sight distance observation on US 460 from Clearview Road southbound approach (facing east)

Sight distance observation on US 460 from Acme Road southbound approach left-turn lane (facing east)

- Occasional pedestrians and bicyclists were observed. Limited pedestrian and bicycle accommodations were present in the study area.

Bicyclist on northbound approach of US 460 at Lake Park Drive intersection

Pedestrians waiting to cross US 460 on west side of Lake Park Drive intersection

Existing Roadway Geometry

The existing roadway geometry in the study area was observed and documented during the field review. **Figure 2** summarizes the existing lane configurations, including storage and taper lengths, for left- and right-turn storage bays within the study area.

Traffic Volume Data

Collection of turning movement count (TMC) data was conducted at Intersections 1-7 on Tuesday, May 10, 2016 and at Intersections 8-12 on Wednesday, May 11, 2016. TMC data was collected between the hours of 7:00 – 9:00 AM and 4:00 – 7:00 PM at all study area intersections except Intersection 2, US 460 at Acme Road. At Intersection 2, 12-hour TMC data was collected between the hours of 7:00 AM – 7:00 PM. In addition, 48-hour vehicle classification tube counts were collected at two locations on US 460 and one location on Front Street on Tuesday, May 10, 2016 and Wednesday, May 11, 2016.

Table 1 summaries the date and source of the count data for each of the 12 study area intersections and three arterial tube count locations. Complete TMC and tube count data is provided in **Appendix A**.

Table 1 – Study Area Intersection and Arterial Counts

Location	Count Date (Source)
STUDY AREA INTERSECTIONS	
1 US 460 at Route 67	5/10/16 (TMC)
2 US 460 at Acme Road	5/10/16 (TMC)
3 US 460 at Clearview Road	5/10/16 (TMC)
4 US 460 at Baker Hollow Road	5/10/16 (TMC)
5 US 460 at Patteson Street	5/10/16 (TMC)
6 US 460 at Hillcreek Road	5/10/16 (TMC)
7 US 460 at Clinch Valley Medical Center Exit	5/10/16 (TMC)
8 US 460 at Clinch Valley Medical Center Entrance	5/11/16 (TMC)
9 US 460 at Lake Park Drive	5/11/16 (TMC)
10 US 460 at Front Street	5/11/16 (TMC)
11 Front Street at 2nd Street/Kents Ridge Road	5/11/16 (TMC)
12 Front Street at Rockbridge Avenue	5/11/16 (TMC)
ARTERIALS	
A US 460 to the west of Route 67	5/10/16 – 5/11/16 (Tube)
B US 460 to the east of Front Street	5/10/16 – 5/11/16 (Tube)
C Front Street to the east of bridge	5/10/16 – 5/11/16 (Tube)

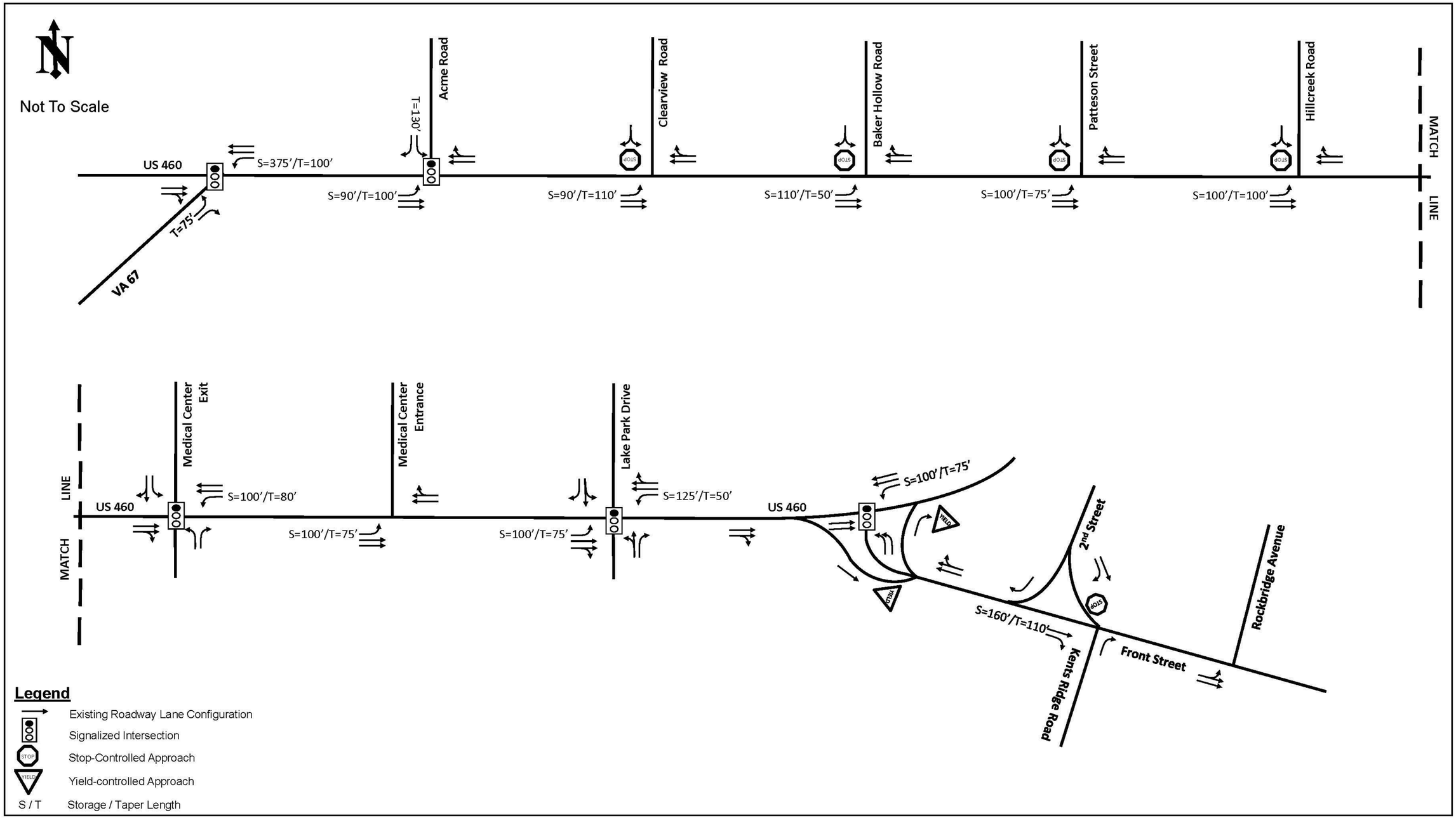
VDOT published annual average daily traffic (AADT) volume estimates were also reviewed on US 460 between Route 67 and Front Street. The 2015 VDOT published AADT volume on US 460 was 13,000 vehicles per day. Historical VDOT AADT volume estimates indicate that traffic volumes have been declining the study area. Over the five-year period from 2011 to 2015, VDOT AADT volume estimates on US 460 between Route 67 and Front Street dropped from 15,000 vehicles per day to 13,000 vehicles per day.

Peak Hour Determination

The AM and PM peak hours of the study area were determined by first reviewing the individual intersection and arterial peak hours. The individual intersection and arterial peak hour volumes were compared to hourly total study area volumes to determine a common peak hour that best represented existing traffic conditions in the study area.

The study team determined that the common peak hour of 7:45 – 8:45 AM best represented the traffic volumes observed during the AM peak hour in the study corridor. This peak hour captured more than 99% of the total volume observed during the individual peak hours at intersections and more than 97% of the total volumes observed during the individual peak hours at arterial locations.

Figure 2 – Existing (2016) Lane Configurations



Similarly, the common peak hour of 4:15 – 5:15 PM best represented the traffic volumes observed during the PM peak hour in the study corridor. This peak hour captured more than 99% of the total traffic volumes observed during the individual peak hours at intersections and more than 99% of the total traffic volumes observed during the individual peak hours at arterial locations.

A table comparing individual intersections and arterial peak hours to the 7:45 – 8:45 AM and 4:15 – 5:15 PM overall study area peak hours is provided in **Appendix A**. An intersection peak hour factor (PHF) was calculated for each study area intersection during AM and PM peak hours using the TMC data. PHFs for each study area intersection are provided in **Figure 3** and in **Appendix A**.

Heavy Vehicle Percentages

Heavy vehicle percentages were calculated for each movement at all study area intersections during the overall study area AM and PM peak hours. **Figure 3** and **Appendix A** summarize the AM and PM peak hour heavy vehicle percentages for each intersection movement. The calculated heavy vehicle percentages shown in **Figure 3** can be misleading for low volume movements since one or two heavy vehicles on a low volume movement can result in a high percentage of heavy vehicles. In this study, all movements with reported heavy vehicle percentages greater than 30% had five or fewer vehicles during the peak hours.

Traffic Volume Balancing

Using the available TMC and tube count data, traffic volumes were balanced, where appropriate, throughout the study area in preparation for the existing conditions operational analyses. Peak hour traffic volumes were balanced between all study area intersections except at locations where imbalances existed due to the presence of significant commercial driveways. Commercial driveways were considered significant if the traffic volume imbalance between adjacent intersections was greater than 10% of the total traffic volume and the adjacent intersections were counted on the same day. Traffic volume imbalances were maintained at the following locations:

- Westbound US 460 between Clearview Road and Acme Road
  - A right-in, right-out driveway was present on westbound US 460 between Clearview Road and Acme Road that provides access to a gas station, US Post Office, and small restaurant; as a result, traffic volumes were not balanced in the westbound direction between these two intersections.
- Eastbound and westbound Front Street between US 460 and 2nd Street/Kents Ridge Road
  - Ten commercial driveways were present on Front Street between US 460 and 2nd Street/Kents Ridge Road that provide access to fast-food restaurants, a gas station, and a shopping center; as a result, traffic volumes were not balanced between these two intersections.

For the rest of the study area, peak hour traffic volumes were balanced using an iterative process of adjusting intersection traffic volumes until the traffic volumes were within a reasonable tolerance. The balanced intersection traffic volumes were within ±5% of raw traffic volumes for all movements in the AM peak hour and within ±4% of raw traffic volumes in the PM peak hour. **Appendix A** contains additional details on of the traffic volume balancing methodology with a summary table showing the differences between unbalanced and balanced traffic volumes.

The existing (2016) balanced AM and PM peak hour traffic volumes in the study area are summarized in **Figure 4**.

Crash Analysis

Crash data for the study area was used to evaluate corridor safety and identify crash patterns. VDOT Roadway Network System (RNS) crash data was obtained for the latest available five years of crash data (January 1, 2011 to December 31, 2015). This crash data was used to identify crash patterns and locations with high crash frequencies along the study corridor.

A field review was conducted on July 11, 2016 to observe and document safety concerns along the study corridor. Special focus was given to areas where the crash data indicated a crash pattern or a high crash frequency. The purpose of the field review was to identify factors contributing to the crash patterns as well as identify potential improvements to mitigate crash risks and improve safety along the corridor.

The following sections of the report summarize the crashes that occurred within the study corridor during the five-year crash analysis period and observations made during field reconnaissance.

Summary of Study Area Crashes

Over the five-year crash analysis period, 181 total crashes were reported within the study area. Of the reported crashes, there were zero fatal crashes, 85 injury crashes, and 96 property damage only (PDO) crashes. A summary of the study area crashes is shown in **Table 2** and additional details are provided in the following sections of the report. Based on a review of this data, there were two observable trends: total crash frequencies and crash severities reduced significantly, especially since 2013.

Table 2 – Study Area Crashes

	Number of Crashes			
Year	Fatal	Injury	PDO	Total
2011	0	22	26	48
2012	0	29	21	50
2013	0	16	16	32
2014	0	11	13	24
2015	0	7	20	27
Total	**0**	**85**	**96**	**181**

In addition, fatal, injury, PDO, and crash rates were calculated for the study area for 2011 to 2015. Crash rates were based on the total number of crashes, length of the study corridor, and the AADT. Since the AADT in the US 460 study area has declined since 2011, the calculation of crash rates allowed for the frequency of crashes to be normalized across analysis years. Crash rates for the US 460 study area are summarized in **Table 3** and are reported in crashes per 100 million vehicles miles traveled. The table shows the total crash rate and injury crash rates have declined between 2011 and 2015, with a significant reduction in the crash rates since 2013.

Table 3 – Study Area Crash Rates

	Crash Rate (crashes per 100 million vehicle miles traveled)			
Year	Fatal	Injury	PDO	Total
2011	0	239	283	522
2012	0	334	242	576
2013	0	184	184	369
2014	0	135	159	294
2015	0	86	245	331

Figure 3 – Existing Heavy Vehicle Percentages & Peak Hour Factors

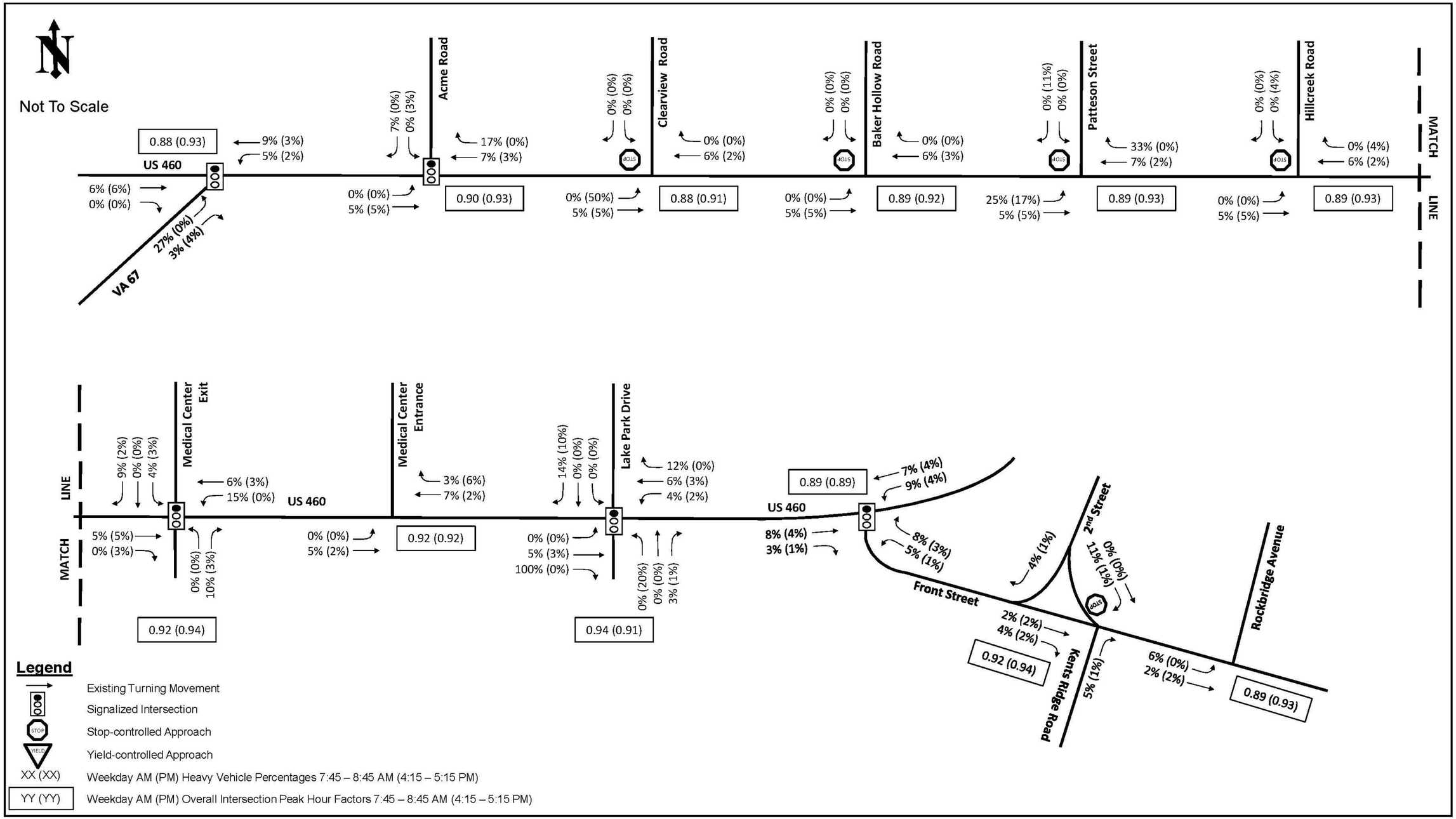
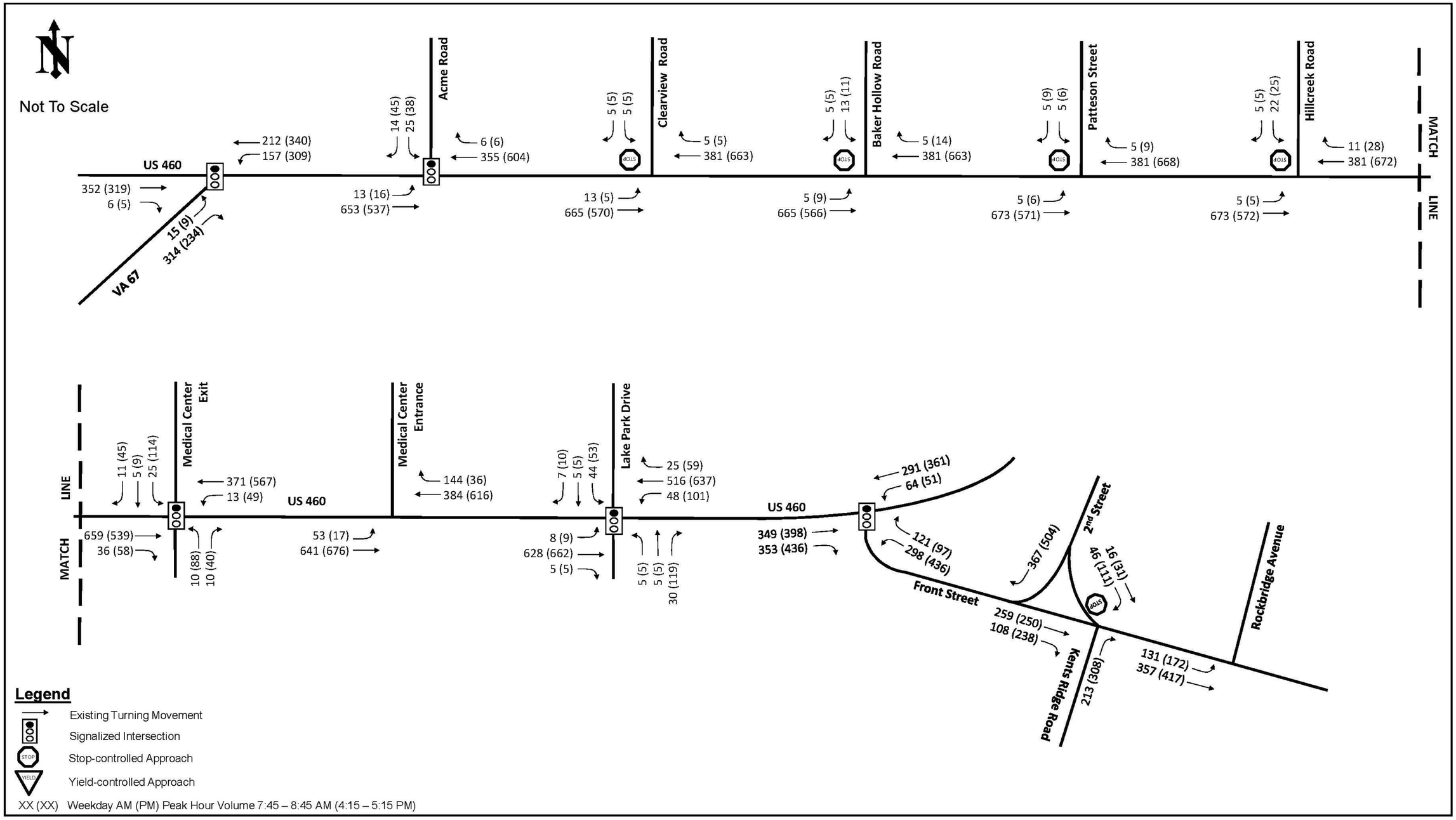


Figure 4 – Existing (2016) Peak Hour Volumes



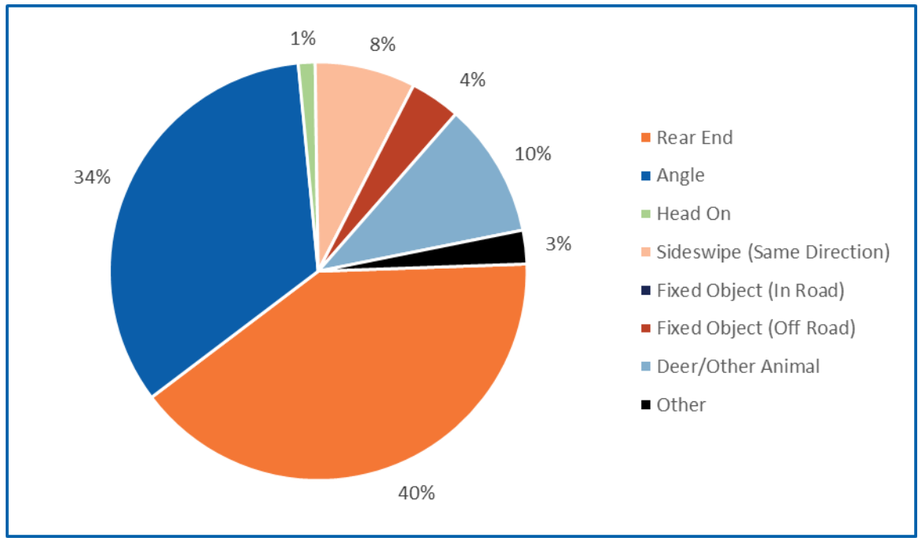
Eastbound US 460 Crash Summary

During the five-year crash analysis period, the following crashes were reported on eastbound US 460 between Route 67 and Front Street:

- Total number of reported crashes: 77
- Total number of reported injury crashes: 33

A summary of the eastbound US 460 crashes by crash type is provided in **Figure 5**. The predominant crash type was rear end, which accounted for 40% of all reported crashes in the eastbound direction. The next most frequent crash type was angle, which accounted for 34% of all reported eastbound crashes.

Figure 5 – Eastbound US 460 Crash Type Summary



Other crash trends on eastbound US 460 included:

- 31% of the reported crashes occurred during the PM peak period from 3 PM to 7 PM, while only 19% occurred during the AM peak period from 6 AM to 10 AM
- 82% of the reported crashes occurred on a weekday (Monday to Friday)
- 79% of the reported crashes occurred in daylight conditions
- 79% of the reported crashes occurred in clear weather conditions

Appendix A contains additional details on the eastbound US 460 crashes.

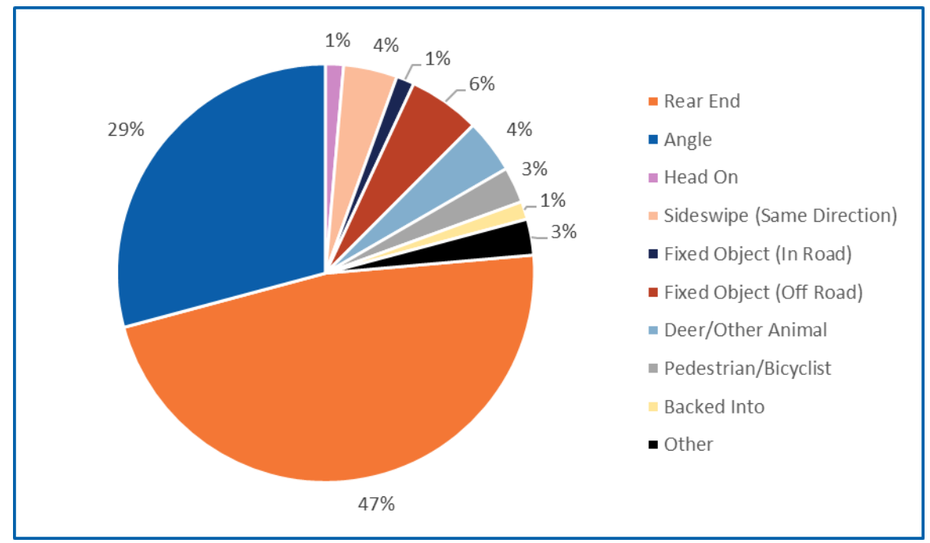
Westbound US 460 Crash Summary

During the five-year crash analysis period, the following crashes were reported on westbound US 460 between Route 67 and Front Street:

- Total number of reported crashes: 72
- Total number of reported injury crashes: 41

A summary of the westbound US 460 crashes by crash type is provided in **Figure 6**. The predominant crash type was rear end, which accounted for 47% of all reported crashes in the westbound direction. The next most frequent crash type was angle, which accounted for 29% of all reported westbound crashes.

Figure 6 – Westbound US 460 Crash Type Summary



Other crash trends on westbound US 460 included:

- 39% of the reported crashes occurred during the PM peak period from 3 PM to 7 PM, while only 17% occurred during the AM peak period from 6 AM to 10 AM
- 90% of the reported crashes occurred on a weekday (Monday to Friday)
- 74% of the reported crashes occurred in daylight conditions
- 83% of the reported crashes occurred in clear weather conditions

Appendix A contains additional details on the westbound US 460 crashes.

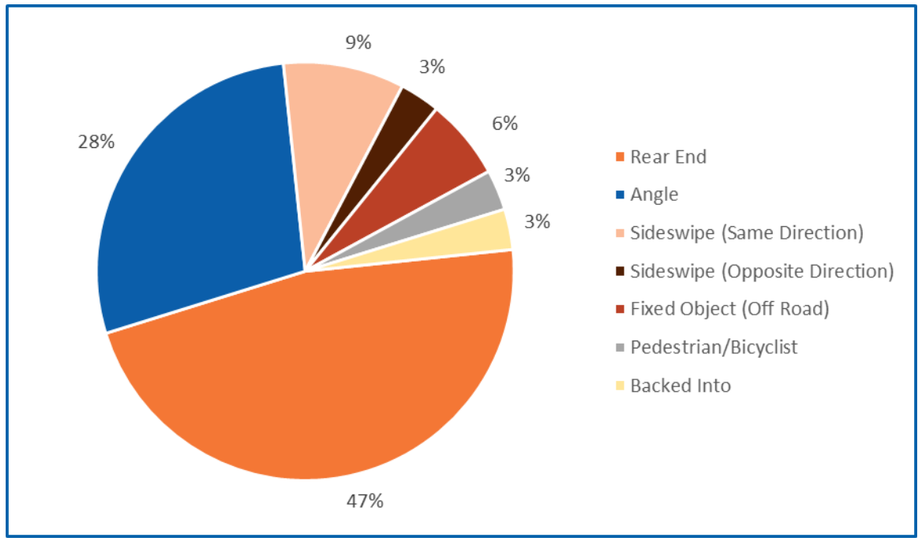
Front Street Crash Summary

During the five-year crash analysis period, the following crashes were reported on Front Street, in both travel directions, between US 460 and Rockbridge Avenue:

- Total number of reported crashes: 32
- Total number of reported injury crashes: 11

A summary of the Front Street crashes by crash type is provided in **Figure 7**. The predominant crash type was rear end, which accounted for 47% of all reported crashes on Front Street. The next most frequent crash type was angle, which accounted for 28% of all reported Front Street crashes.

Figure 7 – Front Street Crash Type Summary



Other crash trends on Front Street included:

- 31% of the reported crashes occurred during the PM peak period from 3 PM to 7 PM, while only 13% occurred during the AM peak period from 6 AM to 10 AM
- 75% of the reported crashes occurred on a weekday (Monday to Friday)
- 88% of the reported crashes occurred in daylight conditions
- 88% of the reported crashes occurred in clear weather conditions

Appendix A contains additional details on the Front Street crashes.

Crash Histograms

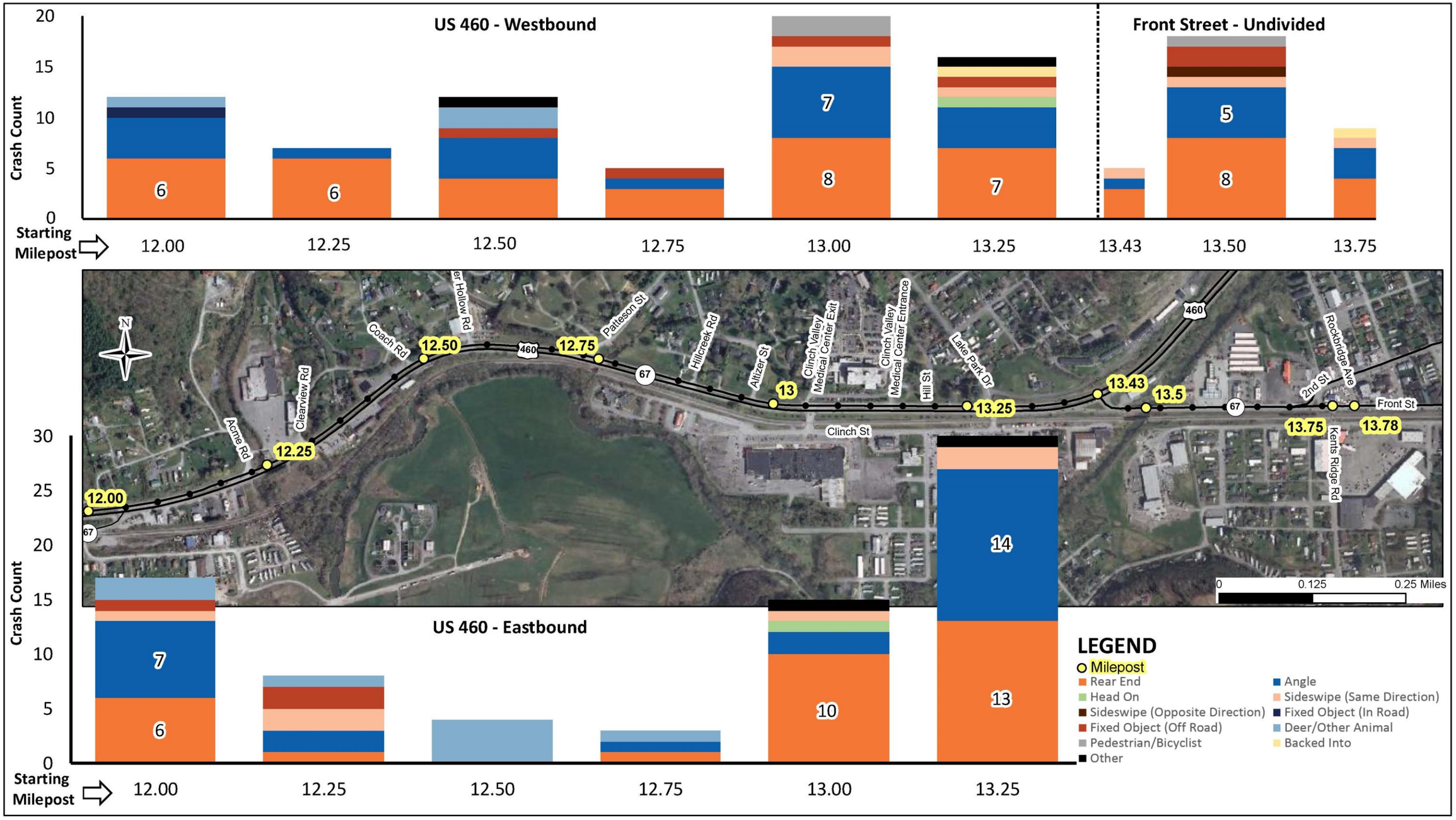
Crash activity by quarter-mile segments of roadway, or crash density, on eastbound and westbound US 460 and in both directions on Front Street is shown on the histograms in **Figure 8**. The histograms illustrate the frequencies and types of crashes that occurred in each quarter-mile segment. Because US 460 is a divided roadway, crashes that occurred in the eastbound and westbound directions were broken into separate histograms. Front Street is undivided and, as a result, all crashes that occurred on Front Street were shown in a single histogram.

In the study area, the segment with the highest crash density was located on eastbound US 460 between milepost 13.25 and 13.43. This segment included the two signalized intersections at Lake Park Drive and Front Street, but did not include any unsignalized intersections or commercial driveways. Thirty crashes were reported in this segment during the five-year crash analysis period and 14 (47%) of the reported crashes were angle crashes. Due to the high number of angle crashes that occurred in this segment with only signalized intersections, where angle crashes are generally less likely to occur, FR-300 police crash reports were requested from VDOT and were reviewed by the study team for the angle crashes in this segment. A summary of the angle crashes that occurred at Lake Park Drive and Front Street during the five-year crash analysis period is provided in the following section of the report.

US 460 at Lake Park Drive (facing east)

US 460 at Front Street (facing east)

Figure 8 – Crash Type Histograms



Lake Park Drive and Front Street Angle Crash Summary

During the five-year crash analysis period, 18 angle crashes occurred at the Lake Park Drive and Front Street intersections. Fourteen of the angle crashes were associated with the eastbound direction and four angle crashes were associated with the westbound direction. A summary of the angle crashes by year at these two intersections is shown in **Table 4**.

Table 4 – Angle Crashes at Lake Park Drive and Front Street

Year	Number of Angle Crashes	
	US 460 at Lake Park Drive	US 460 at Front Street
2011	6	2
2012	2	1
2013	0	3
2014	1	3
2015	0	0
Total	**9**	**9**
Injury	**4**	**7**
PDO	**5**	**2**

Nine angle crashes occurred at each of the intersections during the five-year crash analysis period. In addition, over the five-year analysis period, the combined total angle crashes at both intersections was highest in 2011, with eight angle crashes reported, and lowest in 2015, with zero angle crashes reported. A review of the police descriptions in the FR-300 crash reports for the 18 angles crashes indicated that the primary cause of the crashes was that one of the vehicles involved in the crash ran a red light.

Corridor Speed

A speed study was conducted by VDOT on December 19, 2016 to evaluate vehicle speeds in the US 460 study corridor. The results of the speed study are summarized in **Table 5**. Vehicle speeds were collected in both the eastbound and westbound directions of US 460 at the following three locations:

- Station 1: US 460 approximately 1/8 mile east of Front Street
- Station 2: US 460 at Patteson Street
- Station 3: US 460 at Mudlick Road

Table 5 – US 460 Speed Study Summary

Location	Eastbound US 460 Speed			Westbound US 460 Speed		
	Posted	50th Percentile	85th Percentile	Posted	50th Percentile	85th Percentile
Station 1	35 MPH	47 MPH	54 MPH	35 MPH	45 MPH	51 MPH
Station 2	35 MPH	36 MPH	41 MPH	35 MPH	36 MPH	41 MPH
Station 3	35 MPH	35 MPH	40 MPH	35 MPH	34 MPH	40 MPH

The speed study found that at all three locations, the 85th percentile speed measured at least 5 MPH above the posted speed. Additional details on the speed study are provided in **Appendix A**.

Access Spacing

The existing access spacing on US 460 and Front Street in the study area was evaluated according to the VDOT access management regulations in Appendix F of the *VDOT Road Design Manual*. The minimum spacing standards for intersections, median crossovers, and commercial entrances are dependent on the functional classification and posted speed limit of the roadway, and, as a result, the spacing standards varied within the study area. According to VDOT's 2014 Functional Classification Map, US 460 was classified as a Principal Arterial and Front Street was classified as a Minor Arterial. In addition, the posted speed limit on US 460 ranged from 35 MPH to 55 MPH and the posted speed limit on Front Street was 25 MPH. VDOT access management regulations applicable to the functional classifications and speed limits on US 460 and Front Street are listed in **Table 6**.

Table 6 – Access Management Spacing Requirements

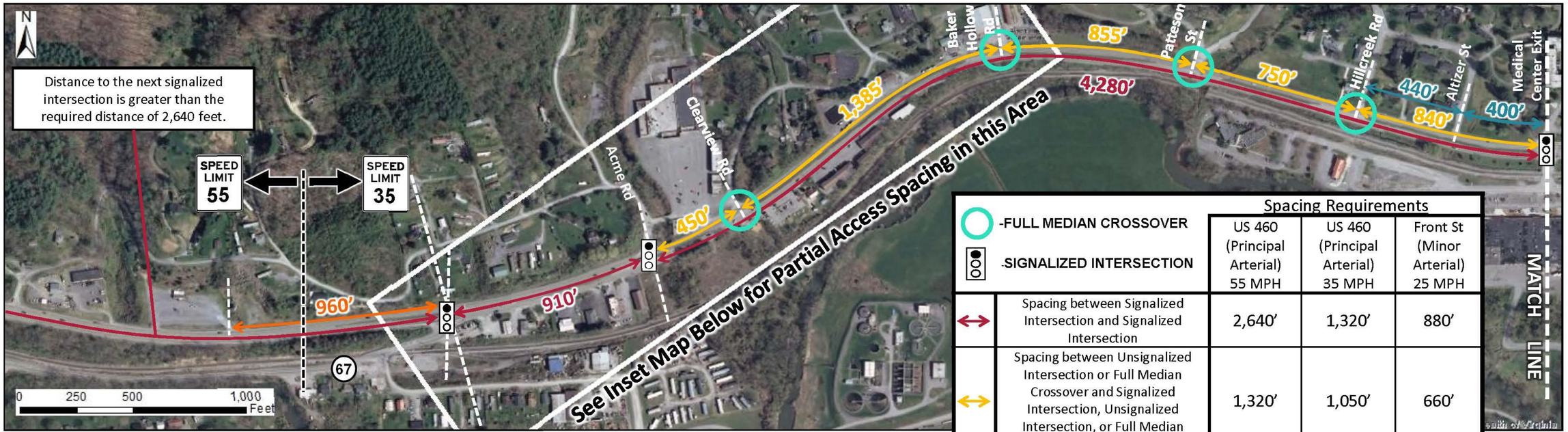
	Minimum Spacing Standards (feet)		
	US 460 (Principal Arterial) 55 MPH	US 460 (Principal Arterial) 35 MPH	Front St (Minor Arterial) 25 MPH
Spacing between Signalized Intersection and Signalized Intersection	2,640	1,320	880
Spacing between Unsignalized Intersection or Full Median Crossover and Signalized Intersection, Unsignalized Intersection, or Full Median Crossover	1,320	1,050	660
Spacing between Full Access Entrance or Directional Median and Any Intersection, Full Access Entrance, or Median Crossover	750	565	355
Spacing between Partial Access Entrance and Any Entrance, Intersection, or Median Crossover	495	305	200
Spacing between Start/End of Ramp Terminal and Any Intersection, Full Access Entrance, or Median Crossover	1,320		

Existing centerline to centerline access point spacing on US 460 and Front Street was measured using aerial maps. The existing spacing in the study area is shown in **Figure 9** and **Figure 10** and is summarized in the following sections.

Signalized Intersection Spacing

There were five signalized intersections in the study area. All signalized intersections were located on US 460 where the posted speed limit was 35 MPH. The required spacing between signalized intersections on a Principal Arterial with a posted speed limit of 35 MPH was 1,320 feet. Signalized intersection spacing in the study area is summarized in **Table 7**. Within the study area, only the spacing between Acme Road and the Clinch Valley Medical Center Exit met the minimum spacing standards for signalized intersections.

Figure 9 – Existing Access Point Spacing (1 of 2)



-FULL MEDIAN CROSSOVER -SIGNALIZED INTERSECTION	Spacing Requirements		
	US 460 (Principal Arterial) 55 MPH	US 460 (Principal Arterial) 35 MPH	Front St (Minor Arterial) 25 MPH
Spacing between Signalized Intersection and Signalized Intersection	2,640'	1,320'	880'
Spacing between Unsignalized Intersection or Full Median Crossover and Signalized Intersection, Unsignalized Intersection, or Full Median Crossover	1,320'	1,050'	660'
Spacing between Full Access Entrance or Directional Median and Any Intersection, Full Access Entrance, or Median Crossover	750'	565'	355'
Spacing between Partial Access Entrance and Any Entrance, Intersection, or Median Crossover	495'	305'	200'
Spacing between Start/End of Ramp Terminal and Any Intersection, Full Access Entrance, or Median Crossover	1,320'		

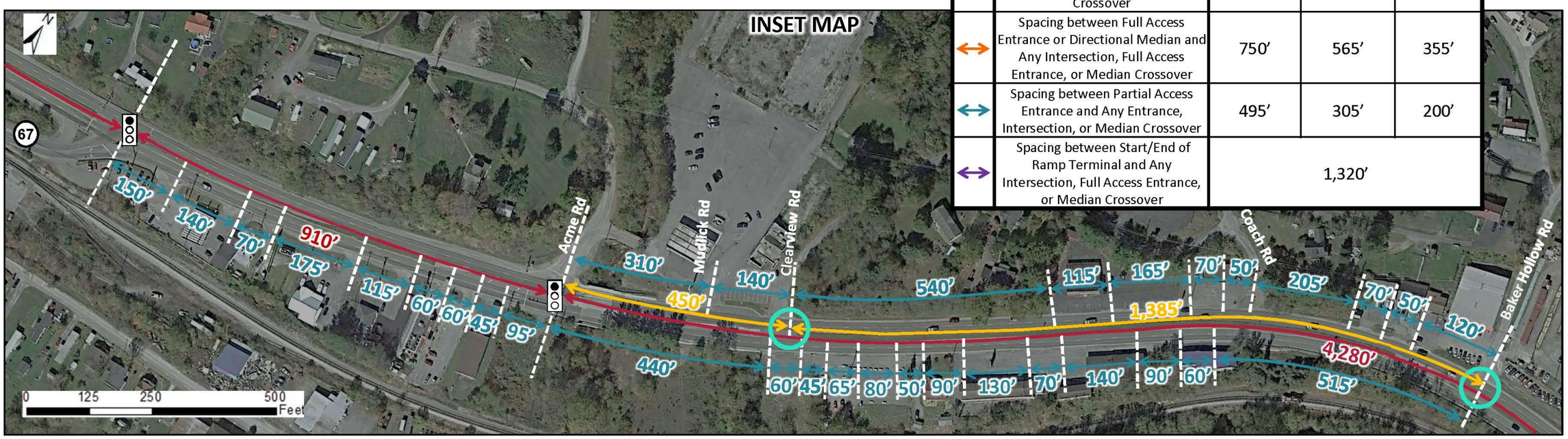
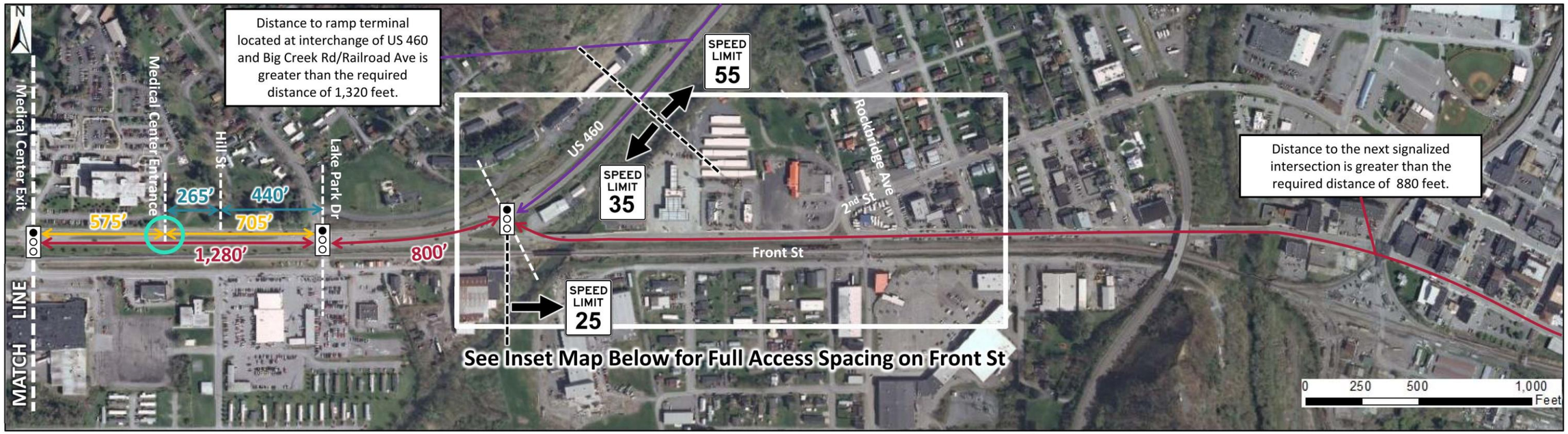


Figure 10 – Existing Access Point Spacing (2 of 2)



-FULL MEDIAN CROSSOVER -SIGNALIZED INTERSECTION		Spacing Requirements		
		US 460 (Principal Arterial) 55 MPH	US 460 (Principal Arterial) 35 MPH	Front St (Minor Arterial) 25 MPH
↔	Spacing between Signalized Intersection and Signalized Intersection	2,640'	1,320'	880'
↔	Spacing between Unsignalized Intersection or Full Median Crossover and Signalized Intersection, Unsignalized Intersection, or Full Median Crossover	1,320'	1,050'	660'
↔	Spacing between Full Access Entrance or Directional Median and Any Intersection, Full Access Entrance, or Median Crossover	750'	565'	355'
↔	Spacing between Partial Access Entrance and Any Entrance, Intersection, or Median Crossover	495'	305'	200'
↔	Spacing between Start/End of Ramp Terminal and Any Intersection, Full Access Entrance, or Median Crossover	1,320'		

Table 7 – Signalized Intersection Spacing

Arterial	From	To	Existing Spacing (Feet)	Required Spacing (Feet)	Meets Standard?
US 460	Route 67	Acme Road	910	1,320	No
US 460	Acme Road	Clinch Valley Medical Center Exit	4,280	1,320	Yes
US 460	Clinch Valley Medical Center Exit	Lake Park Drive	1,280	1,320	No
US 460	Lake Park Drive	Front Street	800	1,320	No

Unsignalized Intersection/ Full Median Crossover Spacing

There were five unsignalized intersections with full median crossovers in the study area. All unsignalized intersections were located on US 460 where the posted speed limit was 35 MPH. The required spacing between unsignalized intersections or full median crossovers and signalized intersections, unsignalized intersections, or full median crossovers on a Principal Arterial with a posted speed limit of 35 MPH was 1,050 feet. Unsignalized intersection/full median crossover spacing in the corridor is summarized in **Table 8**. Within the study area, only the spacing between Clearview Road and Baker Hollow Road met the minimum spacing standards for unsignalized intersections/full median crossovers.

Table 8 – Unsignalized Intersection/Full Median Crossover Spacing

Arterial	From	To	Existing Spacing (Feet)	Required Spacing (Feet)	Meets Standard?
US 460	Acme Road	Clearview Road	450	1,050	No
US 460	Clearview Road	Baker Hollow Road	1,385	1,050	Yes
US 460	Baker Hollow Road	Patteson Street	855	1,050	No
US 460	Patteson Street	Hillcreek Road	750	1,050	No
US 460	Hillcreek Road	Clinch Valley Medical Center Exit	840	1,050	No
US 460	Clinch Valley Medical Center Exit	Clinch Valley Medical Center Entrance	575	1,050	No
US 460	Clinch Valley Medical Center Entrance	Lake Park Drive	705	1,050	No

Full Access Entrance Spacing

In the study area, full access entrances were present on Front Street. Since Front Street was classified as a Minor Arterial and the posted speed limit was 25 MPH, the required spacing between a full access entrance and any intersection or other full access entrance was 355 feet. On the north side of Front Street there were 10 commercial entrances between US 460 and 2nd Street, none of which met the full access entrance spacing requirements. Examples of full access entrance spacing on Front Street are shown in the photos below.

Front Street (facing east)

Front Street (facing west)

Partial Access Entrance Spacing

In the study area, partial access entrances were present on US 460. The partial access entrances were located on US 460 where the posted speed limit was 35 MPH. The required spacing between partial access entrances and any other entrance or intersection was 305 feet. A high concentration of partial access entrances was located on US 460 between Route 67 and Baker Hollow Road. In this half-mile segment, there were over 25 partial access entrances, none of which met the partial access entrance spacing requirements. Examples of partial access spacing on US 460 are shown in the photos below.

US 460 between Route 67 & Acme Road (facing east)

US 460 to the east of Clearview Road (facing east)

Ramp Spacing

Access spacing was also considered in relation to on- and off-ramp terminals. US 460 transitioned to a limited access facility east of Front Street. The first interchange on the limited-access portion of US 460 was located more than a mile from the intersection of US 460 at Front Street. This spacing met the minimum required spacing of 1,320' feet between any intersection, full access entrance, or median crossover and the start or end of a ramp terminal.

Existing Conditions (2016)

Traffic operational analyses were conducted to evaluate the overall performance of the study corridor under existing (2016) AM and PM peak hour conditions. The intent of the existing conditions analyses was to provide a general understanding of the baseline traffic conditions as a starting point for developing future improvement strategies. Existing conditions were modeled using Synchro, Version 9. Existing conditions traffic analysis assumptions and results are described in more detail in the following sections.

Traffic Analysis Assumptions

Existing (2016) Synchro models were developed for AM and PM peak hour conditions based on the existing roadway geometry and collected traffic count data. Synchro inputs and analysis methodologies were consistent with the VDOT Traffic Operations and Safety Analysis Manual (TOSAM), Version 1.0. A detailed summary of the Synchro analysis inputs and assumptions is provided in **Appendix B**.

Traffic Analysis Results

The existing conditions traffic analysis results are summarized in the following section of the report. Two measures of effectiveness were selected to measure the quantitative performance of the study area intersections:

- Average vehicle delay by movement, approach, and intersection – measured in seconds per vehicle
- 95th percentile queue length – measured in feet

Delay and Level of Service

The Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM) methodologies govern the methodology for evaluating capacity and the quality of service provided to road users traveling through a roadway network. There are six letter grades of Level of Service (LOS), ranging from A to F. LOS A indicates a condition of little or no congestion whereas LOS F indicates a condition of severe congestion, unstable traffic flow, and stop-and-go conditions. Intersection LOS is defined in terms of control delay. **Table 9** summarizes the delay associated with each LOS category for signalized and unsignalized intersections, respectively. If intersection traffic volume exceeds capacity, a LOS F is automatically reported.

Table 9 – Signalized and Unsignalized Intersection Level of Service Criteria

LOS	Volume-to-Capacity Ratio	Control Delay (sec/veh)	
		Signalized Intersection	Unsignalized Intersection
A	≤ 1.0	≤10	≤10
B	≤ 1.0	>10 – 20	>10 – 15
C	≤ 1.0	>20 – 35	>15 – 25
D	≤ 1.0	>35 – 55	>25 – 35
E	≤ 1.0	>55 – 80	>35 – 50
F	> 1.0	>80	>50

Source: Transportation Research Board, Highway Capacity Manual 2010

Synchro was used to calculate the delay and associated LOS at each of the study area intersections under existing conditions. HCM 2010 methodologies were used to analyze all unsignalized intersections. However, due to the limitations of the HCM 2010 methodologies to analyze intersections with split phasing and turning movements with both shared and exclusive lane configurations, HCM 2000 methodologies were used to analyze the signalized intersections.

A table summarizing the existing conditions delay and LOS results by movement, approach, and intersection at each study area intersection is provided in **Appendix B**. **Figure 11** shows a graphical representation of the LOS results in the study area. The corresponding Synchro output sheets are included in **Appendix B**.

Intersection delay and LOS for the five signalized intersections in the study area is summarized in **Table 10**. Under existing conditions, all signalized intersections operated at a LOS of A or B in both the AM and PM peak hours.

Table 10 – Existing (2016) Signalized Intersection Delay and LOS

Signalized Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1 - US 460 at Route 67	11.9	B	12.8	B
2 - US 460 at Acme Road	4.5	A	6.6	A
7 - US 460 at Clinch Valley Medical Center Exit	9.6	A	18.8	B
9 - US 460 at Lake Park Drive	13.5	B	19.6	B
10 - US 460 at Front Street	15.5	B	16.6	B

HCM 2000 Results

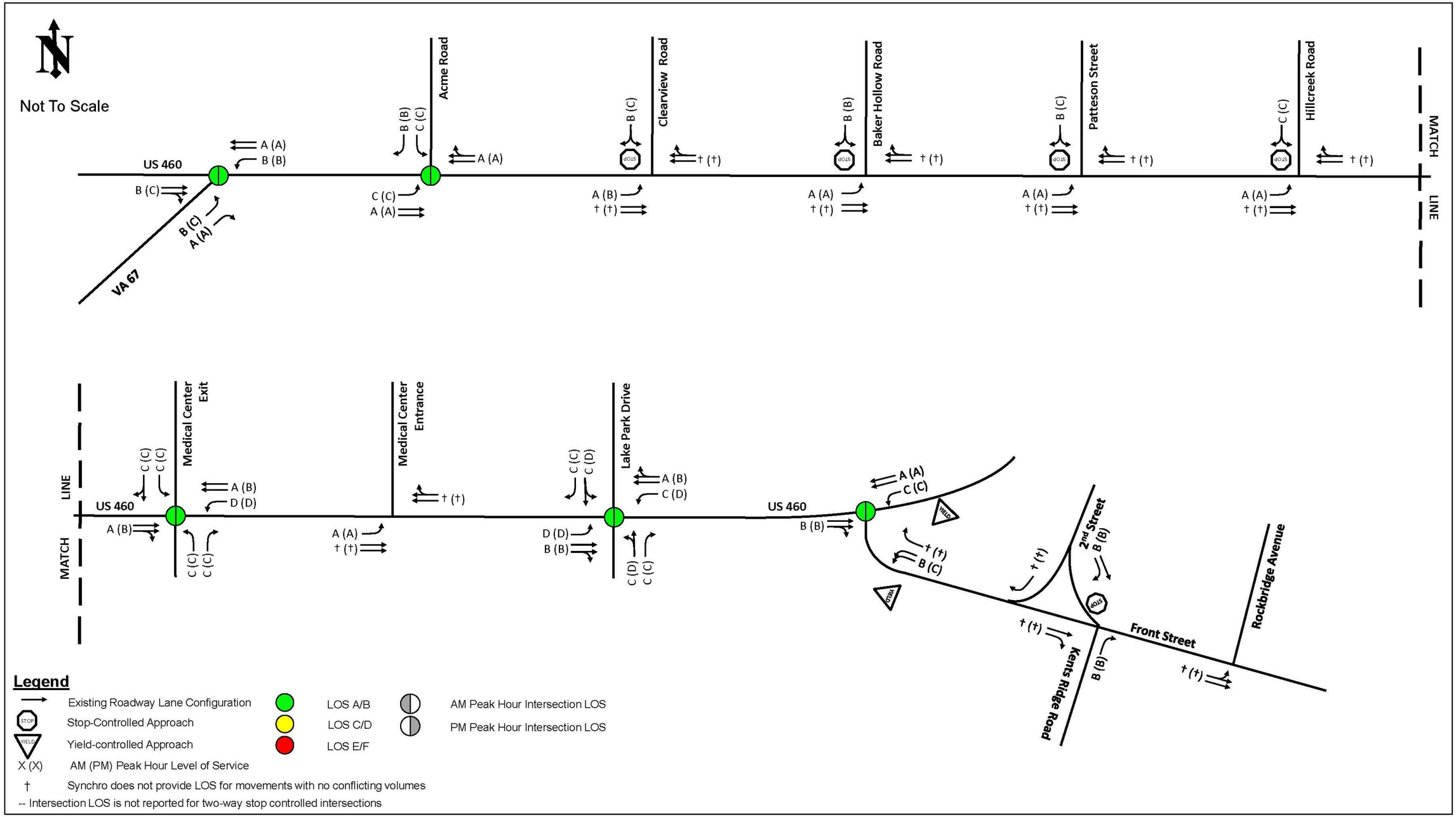
Delay and LOS at all stop controlled approaches in the study area are summarized in **Table 11**. Under existing conditions, all stop-controlled approaches operated at LOS C or better in both the AM and PM peak hours.

Table 11 – Existing (2016) Stop-Controlled Approach Delay and LOS

Unsignalized Intersection	Stop-Controlled Approach	AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
3 - US 460 at Clearview Road	Southbound	13.4	B	16.3	C
4 - US 460 at Baker Hollow Road	Southbound	15.0	B	12.6	B
5 - US 460 at Patteson Street	Southbound	13.2	B	15.4	C
6 - US 460 at Hillcreek Road	Southbound	16.2	C	22.2	C
11 - US 460 at 2nd Street/Kents Ridge Road	Northbound	11.9	B	13.0	B
	Southbound*	10.2	B	10.2	B

HCM 2010 Results
*Delay and LOS for left-turn and through movements. Right-turn movement is free flow.

Figure 11 – Existing (2016) Levels of Service



Under existing conditions, LOS D was the lowest LOS reported for an individual movement. The following study area movements operate at LOS D under existing conditions:

Intersection 7 – US 460 at Clinch Valley Medical Center Exit

- Westbound left-turn movement operated at LOS D in both the AM and PM peak hours

Intersection 9 – US 460 at Lake Park Drive

- Eastbound left-turn movement operated LOS D in both the AM and PM peak hours
- Westbound left-turn movement operated at LOS D in the PM peak hour
- Southbound through-left movement operated at LOS D in the PM peak hour

95th Percentile Queue Length

Queue length is an indicator of congestion at both signalized and unsignalized intersections. A 95th percentile queue length analysis was completed for the study area intersections under existing AM and PM peak hour conditions. A 95th percentile queue length represents the queue length with a five percent probability of being exceeded during the analysis time period.

Synchro was used to calculate the 95th percentile queue length for each intersection lane group under existing conditions. For signalized intersections, the 95th percentile queue length, measured in feet, was reported based on the Synchro queue reports. Since Synchro does not provide a queue report for unsignalized intersections, the 95th percentile queue lengths for unsignalized intersections were reported based on the HCM 2010 reports. Since HCM 2010 reports provide a queue length measured in vehicles, an average vehicle length of 25 feet was assumed to convert the queue lengths from the HCM 2010 reports to feet.

A table summarizing the 95th percentile queue lengths by lane group at each study area intersection is provided in **Appendix B**. The corresponding Synchro output sheets are also included in **Appendix B**.

Under existing conditions, none of the 95th percentile queue lengths reported by Synchro exceeded the storage capacity of a turn lane or extended to an upstream intersection. However, at the following locations, the 95th percentile queue length for the through lane group was longer than the storage capacity for an adjacent turn lane:

Intersection 7 – US 460 at Clinch Valley Medical Center Exit

- Westbound through movement queue was longer than the left-turn storage bay length during the PM peak hour

Intersection 9 – US 460 at Lake Park Drive

- Eastbound through movement queue was longer than the left-turn storage bay length during the AM and PM peak hours
- Westbound through movement queue was longer than the left-turn storage bay length during the AM and PM peak hours

TRAFFIC FORECASTING

To understand future traffic conditions in the study area and assess the long-term benefits of proposed improvements, traffic volumes were forecasted for 2030 traffic conditions. The following sections describe the methodology for developing traffic growth rates and projecting future traffic volumes for the study area.

Traffic Growth Rate Development

Both historic traffic growth trends and VDOT's Statewide Planning System (SPS) projected future traffic growth rates were reviewed and used to develop traffic growth rates for the study area.

Historic traffic growth trends were calculated from VDOT published historic AADT traffic volume estimates. VDOT AADT estimates were reviewed from 2001 to 2015 for the following three roadway segments:

- US 460 from Route 67 to BUS US 460
- Front Street from US 460 to 2nd Street
- Route 67 from Russell County Line to US 460

VDOT published AADT traffic volume estimates are based on collected traffic count data. The amount and detail of collected traffic count data varies from roadway to roadway and from year to year. In general, greater amounts of data are collected on a more frequent basis for higher volume roads. Between 2001 to 2015, the VDOT AADT estimates for the three roadway segments in the study area were based on either factored short-term traffic count data or factored short-term traffic count data with a growth element. Historic traffic growth rates for the study area roadway segments were calculated using the VDOT AADT estimates based on factored short-term traffic count data, not the estimates that included a growth factor. Linear and exponential traffic growth rates were calculated for the three study area segments and are summarized in **Table 12**. The calculated historic traffic growth rates showed primarily negative or no growth in the study area. A detailed summary of VDOT published AADT traffic volume estimates and calculated historical traffic growth rates for the three roadway segments in the study area from 2001 to 2015 is provided in **Appendix C**.

Table 12 – Historic Traffic Growth Rates

Roadway Segment	Linear Growth Rates			Exponential Growth Rates		
	3-Year (2011-2014)	9-Year (2005-2014)	12-Year (2002-2014)	3-Year (2011-2014)	9-Year (2005-2014)	12-Year (2002-2014)
US 460 (Route 67 to BUS US 460)	-4.44%	-2.08%	+0.69%	-4.66%	-2.28%	+0.67%
Front Street (US 460 to 2nd Street)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Route 67 (Russell County Line to US 460)	-3.14%	-2.22%	-1.55%	-3.25%	-2.45%	-1.70%

SPS projected future traffic growth rates were also reviewed as part of the traffic growth rate development process. SPS forecast AADTs were reviewed for 2020, 2030, and 2040 and compared to the 2015 AADT based on traffic count data for the following two roadway segments:

- US 460 from Route 67 to BUS US 460
- Front Street from US 460 to 2nd Street

Projected future traffic growth rates for the study area roadway segments were calculated using the SPS forecast AADTs. Linear and exponential growth rates for 5-year, 15-year, and 25-year periods are summarized in **Table 13**.

The calculated projected future traffic growth rates showed minimal growth in the study area. A detailed summary of SPS forecast AADT and projected future traffic growth rates for the two roadway segments in the study area is provided in **Appendix C**.

Table 13 – Projected Future Traffic Growth Rates

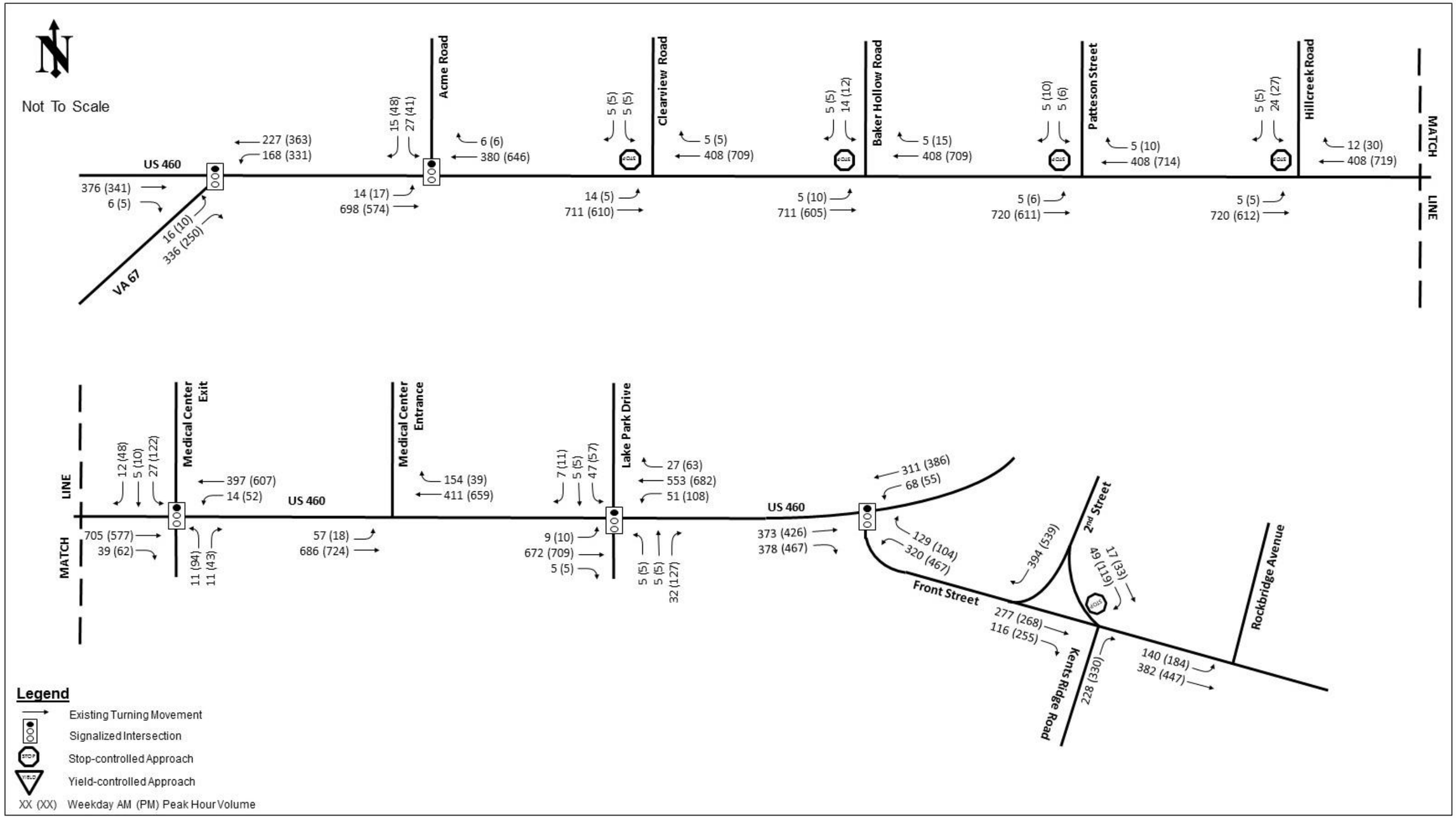
Roadway Segment	Linear Growth Rates			Exponential Growth Rates		
	5-Year (2015-2020)	15-Year (2015-2030)	25-Year (2015-2040)	5-Year (2015-2020)	15-Year (2015-2030)	25-Year (2015-2040)
US 460 (Route 67 to BUS US 460)	+0.66%	+0.66%	+0.66%	+0.62%	+0.63%	+0.66%
Front Street (US 460 to 2nd Street)	+1.24%	+1.24%	+1.24%	+1.09%	+1.15%	+1.21%

The SWG reviewed the VDOT historic traffic growth rates and SPS projected future traffic growth rates. Based on the calculated growth rate data and an understanding of the potential for development in the study area, the SWG agreed upon a 0.5% linear traffic growth rate for all routes in the entire study area.

Projected Traffic Volumes

Linear traffic growth rates were applied to the 2016 existing traffic volumes to generate projected 2030 traffic volumes. The projected traffic volumes were re-balanced throughout the study network. The projected 2030 AM and PM peak hour traffic volumes for the study area are summarized in **Figure 12**.

Figure 12 – No-Build (2030) Peak Hour Traffic Volumes



NO-BUILD TRAFFIC CONDITIONS (2030)

No-build traffic conditions were analyzed to evaluate the results of future (2030) traffic demand on the existing roadway network. The intent of no-build conditions analysis was to provide a general understanding of the baseline future traffic conditions to be used to evaluate the effectiveness of potential future improvement strategies. Synchro modeling assumptions and analysis results for 2030 no-build conditions are described in the following sections.

Traffic Analysis Assumptions

The existing conditions Synchro models were used as a basis to develop the no-build models. No geometric or traffic signal timing changes were made to the existing Synchro models, but the models were updated with projected 2030 no-build traffic volumes. A detailed summary of Synchro modeling inputs and assumptions for the no-build models is provided in **Appendix D**.

Traffic Analysis Results

The same measures of effectiveness used to evaluate existing conditions were used to measure the quantitative performance of the no-build Synchro models:

- Average vehicle delay by movement, approach, and intersection – measured in seconds per vehicle
- 95th percentile queue length – measured in feet

Delay and Level of Service

Synchro was used to calculate the delay and associated LOS at each study area intersection under no-build conditions. The same methodologies used to analyze existing conditions were also used to analyze no-build conditions. HCM 2010 methodologies were used to analyze all unsignalized intersections and HCM 2000 methodologies were used to analyze the signalized intersections.

A table summarizing the no-build delay and LOS results by movement, approach, and intersection at each study area intersection is provided in **Appendix D**. **Figure 13** shows a graphical representation of the LOS results at each intersection in the study area. The corresponding Synchro output sheets are included in **Appendix D**.

Intersection delay and LOS for the five signalized intersections in the study area is summarized in **Table 14**. Under no-build conditions, the intersection delays increased by less than three seconds from existing conditions at all signalized intersections in the study area. Except for the intersection of US 460 at Lake Park Drive, during the PM peak hour, all signalized intersections continued to operate at a LOS of A or B in both the AM and PM peak hours under no-build conditions. The intersection LOS for US 460 at Lake Park Drive during the PM peak hour worsened from LOS B under existing conditions to LOS C under no-build conditions.

Table 14 – No-Build (2030) Signalized Intersection Delay and LOS

Signalized Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1 - US 460 at Route 67	12.4	B	13.1	B
2 - US 460 at Acme Road	4.6	A	7.3	A
7 - US 460 at Clinch Valley Medical Center Exit	9.8	A	19.4	B
9 - US 460 at Lake Park Drive	13.6	B	20.2	C
10 - US 460 at Front Street	16.4	B	18.7	B

HCM 2000 Results

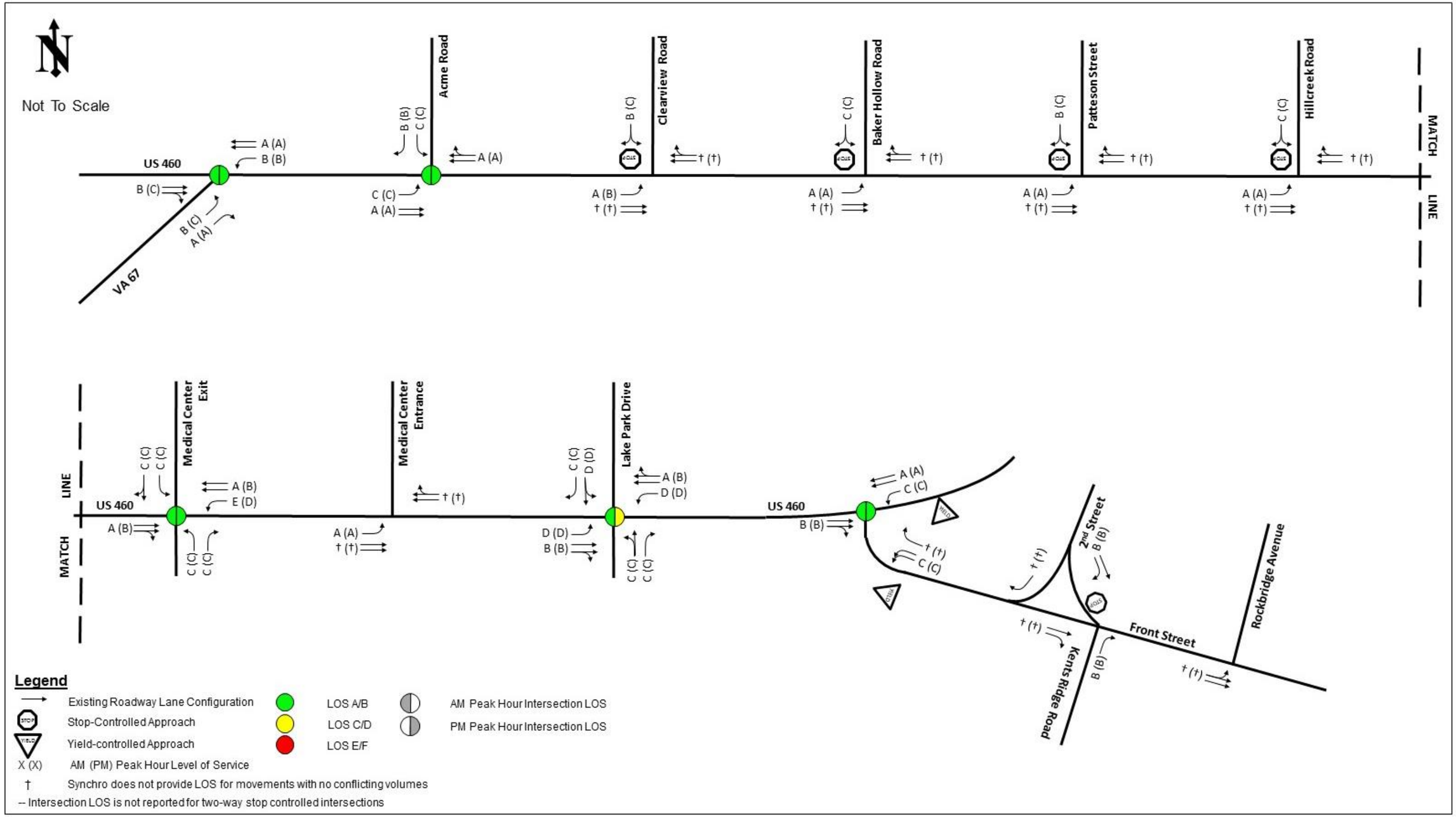
Delay and LOS at all stop-controlled approaches in the study area under no-build conditions are summarized in **Table 15**. Under no-build conditions, all stop-controlled approaches continued to operate at LOS C or better in both AM and PM peak hours. The only unsignalized intersection where a stop-controlled approach operated at a worse LOS under no-build conditions, when compared to existing conditions, was the intersection of US 460 at Baker Hollow Road. The southbound Baker Hollow Road stop-controlled approach worsened from LOS B under existing conditions to LOS C under no-build conditions during the PM peak hour.

Table 15 – No-Build (2030) Unsignalized Intersection Approach Delay and LOS

Unsignalized Intersection	Stop-Controlled Approach	AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
3 - US 460 at Clearview Road	Southbound	14.1	B	17.5	C
4 - US 460 at Baker Hollow Road	Southbound	16.0	C	20.8	C
5 - US 460 at Patteson Street	Southbound	13.8	B	16.0	C
6 - US 460 at Hillcreek Road	Southbound	17.4	C	24.7	C
11 - US 460 at 2nd Street/Kents Ridge Road	Northbound	12.4	B	13.8	B
	Southbound*	10.3	B	10.3	B

HCM 2010 Results
*Delay and LOS for left-turn and through movements. Right-turn movement is free flow.

Figure 13 – No-Build (2030) Level of Service



Under no-build conditions, LOS E was the lowest reported LOS for an individual movement. No additional movements, other than those identified in existing conditions, operated at LOS D or worse under no-build conditions. The following study area movements operate at LOS D or LOS E under existing and no-build conditions:

Intersection 7 – US 460 at Clinch Valley Medical Center Exit

- Westbound left-turn movement operated at LOS E in the AM peak hour and LOS D in the PM peak hour

Intersection 9 – US 460 at Lake Park Drive

- Eastbound left-turn movement operated LOS D in both the AM and PM peak hours
- Westbound left-turn movement operated at LOS D in both the AM and PM peak hours
- Southbound through-left movement operated at LOS D in the AM and PM peak hours

95th Percentile Queue Length

A 95th percentile queue length analysis was completed for the study area intersections under no-build AM and PM peak hour conditions. Synchro was used to calculate the 95th percentile queue length under no-build conditions for each intersection lane group using the same methodologies used for existing conditions. For signalized intersections, the 95th percentile queue lengths were reported based on Synchro queue reports. For unsignalized intersections, the 95th percentile queue lengths were reported based on HCM 2010 reports assuming an average vehicle length of 25 feet.

A table summarizing the 95th percentile queue lengths by lane group at each study area intersection is provided in **Appendix D**. The corresponding Synchro output sheets are also included in **Appendix D**. No-build 95th percentile queue lengths were compared to existing 95th percentile queue lengths.

As in existing conditions, under no-build conditions, none of the 95th percentile queue lengths reported by Synchro exceeded the storage capacity of a turn lane or extended to an upstream intersection. In addition, the same locations where 95th percentile queue lengths for a through lane group were longer than the storage capacity for an adjacent turn lane under existing conditions continued to be a queuing issue under no-build conditions:

Intersection 7 – US 460 at Clinch Valley Medical Center Exit

- Westbound through movement queue was longer than the left-turn storage bay length during the PM peak hour

Intersection 9 – US 460 at Lake Park Drive

- Eastbound through movement queue was longer than the left-turn storage bay length during the AM and PM peak hours
- Westbound through movement queue was longer than the left-turn storage bay length during the AM and PM peak hours

Improvement Screening and Analysis

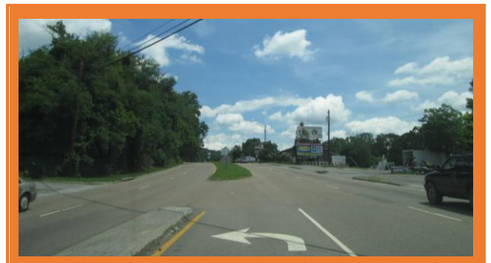
Improvement projects were developed to address safety, geometric, and operational deficiencies along the study corridor identified in the existing and no-build analyses, as well as during the field review. Alternative concepts were developed by the SWG at an alternative development workshop and then screened based on operational analyses, preliminary cost estimates, and feedback on feasibility from the SWG. Based on the screening results, final improvement projects were selected. More detailed design, cost estimates, and schedule estimates were developed for these selected improvement projects. The following sections describe the concept development, alternative analysis, and improvement project selection.

Concept Development

On Tuesday, November 15, 2016, the SWG participated in an alternative development workshop at the Richlands Town Hall. During this workshop, alternatives were developed to address deficiencies identified during the field review and from SWG feedback. The SWG focused on the six objectives listed below when developing the proposed alternatives. Details and sketches of the proposed alternative concepts from the alternative development workshop are provided in **Appendix E**.

1. **Improve access spacing along the study corridor**

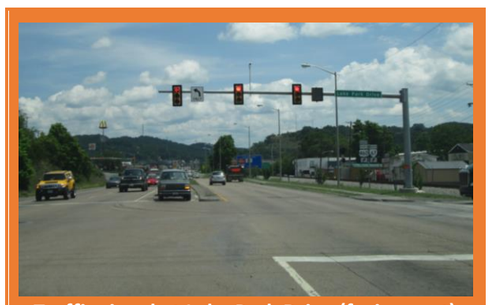
Existing access spacing was evaluated according to the VDOT access management regulations in Appendix F of the *VDOT Road Design Manual* and locations not meeting minimum spacing standards were identified. The SWG focused on addressing deficient unsignalized intersections/full median crossovers spacing and proposed alternatives to reduce the number and severity of potential conflict points by converting full median crossovers to directional median crossovers. Two alternatives were developed to improve unsignalized intersection/full median crossover spacing:



Full median crossover at Clearview Road (facing east)

- *Alternative 1: Access Management Improvements – Median Opening Spacing Full Compliance*
- *Alternative 2: Access Management Improvements – Median Opening Spacing Partial Compliance*

2. **Improve progression between signalized intersections**



Traffic signal at Lake Park Drive (facing east)

Existing conditions observations identified poor progression between the signalized intersections on US 460 at the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street. These traffic signals were not coordinated and vehicles frequently experienced red lights at back-to-back intersections. In addition, crash analysis identified red light running as a contributing factor to crashes in this area. One alternative was developed to improve corridor progression in this area:

- *Alternative 3: Traffic Signal Communications and Retiming Improvements*

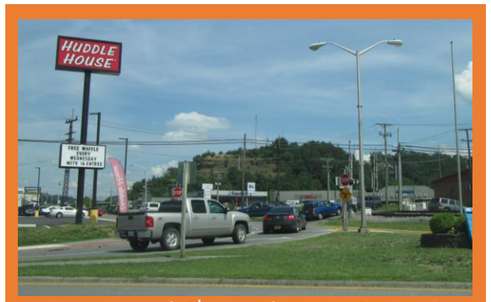
3. **Improve safety at locations with poor sight distance**

During the existing conditions field review, a sight distance safety concern was identified for the southbound Clearview Road approach at US 460. Horizontal and vertical curves in this area restricted the view to the east for southbound vehicles on Clearview Road. The poor sight distance created a challenge for southbound vehicles on Clearview Road to turn both left and right onto US 460. Two alternatives were developed to improve safety by rerouting vehicles on the southbound Clearview Road approach:

Existing sight distance on US 460 from Clearview Road (facing east)

- *Alternative 4: Conversion of Clearview Road to One-Way Street*
- *Alternative 5: Clearview Road, Mudlick Road, and Acme Road Connection*

4. **Improve safety at the Front Street/2nd Street/Kents Ridge Road intersection**



Front Street/2nd Street/Kents Ridge Road intersection

The intersection of Front Street/2nd Street/Kents Ridge Road was identified as a location with safety concerns due to confusing geometry, poor sight triangles, and a hump railroad crossing. Under existing conditions, the alignment of 2nd Street at Front street created a limited sight-triangle for southbound vehicles looking west. In addition, challenges were identified for the Kents Ridge Road approach at Front Street due to the proximity and grade of the Norfolk Southern railroad crossing. SWG members familiar with the study area indicated that this crossing is particularly challenging for tractor trailers and there have been several incidents where tractor trailers have become stuck on the railroad crossing due to the significant grade change. Three alternatives were developed to improve safety and reduce driver confusion in this area:

- *Alternative 6: Front Street/2nd Street Partial Roundabout*
- *Alternative 7: Realignment of 2nd Street Approach at Front Street*
- *Alternative 8: Rockbridge Avenue Railroad Crossing*

5. **Improve access to properties south of the Norfolk Southern Railway tracks**

The Norfolk Southern Railway tracks that run south of US 460 and Front Street and the Clinch River were identified as access constraints in the study area. Under existing conditions, several businesses, many of which rely on tractor trailers for business operations, were located in the area bounded by the railroad tracks to the north and the Clinch River to the south. The only access to these properties was via two humped railroad crossings, one across from the Clinch Valley Medical Center exit and one at Lake Park Drive. Both crossings were at-grade, hump crossings that connect US 460, north of the railroad tracks, to

Lake Park Drive railroad crossing

Clinch Street, a frontage road south of the railroad tracks. The distances between the US 460 and Clinch Street intersections on either side of both railroad crossings were approximately 100 feet. The proximity of the US 460 and Clinch Street intersections, in combination with the railroad crossing, provided limited storage for northbound vehicles at the US 460 intersections and created challenging tractor trailer movements. Two alternatives were developed to improve access to the properties south of the railroad tracks:

- *Alternative 9: New Frontage Road Bridge*
- *Alternative 10: Clinch Street Railroad Crossing Improvements*

6. **Improve safety on westbound US 460 to the east of Front Street**

Westbound US 460 to the east of Front Street

Under existing conditions, westbound US 460 transitioned from a limited access, four-lane, divided highway with a posted speed limit of 55 MPH to a nonlimited access, four-lane, divided highway with a posted speed limit of 35 MPH approximately a quarter mile east of Front Street. In the westbound travel direction on US 460, Front Street was the first intersection encountered after the end of limited access and was located on a horizontal curve. Crash analysis identified red- light running as an issue in this area and the speed study reported 50th and 85th percentile speeds of 45 MPH and 51 MPH, respectively, in the 35 MPH zone on westbound US 460 to the east of Front Street. One alternative was developed to improve safety on westbound US 460 to the east of the Front Street intersection:

- *Alternative 11: Flashing Speed Limit Signs/Warning Beacons*

Alternatives Analysis

Following the alternatives development workshop, improvements were screened based on operational analysis and preliminary cost estimates. **Table 16** summarizes whether operational analysis and/or preliminary cost estimates were completed for each alternative. Operational analysis was only completed for alternatives that changed the geometry of the roadway and where existing traffic count data was available. Because traffic counts were not collected on the frontage roads, Clinch Street and S. Front Street, operational analysis was not performed for Alternative 9 or Alternative 10.

Synchro was used to assess the operational benefits of the alternatives under future (2030) AM and PM peak hour traffic demand conditions. No-build 2030 AM and PM peak hour traffic volumes were rerouted and rebalanced to account for the geometric conditions for the alternatives. Each alternative was evaluated independently and compared to the 2030 no-build AM and PM peak hour results. Rerouted traffic volume figures; tables summarizing the delay, LOS, and 95th percentile queue lengths; and Synchro output sheets are provided in **Appendix E** for each alternative for which operational analysis was completed.

Table 16 – Alternative Analysis Screening Evaluations

Alternative	Operational Analysis?	Preliminary Cost Estimate?
1) Access Management Improvements – Median Opening Spacing Full Compliance	✓	✓
2) Access Management Improvements – Median Opening Spacing Partial Compliance	✓	✓
3) Traffic Signal Communications and Retiming Improvements	✓	✓
4) Conversion of Clearview Road to One-Way Street	✓	✓
5) Clearview Road, Mudlick Road, and Acme Road Connection	✓	✓
6) Front Street/2nd Street Partial Roundabout	✓	✓
7) Realignment of 2nd Street Approach at Front Street	✓	✓
8) Rockbridge Avenue Railroad Crossing	✓	✓
9) New Frontage Road Bridge		✓
10) Clinch Street Railroad Crossing Improvements		✓
11) Flashing Speed Limit Signs/Warning Beacons		✓

High-level planning level cost estimate ranges were developed for each of the alternatives based on a combination of high and low unit costs from the *2015 TMPD Planning Level Cost Estimates Spreadsheet* and experience. Cost estimates for preliminary engineering; right-of-way and utility relocation; and construction were developed for each alternative and summed to determine the total project cost. At this screening stage, right-of-way and utility relocation costs were estimated as a percentage of the construction cost for alternatives where right-of-way and/or utility relocation was anticipated. All costs were reported in 2017 dollars. The intent of the planning level cost estimates was to provide an order-of-magnitude range for the total project cost to be used for comparison and screening purposes. A summary table of the planning-level cost estimates for each alternative is provided in **Appendix E**.

Improvement Project Selection

The final step in the screening process was the selection of improvement projects to move forward in the improvement development process, which included the development of CAD concepts and refined cost and schedule estimates. An online SWG meeting was conducted on Thursday, January 19, 2017 to review the alternative analysis results and preliminary cost estimates. SWG members provided additional input on feasibility that factored into the final project sections. The selected improvement projects are indicated in **Table 17**.

A secondary component of improvement project selection was the decision of which projects to include in the preferred build analysis. Projects selected for inclusion in the preferred build alternative are identified in **Table 17**. The purpose of the preferred build analysis was to evaluate the combined operations of multiple improvements in one Synchro model to understand how the improvements work in conjunction with one another. Because some of the selected projects have the same or overlapping project locations, not all selected projects could be included in

the preferred build model. The SWG selected projects anticipated to have a more significant impact on the corridor for the preferred build analysis.

Table 17 – Improvement Project Selection Summary

Alternative	Selected Project?	Included in Preferred Build?
1) Access Management Improvements – Median Opening Spacing Full Compliance		
2) Access Management Improvements – Median Opening Spacing Partial Compliance	✓	✓
3) Traffic Signal Communications and Retiming Improvements	✓	✓
4) Conversion of Clearview Road to One-Way Street	✓	✓
5) Clearview Road, Mudlick Road, and Acme Road Connection		
6) Front Street/2nd Street Partial Roundabout		
7) Realignment of 2nd Street Approach at Front Street	✓	
8) Rockbridge Avenue Railroad Crossing	✓	✓
9) New Frontage Road Bridge	✓	
10) Clinch Street Railroad Crossing Improvements	✓	
11) Flashing Speed Limit Signs/Warning Beacons	✓	

Additional details on the selection of improvement projects and projects for the preferred build model are included in **Appendix E.**

PREFERRED BUILD TRAFFIC CONDITIONS (2030)

Preferred build traffic conditions were analyzed to evaluate the results of future (2030) traffic demand on the preferred build roadway network. The intent of the preferred build condition analysis was to evaluate the effectiveness of the selected improvement projects and understand how the improvement projects work in conjunction with one another. Synchro modeling assumptions and analysis results for the 2030 preferred build traffic conditions are described in the following sections.

Traffic Analysis Assumptions

The no-build conditions models were used as the basis to develop the preferred build conditions models. Roadway geometry and traffic signal timing adjustments were made to reflect the improvement strategies set forth in the preferred build alternative. The models were updated with rerouted future (2030) traffic volumes to account for changing traffic patterns primarily due to geometric changes in the preferred build alternatives. A detailed summary of Synchro modeling inputs and assumptions for the preferred build model are provided in **Appendix F**. The rerouted future traffic volumes used for the build models are shown in **Figure 14**.

Traffic Analysis Results

The same measures of effectiveness used to evaluate existing and no-build conditions were used to measure the quantitative performance of the preferred build Synchro models:

- Average vehicle delay by movement, approach, and intersection – measured in seconds per vehicle
- 95th percentile queue length – measured in feet

Delay and Level of Service

Synchro was used to calculate the delay and associated LOS at each study area intersection under preferred build conditions. The same methodologies used to analyze existing and no-build conditions were also used to analyze preferred build conditions. HCM 2010 methodologies were used to analyze all unsignalized intersections and HCM 2000 methodologies were used to analyze the signalized intersections.

A table summarizing the build conditions delay and LOS results by movement, approach, and intersection at each study area intersection is provided in **Appendix F**. **Figure 15** shows a graphical representation of the LOS results at each intersection in the study area. The corresponding Synchro output sheets are included in **Appendix F**.

Intersection delay and LOS for the five signalized intersections in the study area is summarized in **Table 18**. Under preferred build conditions, the intersection delays at signalized intersections were comparable to the delays under no-build conditions. All signalized intersections in the study area operated at an LOS B or better under preferred build conditions in both the AM and PM peak hours. The intersection of US 460 at Lake Park Drive during the PM peak hour improved from LOS C under no-build conditions to LOS B under build conditions.

Table 18 – Build (2030) Signalized Intersection Delay and LOS

Signalized Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1 - US 460 at Route 67	12.4	B	13.1	B
2 - US 460 at Acme Road	5.3	A	7.4	A
7 - US 460 at Clinch Valley Medical Center Exit	7.9	A	18.7	B
9 - US 460 at Lake Park Drive	10.9	B	16.5	B
10 - US 460 at Front Street	17.8	B	19.2	B

HCM 2000 Results

Delay and LOS at all stop-controlled approaches in the study area under preferred build conditions are summarized in **Table 19**. Under preferred build conditions, all stop-controlled approaches continued to operate at LOS C or better in both AM and PM peak hours. Under the preferred build geometry, the southbound Clearview Road movements were rerouted to Acme Road and the US 460 at 2nd Street/Kents Ridge Road movements were moved to the new US 460 at Rockbridge Road/Kents Ridge Road intersection. In addition, because the full median opening at Hillcreek Road was converted to a directional median, southbound left-turns at Hillcreek Road were rerouted to Patteson Street. Only minor increases in delay were reported at the intersections of US 460 at Acme Road (signalized), Patteson Street (unsignalized), and Rockbridge Road (unsignalized) despite serving additional vehicles due to rerouting. All stop-controlled approaches continued to operate at LOS C or better under preferred build conditions.

Table 19 – Build (2030) Unsignalized Intersection Approach Delay and LOS

Unsignalized Intersection	Stop-Controlled Approach	AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
3 - US 460 at Clearview Road	Southbound	n/a	n/a	n/a	n/a
4 - US 460 at Baker Hollow Road	Southbound	16.0	C	20.8	C
5 - US 460 at Patteson Street	Southbound	17.8	C	23.6	C
6 - US 460 at Hillcreek Road	Southbound	9.7	A	11.1	B
11 - US 460 at 2nd Street	Northbound	n/a	n/a	n/a	n/a
	Southbound	n/a	n/a	n/a	n/a
12 - US 460 at Rockbridge Road/Kents Ridge Road	Northbound*	n/a	n/a	n/a	n/a
	Southbound	11.8	B	12.7	B

HCM 2010 Results
*Right-turn movement is free-flow.

Figure 14 – Build (2030) Peak Hour Traffic Volumes

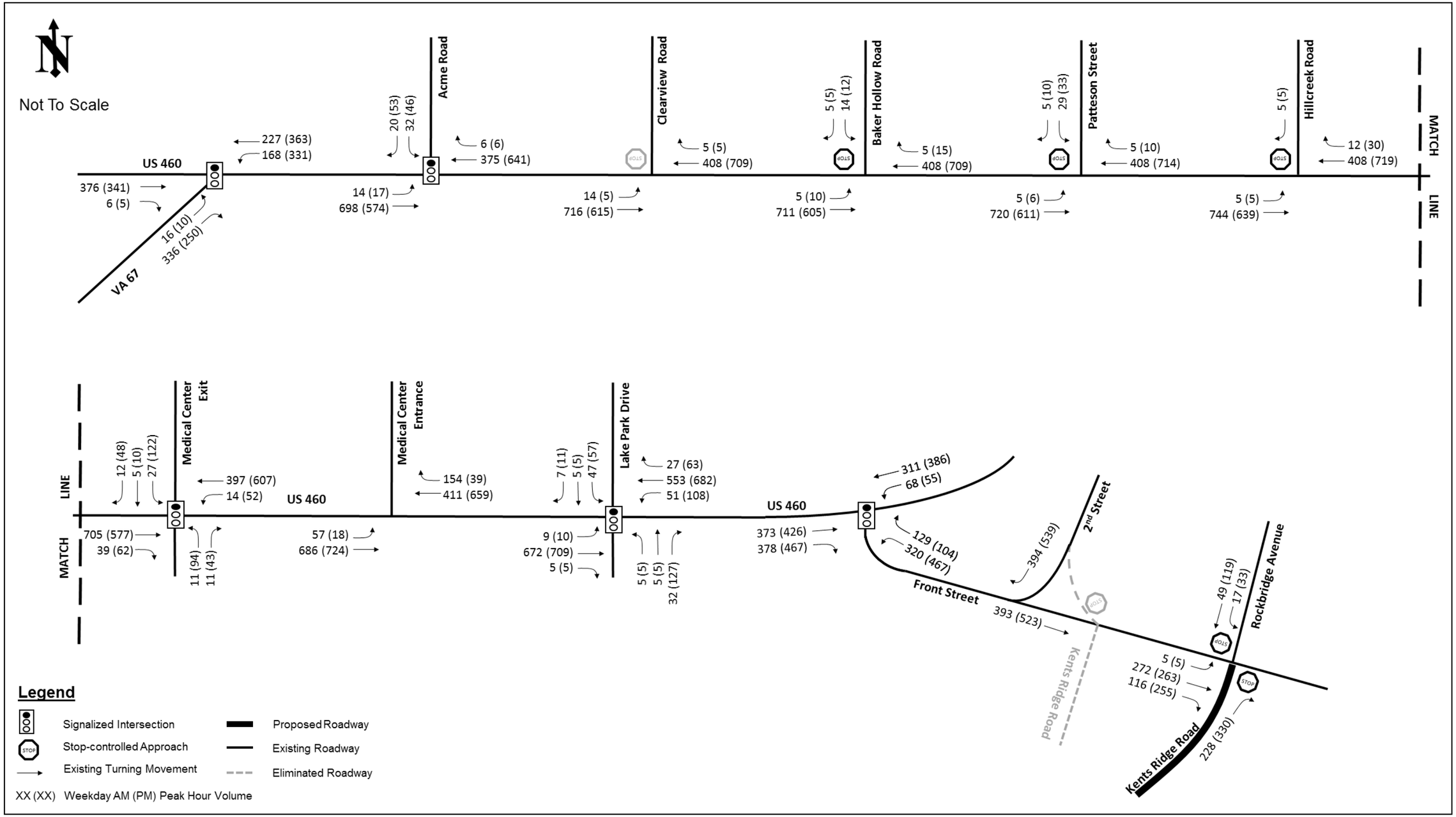
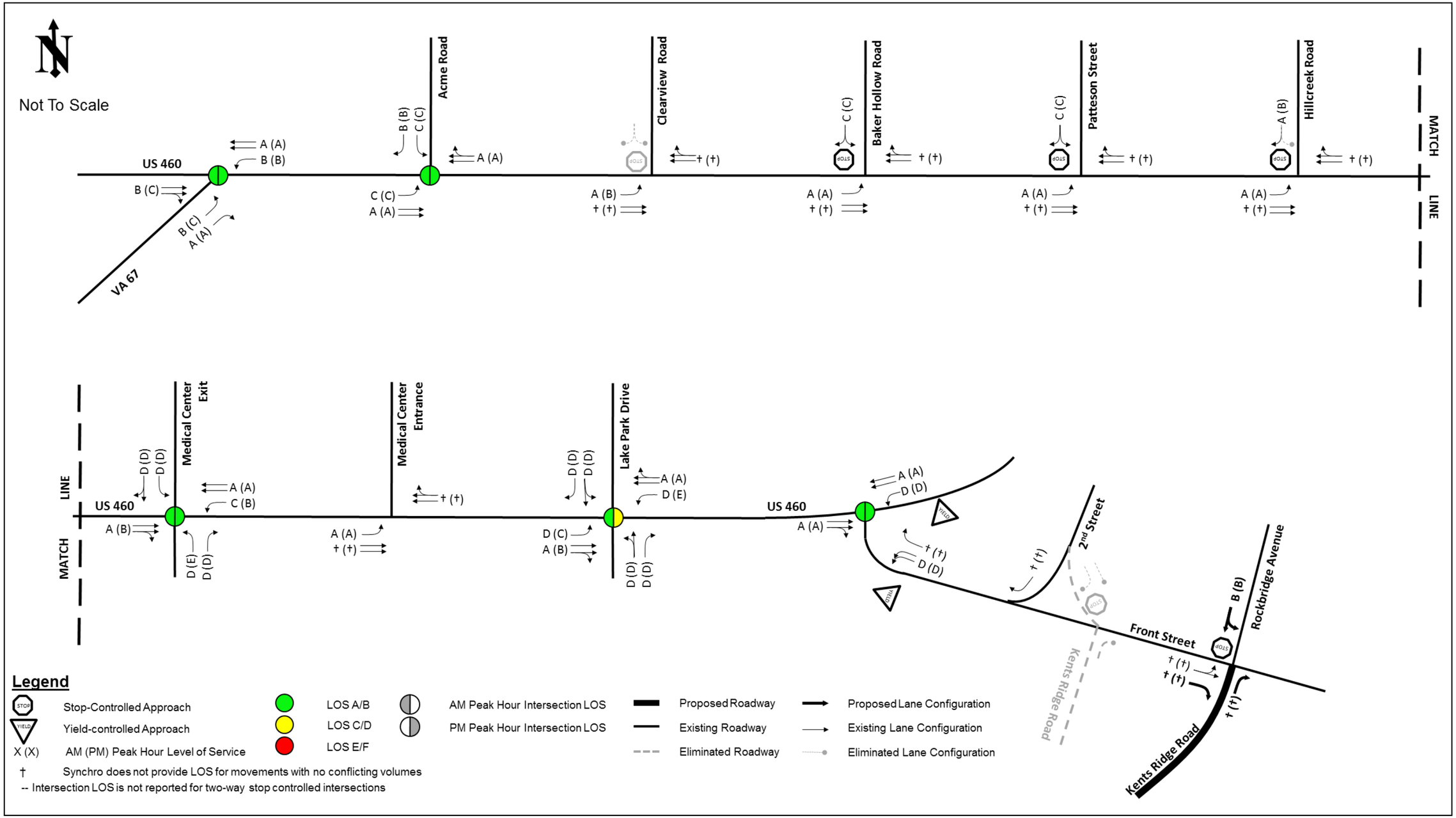


Figure 15 – Build (2030) Level of Service



Under preferred build conditions, LOS E was the lowest LOS reported for an individual movement. Due to the coordination of the traffic signals at the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street, several left-turn and side street movements operated at LOS D or LOS E under preferred build conditions. The coordinated traffic signal timings prioritized traffic flow along US 460, which resulted in lower LOS for some left-turn and side street movements along the study corridor. The following study area movements operated at LOS D or LOS E under preferred build conditions:

Intersection 7 – US 460 at Clinch Valley Medical Center Exit

- Southbound through-right movement operated at LOS D in the AM and PM peak hours
- Southbound left-turn movement operated at LOS D in the AM and PM peak hours
- Northbound left-turn movement operated at LOS D in the AM peak hour and LOS E in the PM peak hour
- Northbound right-turn movement operated at LOS D in the AM and PM peak hours

Intersection 9 – US 460 at Lake Park Drive

- Eastbound left-turn movement operated LOS D in the AM peak hour
- Westbound left-turn movement operated at LOS D in the AM peak hour and LOS E in the PM peak hour
- Southbound through-left movement operated at LOS D in the AM and PM peak hours
- Southbound right-turn movement operated at LOS D in the AM and PM peak hours
- Northbound through-left movement operated at LOS D in the AM and PM peak hours
- Northbound right-turn movement operated at LOS D in the AM and PM peak hours

Intersection 9 – US 460 at Front Street

- Westbound left-turn movement operated at LOS D in the AM and PM peak hours
- Northbound left-turn movement operated at LOS D in the AM and PM peak hours

95th Percentile Queue Length

A 95th percentile queue length analysis was completed for the study area intersections under preferred build AM and PM peak hour conditions. Synchro was used to calculate the 95th percentile queue length under preferred build conditions for each intersection lane group using the same methodologies used for existing and no-build conditions. For signalized intersections, the 95th percentile queue lengths were reported based on Synchro queue reports. For unsignalized intersections, the 95th percentile queue lengths were reported based on HCM 2010 reports assuming an average vehicle length of 25 feet.

A table summarizing the 95th percentile queue lengths by lane group at each study area intersection under preferred build conditions is provided in **Appendix F**. The corresponding Synchro output sheets are also included in **Appendix F**. Preferred build 95th percentile queue lengths were compared to no-build 95th percentile queue lengths.

As in existing and no-build conditions, under build conditions, none of the 95th percentile queue lengths reported by Synchro exceeded the storage capacity of a turn lane or extended to an upstream intersection. Under existing and preferred build conditions, there were no locations where 95th percentile queue lengths for a through lane group was longer than the storage capacity for an adjacent turn lane.

Conceptual Design, Costs, and Schedules

Conceptual designs, refined planning-level cost estimates, and schedule estimates were developed for each selected improvement project and are summarized in the following sections. One-page summary sheets were designed for each improvement projects and are included in **Appendix H**. The summary sheets provide a brief project description, conceptual design layout, planning level cost estimate, project schedule and project location map for each improvement project.

Conceptual Design

Conceptual designs were developed for the improvement projects. CAD drawings were developed for improvement projects with geometric components. During the CAD drawing development, the project designs were further refined and in some cases modifications were made to the initial concepts developed during the concept development phase. The following sections describe and provide a graphic for each of the selected improvement concepts and discuss any design modifications from the conceptual development phase.

Conceptual design plans were developed in accordance with the following applicable guidelines:

- A Policy on Geometric Design of Highways and Streets (AASHTO 2011)
- VDOT Road Design Manual (Issued January 2005, Revised July 2016)
- VDOT Road and Bridge Standards (VDOT 2016, latest revisions)
- Manual on Uniform Traffic Control Devices (MUTCD 2009)
- 2011 Virginia Supplement to the MUTCD

Design criteria and guidance from these documents were applied to roadways within the project limits based on functional classification and roadway design speeds. The proposed design assumed a WB-67 as the design vehicle to determine the design impacts of the turning radius.

Alternative 2: Access Management Improvements

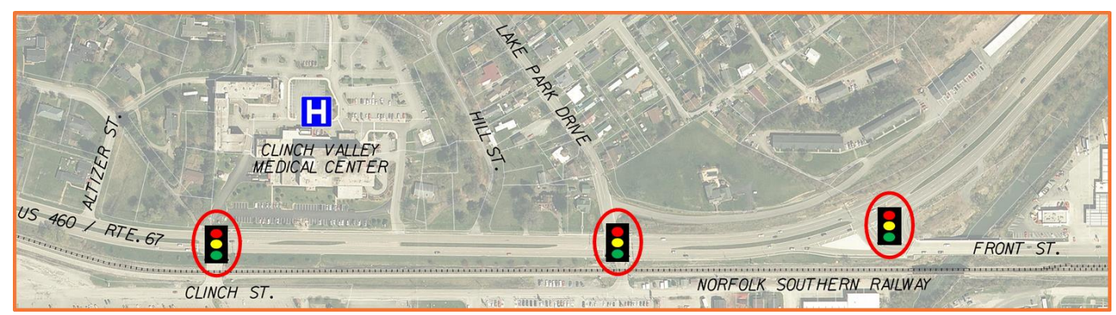
This project improves access management on US 460 between Route 67 and Front Street by converting three of the five existing full median openings to directional median openings. The existing full median openings at Baker Hollow Road and Patteson Street will be maintained, while the full median openings at Clearview Road, Hillcreek Road, and the Clinch Valley Medical Center entrance will be converted to directional median openings. Converting the full median openings to directional median openings is anticipated to enhance safety on the corridor by reducing the number and severity of potential conflict points.

Figure 16 – Alternative 2 Conceptual Design

Alternative 3: Traffic Signal Communications and Retiming Improvements

This project improves the operations of US 460 by providing traffic signal communication and retiming three existing traffic signals on US 460. Communication will be provided to the US 460 traffic signals at the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street using an existing fiber optic network. In addition, these traffic signals will be retimed and coordinated timing plans will be implemented to reduce the number of back-to-back stops and improve corridor progression.

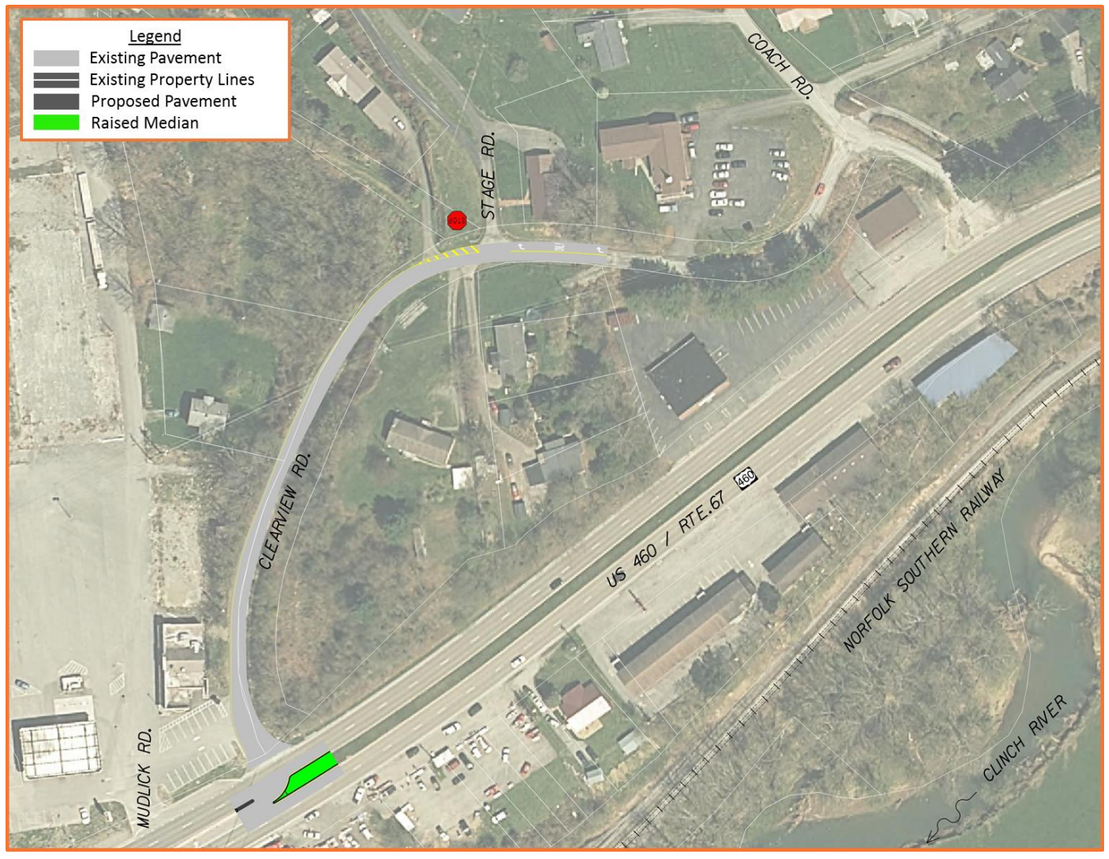
Figure 17 – Alternative 3 Conceptual Design



Alternative 4: Conversion of Clearview Road to One-Way Street

This project improves safety at the intersection of US 460 and Clearview Road by eliminating the southbound Clearview Road movements, which have limited sight distance, and converting Clearview Road to a one-way street. Clearview Road will be converted to a one-way street with travel permitted in the northbound direction between US 460 and Stage Road. Between Stage Road and Coach Road, Clearview Road will be maintained as a two-way street. The full median opening on US 460 at Clearview Road will be converted to a directional median opening.

Figure 18 – Alternative 4 Conceptual Design



Alternative 7 and 7A: Realignment of 2nd Street Approach at Front Street

These projects improve safety and reduce driver confusion at the intersection of 2nd Street and Front Street by realigning the southbound 2nd Street approach. The realignment will improve the sight triangle looking west for the 2nd Street to Kents Ridge Road movement and provide a free-flow movement for the southbound left-turn from 2nd Street to eastbound Front Street. Two alternatives were developed for this concept, Alternative 7 and Alternative 7A. Alternative 7 includes channelization at the Kents Ridge Road at Front Street intersection and the construction of a receiving lane for a free-flow movement from northbound Kents Ridge Road to eastbound Front Street, while Alternative 7A only includes the improvements to the southbound 2nd Street approach. The construction of the receiving lane for Alternative 7 is anticipated to remove approximately 11 parking spaces on the south side of Front Street.

Figure 19 – Alternative 7 Conceptual Design

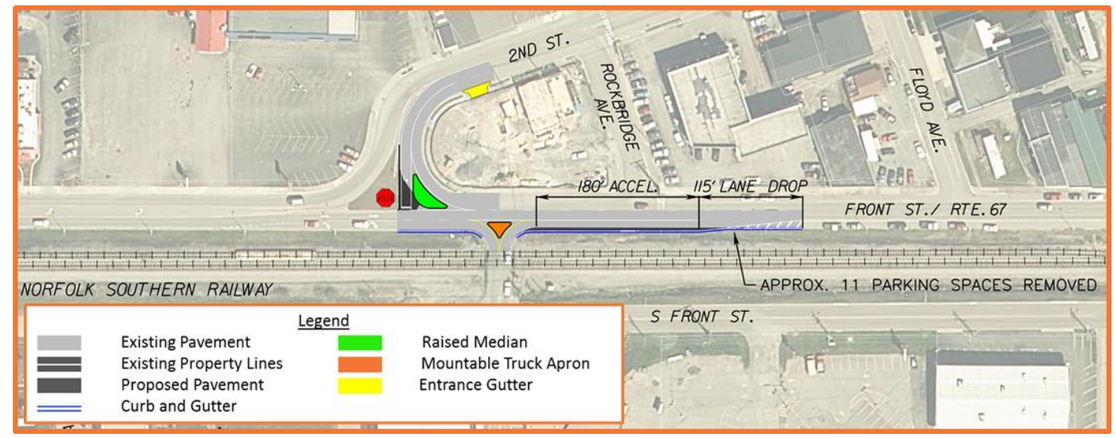
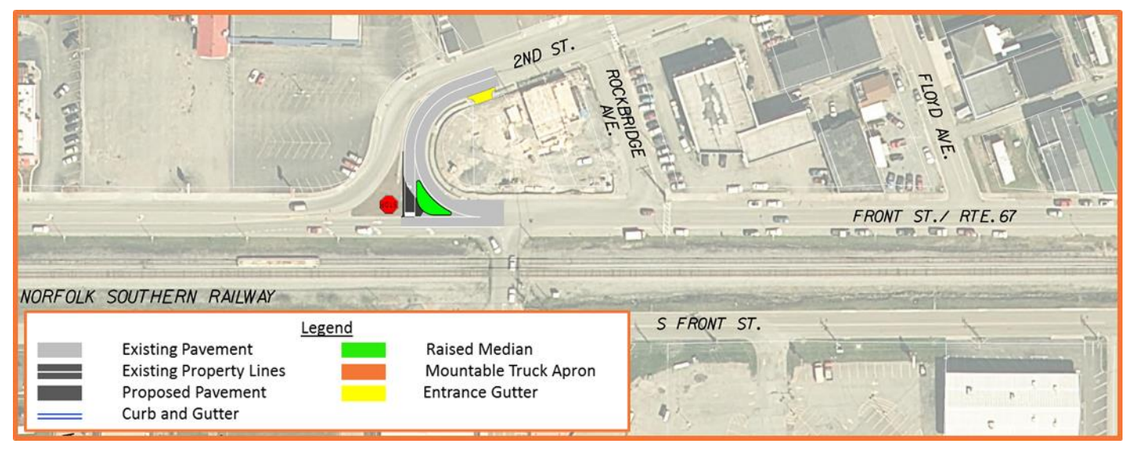


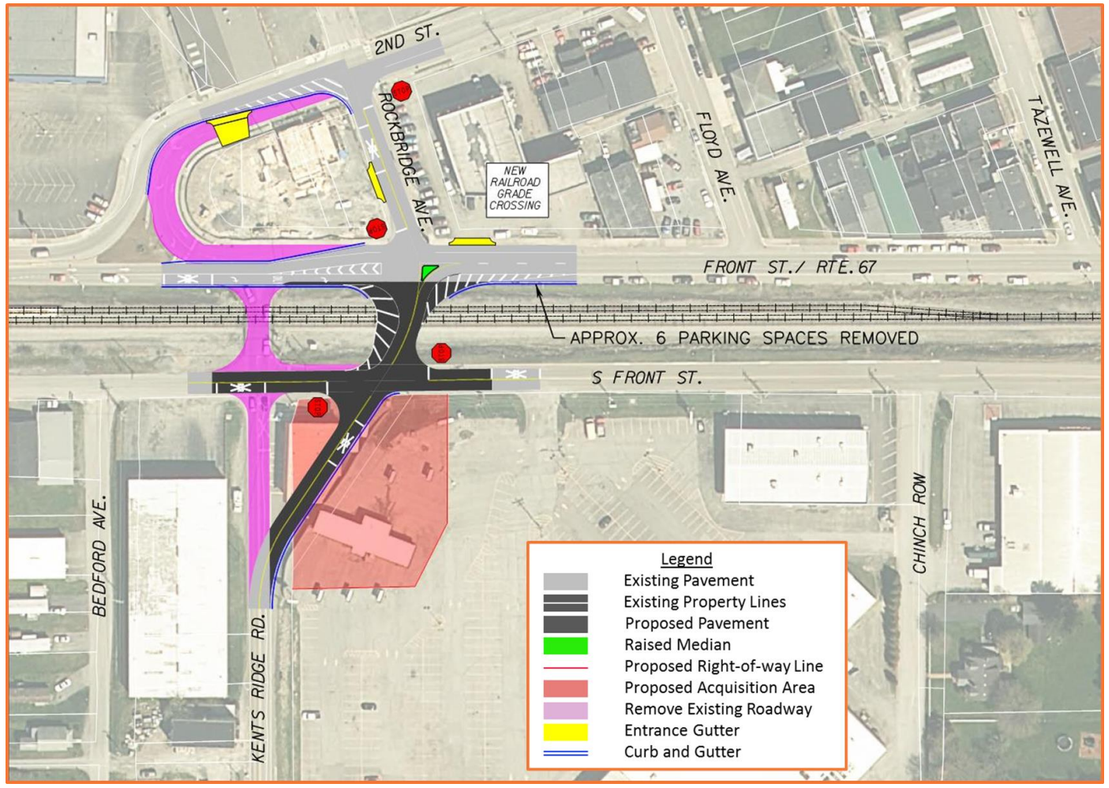
Figure 20 – Alternative 7A Conceptual Design



Alternative 8: Rockbridge Avenue Railroad Crossing

This project improves safety and reduces driver confusion at the railroad crossing between Front Street and S. Front Street by realigning Kents Ridge Road to create a four-leg intersection with Rockbridge Avenue, converting Rockbridge Avenue to a two-way street, and constructing a new at-grade railroad crossing. To realign Kent's Ridge Road, the existing fire station in the southeast corner of the intersection of Kents Ridge Road and S. Front Street will need to be demolished and relocated. The realignment will provide additional storage for the eastbound Front Street right-turn lane at the railroad crossing and allow for a northbound free-flow right-turn with a receiving lane on eastbound Front Street. This project is anticipated to remove approximately 6 parking spaces on the south side of Front Street.

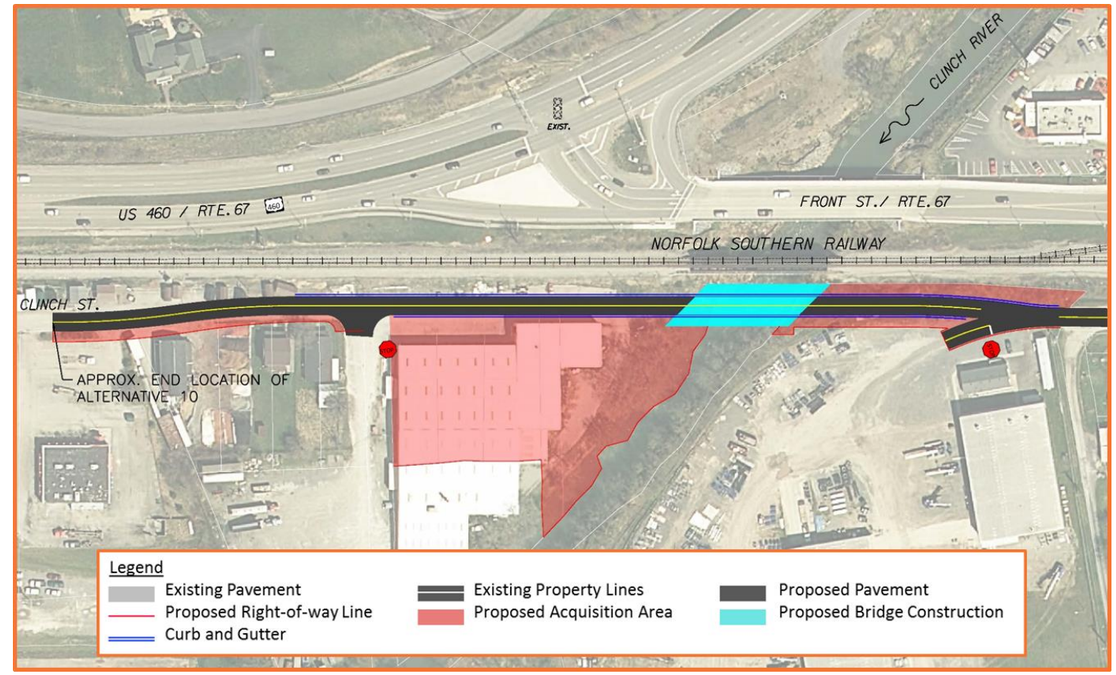
Figure 21 – Alternative 8 Conceptual Design



Alternative 9: New Frontage Road Bridge

This project improves access to properties south of the Norfolk Southern Railway tracks by constructing a new bridge over the Clinch River. The proposed bride will connect Clinch Street on the west side of the Clinch River to S. Front Street on the east side of the Clinch River. The Clinch Street and S. Front Street approaches to the new bridge will be reconstructed and repaved as part of this project.

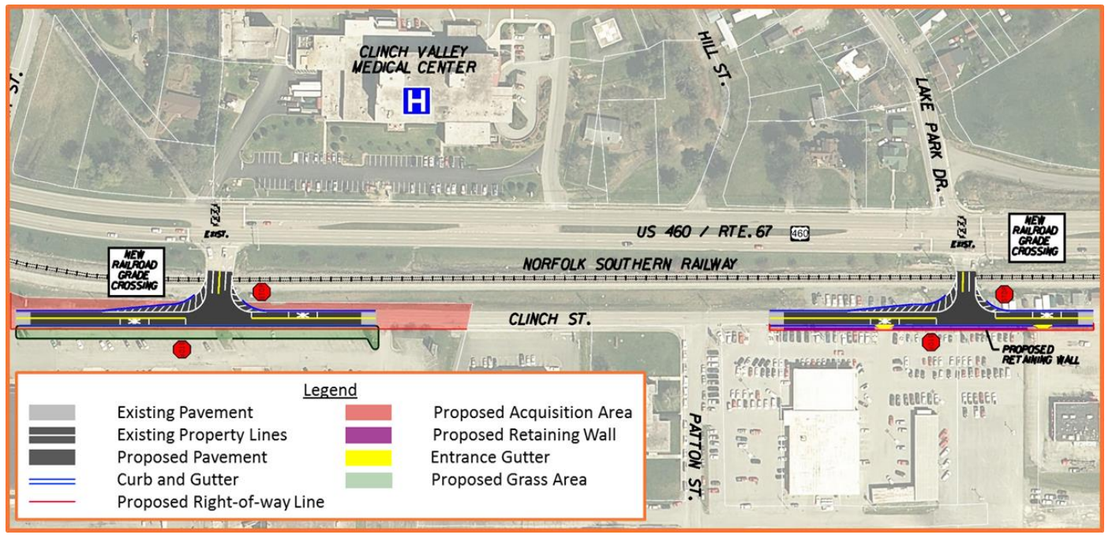
Figure 22 – Alternative 9 Conceptual Design



Alternative 10: Clinch Street Railroad Crossing Improvements

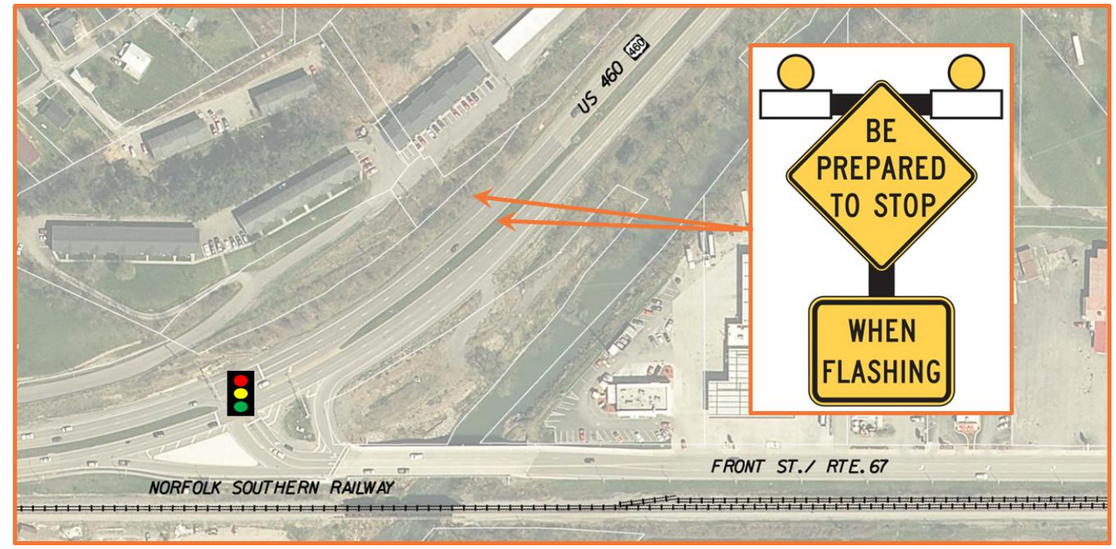
This project improves the geometry and safety at the Clinch Valley Medical Center exit and Lake Park Drive railroad crossings by improving the at-grade crossings and providing "No Turn" indications on Clinch Street that will activate during rail crossings. The grade on Clinch Street south of the railroad tracks will be raised to reduce the grade change over the tracks and remove the humped crossings. Additional pavement will also be added on the crossings to accommodate truck turning radii. To raise the grade on Clinch Street, a retaining wall will need to be constructed and parking spaces in the shopping center lot will be removed.

Figure 23 – Alternative 10 Conceptual Design



Alternative 11: Controller-Actuated Warning Beacons

This project will improve safety on westbound US 460 to the east of Front Street by installing controller-actuated warning beacons in advance of the Front Street intersection. Under existing conditions, at this location, westbound US 460 is a limited-access highway with a speed limit reduction from 55 MPH to 35 MPH prior to the Front Street intersection. The Front Street intersection is located on a curve and the controller-actuated beacons would provide additional warning to motorists that they are approaching a signalized intersection. Vegetation clearing should be completed in conjunction with this project to improve the line of sight to the traffic signal.



Planning-Level Cost Estimates

Refined planning-level cost estimates were developed for all selected improvement projects. The VDOT Project Cost Estimating System (PCES) was used as a resource for calculation the project construction and preliminary engineering costs. Quantities were determined based on the conceptual designs. For projects with anticipated right-of-way and/or utility impacts, right-of-way and utility relocation costs were estimated on a project-by-project basis based on the size and complexity of the project, as well as the existing right-of-way limits. In addition, the construction cost included an additional 25% of the base roadway construction cost for construction engineering and inspection (CEI). **Table 20** summarizes the preliminary engineering (PE), right-of-way and utility relocation (RW), construction (CN), and total planning level cost estimates for each improvement project. Costs are reported in 2017 dollars. A more detailed breakdown of the planning-level cost estimates is provided in **Appendix G**. Projects with no anticipated right-of-way impacts or utility relocation and with limited design were planned to be completed as "No-Plan" projects as noted in **Table 20**. The preliminary engineering costs for these "No-Plan" projects reflect a "No-Plan" project assumption.

Table 20 – Planning-Level Cost Estimates

Alternative	Cost Estimate (2017 dollars)			
	PE	RW	CN	Total
2) Access Management Improvements*	$30,000	--	$434,000	**$464,000**
3) Traffic Signal Communications and Retiming Improvements	$40,000	--	$189,000	**$229,000**
4) Conversion of Clearview Road to One-Way Street*	$30,000	--	$165,000	**$195,000**
7) Realignment of 2nd Street Approach at Front Street*	$35,000	$18,000	$650,000	**$703,000**
7A) Realignment of 2nd Street Approach at Front Street*	$30,000	$18,000	$380,000	**$428,000**
8) Rockbridge Avenue Railroad Crossing	$500,000	$2,185,000	$2,611,000	**$5,296,000**
9) New Frontage Road Bridge	$1,857,000	$1,669,000	$6,190,000	**$9,716,000**
10) Clinch Street Railroad Crossing Improvements	$798,000	$361,000	$3,563,000	**$4,722,000**
11) Controller-Actuated Warning Beacons	$50,000	--	$141,000	**$191,000**

*PE cost assumes project will be completed as a "No-Plan" project

Table 21 – Schedule Estimates

Alternative	Schedule Estimate (months)			
	PE	RW	CN	Total
2) Access Management Improvements*	2	--	2	**4**
3) Traffic Signal Communications and Retiming Improvements	5	--	2	**7**
4) Conversion of Clearview Road to One-Way Street*	2	--	1	**3**
7) Realignment of 2nd Street Approach at Front Street*	2	1	4	**7**
7A) Realignment of 2nd Street Approach at Front Street*	2	1	3	**6**
8) Rockbridge Avenue Railroad Crossing	24	12	9	**45**
9) New Frontage Road Bridge	38	18	12	**68**
10) Clinch Street Railroad Crossing Improvements	25	9	10	**44**
11) Controller-Actuated Warning Beacons	3	--	3	**6**

*PE schedule assumes project will be completed as a "No-Plan" project

Schedule Estimates

Schedule estimates were also developed for all selected improvement projects. Schedule estimates were based on experience and SWG feedback. **Table 21** summarizes the projected timeframes for the preliminary engineering (PE), right-of-way and utility relocation (RW), and construction (CN) phases of each improvement project. Like the planning-level cost estimates, the schedule estimates accounted for the shorter duration anticipated for the projects assumed to be completed as "No-Plan" projects.

PROJECT ADVANCEMENT

The Study should be used as a planning tool to achieve the next steps of planning, programming, designing, and constructing the identified safety and operational improvements in the study corridor. To advance these projects beyond the planning stage, members of the SWG should use the following steps.

1. Gain consensus for projects

Conduct outreach meeting(s) to stakeholders who were not part of the SWG to gain acceptance for the proposed projects. Other stakeholders might include businesses owners on the corridor, as well as Town of Richlands and Tazewell County residents.

2. Prioritize improvements

Improvement projects should be prioritized on a regional level. Factors to consider in the prioritization process include geometric improvements, safety improvements, and right-of-way impacts. **Table 22** summarizes these factors for each alternative improvement project. Three alternatives were identified with geometric improvements, safety improvements, and no anticipated right-of-way impacts:

- Alternative 2: Access Management Improvements
- Alternative 4: Conversion of Clearview Road to One-Way Street
- Alternative 7: Realignment of 2nd Street Approach at Front Street

Table 22 – Project Prioritization Considerations

Alternative	Geometric Improvement	Safety Improvement	No Anticipated RW Impacts
2) Access Management Improvements	✓	✓	✓
3) Traffic Signal Communications and Retiming Improvements		✓	✓
4) Conversion of Clearview Road to One-Way Street	✓	✓	✓
7) Realignment of 2nd Street Approach at Front Street	✓	✓	✓
8) Rockbridge Avenue Railroad Crossing	✓	✓	
9) New Frontage Road Bridge	✓		
10) Clinch Street Railroad Crossing Improvements	✓	✓	
11) Controller-Actuated Warning Beacons		✓	✓

3. Prepare projects for advancement

Once projects have been prioritized at the regional level, the highest priority projects should be advanced to the following documents in preparation for funding application submissions.

- Constrained Long Range Transportation Plan (CLRP)
- Transportation Improvement Plan (TIP)
- Statewide Transportation Improvement Plan (STIP)

4. Apply for prioritized funding programs

The following funding sources should be considered for improvement projects identified in this study.

SMART SCALE

SMART SCALE allocates funding from the construction District Grants Program (DGP) and High-Priority Projects Program (HPPP) to transportation projects based on a scoring process. The scoring process evaluates, scores and ranks projects based on congestion mitigation, economic development, accessibility, safety, environmental quality, and land use factors. The location of the project determines the weight of each of these scoring factors in the calculation of the total score. For projects in the Bristol District, the scoring factors with the highest weight are economic development (35%) and safety (30%). All proposed US 460 improvement projects are candidate projects for SMART SCALE funding.

Several identified improvement projects can also be combined into one SMART SCALE application to recognize cost savings associated with completing the projects concurrently and increase the overall project score. For the proposed US 460 improvement projects, the following improvement projects could be packaged into one SMART SCALE application:

- Alternative 2: Access Management Improvements
- Alternative 3: Traffic Signal Communications and Retiming Improvements
- Alternative 4: Conversion of Clearview Road to One-Way Street
- Alternative 11: Controller-Actuated Warning Beacons

Revenue Sharing

Revenue sharing is a program that provides a dollar for dollar state match to local funds for transportation projects. Projects eligible for Revenue Sharing funds include construction, reconstruction, improvement, and maintenance projects. All US 460 improvement projects are candidate projects for Revenue Sharing.

Congestion Mitigation and Air Quality (CMAQ)

CMAQ allocates funding to surface transportation projects that improve air quality by reducing congestion. A candidate improvement project for CMAQ funding includes:

- Alternative 3: Traffic Signal Communications and Retiming Improvements

Highway Safety Improvement Program (HSIP)

HSIP provides funding for improvements that correct or improve safety on a section of roadway or intersection with a high incidence of crashes. A candidate improvement project for HSIP funding includes:

- Alternative 11: Controller-Actuated Warning Beacons

5. Advance selected projects to VDOT SYIP

Once project applications are approved for funding through one or more of the aforementioned funding sources, the project should be incorporated in the VDOT SYIP, so it can enter the project development process.

APPENDIX A – DATA COLLECTION

APPENDIX A-1: TURNING MOVEMENT COUNT DATA

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 1-Rt. 67 and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Car

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
07:00 AM	33	23	0	56	35	4	0	39	3	43	0	46	141
07:15 AM	53	20	0	73	52	2	0	54	2	56	0	58	185
07:30 AM	41	26	0	67	74	6	0	80	3	51	0	54	201
07:45 AM	44	58	0	102	95	5	0	100	4	76	0	80	282
Total	171	127	0	298	256	17	0	273	12	226	0	238	809
08:00 AM	45	34	0	79	68	1	0	69	0	91	0	91	239
08:15 AM	51	32	0	83	69	3	0	72	1	85	0	86	241
08:30 AM	48	21	1	70	72	2	0	74	1	79	0	80	224
08:45 AM	45	38	0	83	56	0	0	56	1	54	0	55	194
Total	189	125	1	315	265	6	0	271	3	309	0	312	898
Grand Total	360	252	1	613	521	23	0	544	15	535	0	550	1707
Apprch %	58.7	41.1	0.2		95.8	4.2	0		2.7	97.3	0		
Total %	21.1	14.8	0.1	35.9	30.5	1.3	0	31.9	0.9	31.3	0	32.2	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	44	**58**	**102**	**95**	**5**	**100**	**4**	76	80	**282**
08:00 AM	45	34	79	68	1	69	0	**91**	**91**	239
08:15 AM	**51**	32	83	69	3	72	1	85	86	241
08:30 AM	48	21	69	72	2	74	1	79	80	223
Total Volume	188	145	333	304	11	315	6	331	337	985
% App. Total	56.5	43.5		96.5	3.5		1.8	98.2		
PHF	.922	.625	.816	.800	.550	.788	.375	.909	.926	.873

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File Name : 1-Rt. 67 and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Truck

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
07:00 AM	5	2	0	7	4	0	0	4	2	2	0	4	15
07:15 AM	7	2	0	9	2	1	0	3	0	1	0	1	13
07:30 AM	5	1	0	6	7	0	0	7	0	6	0	6	19
07:45 AM	6	3	0	9	2	1	0	3	0	5	0	5	17
Total	23	8	0	31	15	2	0	17	2	14	0	16	64
08:00 AM	5	1	0	6	3	3	0	6	0	10	0	10	22
08:15 AM	3	1	0	4	3	0	0	3	0	7	0	7	14
08:30 AM	5	3	0	8	3	0	0	3	0	1	0	1	12
08:45 AM	12	2	0	14	2	1	0	3	0	1	0	1	18
Total	25	7	0	32	11	4	0	15	0	19	0	19	66
Grand Total	48	15	0	63	26	6	0	32	2	33	0	35	130
Apprch %	76.2	23.8	0		81.2	18.8	0		5.7	94.3	0		
Total %	36.9	11.5	0	48.5	20	4.6	0	24.6	1.5	25.4	0	26.9	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	5	1	6	**7**	0	**7**	0	6	6	19
07:45 AM	**6**	**3**	**9**	2	1	3	0	5	5	17
08:00 AM	5	1	6	3	**3**	6	0	**10**	**10**	**22**
08:15 AM	3	1	4	3	0	3	0	7	7	14
Total Volume	19	6	25	15	4	19	0	28	28	72
% App. Total	76	24		78.9	21.1		0	100		
PHF	.792	.500	.694	.536	.333	.679	.000	.700	.700	.818

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File Name : 1-Rt. 67 and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Combined

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
07:00 AM	38	25	0	63	39	4	0	43	5	45	0	50	156
07:15 AM	60	22	0	82	54	3	0	57	2	57	0	59	198
07:30 AM	46	27	0	73	81	6	0	87	3	57	0	60	220
07:45 AM	50	61	0	111	97	6	0	103	4	81	0	85	299
Total	194	135	0	329	271	19	0	290	14	240	0	254	873
08:00 AM	50	35	0	85	71	4	0	75	0	101	0	101	261
08:15 AM	54	33	0	87	72	3	0	75	1	92	0	93	255
08:30 AM	53	24	1	78	75	2	0	77	1	80	0	81	236
08:45 AM	57	40	0	97	58	1	0	59	1	55	0	56	212
Total	214	132	1	347	276	10	0	286	3	328	0	331	964
Grand Total	408	267	1	676	547	29	0	576	17	568	0	585	1837
Apprch %	60.4	39.5	0.1		95	5	0		2.9	97.1	0		
Total %	22.2	14.5	0.1	36.8	29.8	1.6	0	31.4	0.9	30.9	0	31.8	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	50	**61**	**111**	**97**	**6**	**103**	**4**	81	85	**299**
08:00 AM	50	35	85	71	4	75	0	**101**	**101**	261
08:15 AM	**54**	33	87	72	3	75	1	92	93	255
08:30 AM	53	24	77	75	2	77	1	80	81	235
Total Volume	207	153	360	315	15	330	6	354	360	1050
% App. Total	57.5	42.5		95.5	4.5		1.7	98.3		
PHF	.958	.627	.811	.812	.625	.801	.375	.876	.891	.878

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File Name : 1-Rt. 67 and US 460 PM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Car

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
04:00 PM	91	64	0	155	48	2	0	50	3	77	0	80	285
04:15 PM	66	54	0	120	57	3	0	60	3	87	0	90	270
04:30 PM	86	78	0	164	44	2	0	46	0	66	0	66	276
04:45 PM	86	75	0	161	63	4	0	67	1	71	0	72	300
Total	329	271	0	600	212	11	0	223	7	301	0	308	1131
05:00 PM	96	99	0	195	55	0	0	55	1	66	0	67	317
05:15 PM	73	80	0	153	59	2	0	61	1	61	0	62	276
05:30 PM	79	77	0	156	72	2	0	74	5	58	0	63	293
05:45 PM	65	54	0	119	50	1	0	51	1	51	0	52	222
Total	313	310	0	623	236	5	0	241	8	236	0	244	1108
06:00 PM	60	58	0	118	41	3	0	44	2	62	0	64	226
06:15 PM	45	56	0	101	56	2	0	58	3	64	0	67	226
06:30 PM	53	50	0	103	52	0	0	52	2	48	0	50	205
06:45 PM	48	45	0	93	48	2	0	50	0	21	0	21	164
Total	206	209	0	415	197	7	0	204	7	195	0	202	821
Grand Total	848	790	0	1638	645	23	0	668	22	732	0	754	3060
Apprch %	51.8	48.2	0		96.6	3.4	0		2.9	97.1	0		
Total %	27.7	25.8	0	53.5	21.1	0.8	0	21.8	0.7	23.9	0	24.6	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	86	75	161	63	**4**	67	1	**71**	**72**	300
05:00 PM	**96**	**99**	**195**	55	0	55	1	66	67	**317**
05:15 PM	73	80	153	59	2	61	1	61	62	276
05:30 PM	79	77	156	**72**	2	**74**	**5**	58	63	293
Total Volume	334	331	665	249	8	257	8	256	264	1186
% App. Total	50.2	49.8		96.9	3.1		3	97		
PHF	.870	.836	.853	.865	.500	.868	.400	.901	.917	.935

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File Name : 1-Rt. 67 and US 460 PM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Truck

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
04:00 PM	4	4	0	8	2	0	0	2	0	6	0	6	16
04:15 PM	3	3	0	6	1	0	0	1	0	10	0	10	17
04:30 PM	2	1	0	3	1	0	0	1	0	5	0	5	9
04:45 PM	4	1	0	5	1	0	0	1	0	3	0	3	9
Total	13	9	0	22	5	0	0	5	0	24	0	24	51
05:00 PM	1	1	0	2	5	0	0	5	0	1	0	1	8
05:15 PM	6	1	0	7	0	0	0	0	0	6	0	6	13
05:30 PM	2	0	0	2	1	0	0	1	1	2	0	3	6
05:45 PM	1	0	0	1	0	0	0	0	0	6	0	6	7
Total	10	2	0	12	6	0	0	6	1	15	0	16	34
06:00 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
06:15 PM	2	1	0	3	0	0	0	0	0	4	0	4	7
06:30 PM	1	2	0	3	0	0	0	0	0	2	0	2	5
06:45 PM	2	0	0	2	1	0	0	1	0	1	0	1	4
Total	7	3	0	10	1	0	0	1	0	8	0	8	19
Grand Total	30	14	0	44	12	0	0	12	1	47	0	48	104
Apprch %	68.2	31.8	0		100	0	0		2.1	97.9	0		
Total %	28.8	13.5	0	42.3	11.5	0	0	11.5	1	45.2	0	46.2	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**4**	**4**	**8**	**2**	0	**2**	0	6	6	16
04:15 PM	3	3	6	1	0	1	0	**10**	**10**	**17**
04:30 PM	2	1	3	1	0	1	0	5	5	9
04:45 PM	4	1	5	1	0	1	0	3	3	9
Total Volume	13	9	22	5	0	5	0	24	24	51
% App. Total	59.1	40.9		100	0		0	100		
PHF	.813	.563	.688	.625	.000	.625	.000	.600	.600	.750

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File Name : 1-Rt. 67 and US 460 PM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Combined

	US 460 Westbound				Rt. 67 Northbound				US 460 Eastbound				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
04:00 PM	95	68	0	163	50	2	0	52	3	83	0	86	301
04:15 PM	69	57	0	126	58	3	0	61	3	97	0	100	287
04:30 PM	88	79	0	167	45	2	0	47	0	71	0	71	285
04:45 PM	90	76	0	166	64	4	0	68	1	74	0	75	309
Total	342	280	0	622	217	11	0	228	7	325	0	332	1182
05:00 PM	97	100	0	197	60	0	0	60	1	67	0	68	325
05:15 PM	79	81	0	160	59	2	0	61	1	67	0	68	289
05:30 PM	81	77	0	158	73	2	0	75	6	60	0	66	299
05:45 PM	66	54	0	120	50	1	0	51	1	57	0	58	229
Total	323	312	0	635	242	5	0	247	9	251	0	260	1142
06:00 PM	62	58	0	120	41	3	0	44	2	63	0	65	229
06:15 PM	47	57	0	104	56	2	0	58	3	68	0	71	233
06:30 PM	54	52	0	106	52	0	0	52	2	50	0	52	210
06:45 PM	50	45	0	95	49	2	0	51	0	22	0	22	168
Total	213	212	0	425	198	7	0	205	7	203	0	210	840
Grand Total	878	804	0	1682	657	23	0	680	23	779	0	802	3164
Apprch %	52.2	47.8	0		96.6	3.4	0		2.9	97.1	0		
Total %	27.7	25.4	0	53.2	20.8	0.7	0	21.5	0.7	24.6	0	25.3	

	US 460 Westbound			Rt. 67 Northbound			US 460 Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	90	76	166	64	**4**	68	1	**74**	**75**	309
05:00 PM	**97**	**100**	**197**	60	0	60	1	67	68	**325**
05:15 PM	79	81	160	59	2	61	1	67	68	289
05:30 PM	81	77	158	**73**	2	**75**	**6**	60	66	299
Total Volume	347	334	681	256	8	264	9	268	277	1222
% App. Total	51	49		97	3		3.2	96.8		
PHF	.894	.835	.864	.877	.500	.880	.375	.905	.923	.940

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File Name : 2-Acme Rd. and US 460
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Car

	Acme Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	3	0	5	1	58	0	0	59	80	2	0	82	146
07:15 AM	3	1	0	4	0	67	0	0	67	113	0	0	113	184
07:30 AM	3	2	0	5	3	70	0	0	73	129	3	0	132	210
07:45 AM	1	5	0	6	3	93	0	0	96	174	3	0	177	279
Total	9	11	0	20	7	288	0	0	295	496	8	0	504	819
08:00 AM	3	6	0	9	0	76	0	0	76	159	1	0	160	245
08:15 AM	3	4	0	7	0	79	0	0	79	153	8	0	161	247
08:30 AM	6	10	0	16	2	67	1	0	70	141	1	0	142	228
08:45 AM	6	4	0	10	1	74	0	0	75	112	1	0	113	198
Total	18	24	0	42	3	296	1	0	300	565	11	0	576	918
09:00 AM	5	4	0	9	3	68	0	0	71	103	2	0	105	185
09:15 AM	8	5	0	13	1	58	0	0	59	118	3	0	121	193
09:30 AM	3	7	0	10	0	79	0	0	79	110	3	0	113	202
09:45 AM	5	8	0	13	1	62	0	0	63	91	2	0	93	169
Total	21	24	0	45	5	267	0	0	272	422	10	0	432	749
10:00 AM	2	5	0	7	0	72	0	0	72	117	5	0	122	201
10:15 AM	2	10	0	12	2	79	0	0	81	101	9	0	110	203
10:30 AM	8	5	0	13	1	65	1	0	67	121	3	0	124	204
10:45 AM	13	6	0	19	1	88	0	0	89	123	2	0	125	233
Total	25	26	0	51	4	304	1	0	309	462	19	0	481	841
11:00 AM	3	7	0	10	2	111	0	0	113	88	3	0	91	214
11:15 AM	9	11	0	20	1	90	0	0	91	110	8	0	118	229
11:30 AM	5	3	0	8	1	98	0	0	99	118	6	0	124	231
11:45 AM	11	8	0	19	0	104	0	0	104	107	3	0	110	233
Total	28	29	0	57	4	403	0	0	407	423	20	0	443	907
12:00 PM	3	17	0	20	2	102	0	0	104	91	5	0	96	220
12:15 PM	3	13	0	16	3	98	0	0	101	101	3	0	104	221
12:30 PM	7	8	0	15	1	101	0	0	102	115	3	0	118	235
12:45 PM	7	3	0	10	0	94	0	0	94	120	4	0	124	228
Total	20	41	0	61	6	395	0	0	401	427	15	0	442	904
01:00 PM	9	13	0	22	1	98	1	0	100	127	3	0	130	252
01:15 PM	9	13	0	22	1	98	1	0	100	110	1	0	111	233
01:30 PM	4	13	0	17	2	115	1	0	118	95	5	0	100	235
01:45 PM	6	9	0	15	4	102	0	0	106	95	5	0	100	221
Total	28	48	0	76	8	413	3	0	424	427	14	0	441	941
02:00 PM	8	9	0	17	1	125	0	0	126	78	8	0	86	229
02:15 PM	8	13	0	21	4	121	0	0	125	119	4	0	123	269
02:30 PM	12	10	0	22	1	129	0	0	130	116	0	0	116	268
02:45 PM	6	4	0	10	1	119	0	0	120	105	4	1	110	240
Total	34	36	0	70	7	494	0	0	501	418	16	1	435	1006
03:00 PM	7	6	0	13	1	117	0	0	118	90	6	0	96	227
03:15 PM	10	10	0	20	0	121	0	0	121	123	5	0	128	269
03:30 PM	4	8	0	12	1	157	0	0	158	127	5	0	132	302
03:45 PM	2	12	0	14	5	137	0	0	142	157	8	0	165	321
Total	23	36	0	59	7	532	0	0	539	497	24	0	521	1119
04:00 PM	19	7	0	26	4	135	0	0	139	126	3	0	129	294
04:15 PM	10	13	0	23	2	114	0	0	116	146	5	0	151	290
04:30 PM	8	6	0	14	0	157	0	0	157	112	1	0	113	284
04:45 PM	9	8	0	17	3	157	0	0	160	139	4	0	143	320
Total	46	34	0	80	9	563	0	0	572	523	13	0	536	1188
05:00 PM	18	10	0	28	1	171	0	0	172	130	6	0	136	336
05:15 PM	15	16	0	31	2	144	0	0	146	119	4	0	123	300
05:30 PM	12	7	0	19	4	145	0	0	149	134	2	0	136	304
05:45 PM	15	5	0	20	2	108	0	0	110	106	2	0	108	238
Total	60	38	0	98	9	568	0	0	577	489	14	0	503	1178
06:00 PM	6	7	0	13	1	114	0	0	115	107	2	0	109	237
06:15 PM	5	2	0	7	4	95	0	0	99	123	5	0	128	234
06:30 PM	7	9	0	16	2	99	0	0	101	95	5	0	100	217
06:45 PM	9	6	0	15	3	82	0	0	85	69	2	0	71	171
Total	27	24	0	51	10	390	0	0	400	394	14	0	408	859
Grand Total	339	371	0	710	79	4913	5	0	4997	5543	178	1	5722	11429
Apprch %	47.7	52.3	0		1.6	98.3	0.1	0		96.9	3.1	0		
Total %	3	3.2	0	6.2	0.7	43	0	0	43.7	48.5	1.6	0	50.1	

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File Name : 2-Acme Rd. and US 460
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	Acme Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	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 07:45 AM											
07:45 AM	1	5	6	**3**	**93**	0	**96**	**174**	3	**177**	**279**
08:00 AM	3	6	9	0	76	0	76	159	1	160	245
08:15 AM	3	4	7	0	79	0	79	153	**8**	161	247
08:30 AM	**6**	**10**	**16**	2	67	**1**	70	141	1	142	228
Total Volume	13	25	38	5	315	1	321	627	13	640	999
% App. Total	34.2	65.8		1.6	98.1	0.3		98	2		
PHF	.542	.625	.594	.417	.847	.250	.836	.901	.406	.904	.895
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	9	8	17	3	157	0	160	**139**	4	**143**	320
05:00 PM	**18**	10	28	1	**171**	0	**172**	130	**6**	136	**336**
05:15 PM	15	**16**	**31**	2	144	0	146	119	4	123	300
05:30 PM	12	7	19	**4**	145	0	149	134	2	136	304
Total Volume	54	41	95	10	617	0	627	522	16	538	1260
% App. Total	56.8	43.2		1.6	98.4	0		97	3		
PHF	.750	.641	.766	.625	.902	.000	.911	.939	.667	.941	.938

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File Name : 2-Acme Rd. and US 460
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Groups Printed- Truck

	Acme Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	8	0	0	8	6	0	0	6	14
07:15 AM	0	1	0	1	0	8	0	0	8	4	0	0	4	13
07:30 AM	0	0	0	0	1	6	0	0	7	13	0	0	13	20
07:45 AM	0	0	0	0	1	7	0	0	8	7	0	0	7	15
Total	0	1	0	1	2	29	0	0	31	30	0	0	30	62
08:00 AM	1	0	0	1	0	6	0	0	6	11	0	0	11	18
08:15 AM	0	0	0	0	0	4	0	0	4	11	0	0	11	15
08:30 AM	0	0	0	0	0	7	0	0	7	4	0	0	4	11
08:45 AM	0	0	0	0	0	15	0	0	15	3	0	0	3	18
Total	1	0	0	1	0	32	0	0	32	29	0	0	29	62
09:00 AM	0	0	0	0	0	12	0	0	12	7	0	0	7	19
09:15 AM	0	0	0	0	0	15	0	0	15	4	0	0	4	19
09:30 AM	0	0	0	0	0	11	0	0	11	5	0	0	5	16
09:45 AM	1	2	0	3	0	15	0	0	15	9	0	0	9	27
Total	1	2	0	3	0	53	0	0	53	25	0	0	25	81
10:00 AM	0	0	0	0	0	6	0	0	6	4	0	0	4	10
10:15 AM	0	0	0	0	0	6	0	0	6	7	1	0	8	14
10:30 AM	0	0	0	0	0	6	0	0	6	11	0	0	11	17
10:45 AM	1	0	0	1	0	10	0	0	10	5	0	0	5	16
Total	1	0	0	1	0	28	0	0	28	27	1	0	28	57
11:00 AM	0	0	0	0	0	4	0	0	4	7	0	0	7	11
11:15 AM	0	0	0	0	0	8	0	0	8	6	0	0	6	14
11:30 AM	0	0	0	0	0	6	0	0	6	10	1	0	11	17
11:45 AM	1	0	0	1	0	11	0	0	11	6	0	0	6	18
Total	1	0	0	1	0	29	0	0	29	29	1	0	30	60
12:00 PM	0	0	0	0	0	13	0	0	13	7	0	0	7	20
12:15 PM	0	0	0	0	0	4	0	0	4	4	0	0	4	8
12:30 PM	0	0	0	0	0	5	0	0	5	6	0	0	6	11
12:45 PM	0	0	0	0	0	8	0	0	8	13	0	0	13	21
Total	0	0	0	0	0	30	0	0	30	30	0	0	30	60
01:00 PM	0	0	0	0	0	1	0	0	1	5	0	0	5	6
01:15 PM	0	0	0	0	0	7	0	0	7	7	0	0	7	14
01:30 PM	0	0	0	0	0	9	0	0	9	6	0	0	6	15
01:45 PM	1	0	0	1	0	6	0	0	6	12	0	0	12	19
Total	1	0	0	1	0	23	0	0	23	30	0	0	30	54
02:00 PM	0	0	0	0	0	9	0	0	9	7	1	0	8	17
02:15 PM	0	0	0	0	0	6	0	0	6	8	0	0	8	14
02:30 PM	0	1	0	1	0	7	0	0	7	5	1	0	6	14
02:45 PM	0	0	0	0	0	7	0	0	7	9	0	0	9	16
Total	0	1	0	1	0	29	0	0	29	29	2	0	31	61
03:00 PM	0	0	0	0	0	7	0	0	7	8	0	0	8	15
03:15 PM	0	0	0	0	0	7	0	0	7	12	0	0	12	19
03:30 PM	0	0	0	0	0	6	0	0	6	4	0	0	4	10
03:45 PM	0	1	0	1	1	7	0	0	8	3	0	0	3	12
Total	0	1	0	1	1	27	0	0	28	27	0	0	27	56
04:00 PM	0	0	0	0	0	8	0	0	8	6	0	0	6	14
04:15 PM	0	0	0	0	0	6	0	0	6	11	0	0	11	17
04:30 PM	0	0	0	0	0	3	0	0	3	6	0	0	6	9
04:45 PM	0	1	0	1	0	5	0	0	5	4	0	0	4	10
Total	0	1	0	1	0	22	0	0	22	27	0	0	27	50
05:00 PM	0	0	0	0	0	2	0	0	2	6	0	0	6	8
05:15 PM	0	0	0	0	0	7	0	0	7	5	0	0	5	12
05:30 PM	0	0	0	0	0	2	0	0	2	3	0	0	3	5
05:45 PM	0	0	0	0	0	2	0	0	2	5	0	0	5	7
Total	0	0	0	0	0	13	0	0	13	19	0	0	19	32
06:00 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:15 PM	0	0	0	0	0	4	0	0	4	7	0	0	7	11
06:30 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:45 PM	0	0	0	0	0	3	0	0	3	3	0	0	3	6
Total	0	0	0	0	0	11	0	0	11	12	0	0	12	23
Grand Total	5	6	0	11	3	326	0	0	329	314	4	0	318	658
Apprch %	45.5	54.5	0		0.9	99.1	0	0		98.7	1.3	0		
Total %	0.8	0.9	0	1.7	0.5	49.5	0	0	50	47.7	0.6	0	48.3	

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	Acme Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	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 09:00 AM											
09:00 AM	0	0	0	0	12	0	12	7	0	7	19
09:15 AM	0	0	0	0	**15**	0	**15**	4	0	4	19
09:30 AM	0	0	0	0	11	0	11	5	0	5	16
09:45 AM	**1**	**2**	**3**	0	15	0	15	**9**	0	**9**	**27**
Total Volume	1	2	3	0	53	0	53	25	0	25	81
% App. Total	33.3	66.7		0	100	0		100	0		
PHF	.250	.250	.250	.000	.883	.000	.883	.694	.000	.694	.750
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 01:15 PM											
01:15 PM	0	0	0	0	7	0	7	7	0	7	14
01:30 PM	0	0	0	0	**9**	0	**9**	6	0	6	15
01:45 PM	**1**	0	**1**	0	6	0	6	**12**	0	**12**	**19**
02:00 PM	0	0	0	0	9	0	9	7	**1**	8	17
Total Volume	1	0	1	0	31	0	31	32	1	33	65
% App. Total	100	0		0	100	0		97	3		
PHF	.250	.000	.250	.000	.861	.000	.861	.667	.250	.688	.855

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File Name : 2-Acme Rd. and US 460
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Groups Printed- Combined

	Acme Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	3	0	5	1	66	0	0	67	86	2	0	88	160
07:15 AM	3	2	0	5	0	75	0	0	75	117	0	0	117	197
07:30 AM	3	2	0	5	4	76	0	0	80	142	3	0	145	230
07:45 AM	1	5	0	6	4	100	0	0	104	181	3	0	184	294
Total	9	12	0	21	9	317	0	0	326	526	8	0	534	881
08:00 AM	4	6	0	10	0	82	0	0	82	170	1	0	171	263
08:15 AM	3	4	0	7	0	83	0	0	83	164	8	0	172	262
08:30 AM	6	10	0	16	2	74	1	0	77	145	1	0	146	239
08:45 AM	6	4	0	10	1	89	0	0	90	115	1	0	116	216
Total	19	24	0	43	3	328	1	0	332	594	11	0	605	980
09:00 AM	5	4	0	9	3	80	0	0	83	110	2	0	112	204
09:15 AM	8	5	0	13	1	73	0	0	74	122	3	0	125	212
09:30 AM	3	7	0	10	0	90	0	0	90	115	3	0	118	218
09:45 AM	6	10	0	16	1	77	0	0	78	100	2	0	102	196
Total	22	26	0	48	5	320	0	0	325	447	10	0	457	830
10:00 AM	2	5	0	7	0	78	0	0	78	121	5	0	126	211
10:15 AM	2	10	0	12	2	85	0	0	87	108	10	0	118	217
10:30 AM	8	5	0	13	1	71	1	0	73	132	3	0	135	221
10:45 AM	14	6	0	20	1	98	0	0	99	128	2	0	130	249
Total	26	26	0	52	4	332	1	0	337	489	20	0	509	898
11:00 AM	3	7	0	10	2	115	0	0	117	95	3	0	98	225
11:15 AM	9	11	0	20	1	98	0	0	99	116	8	0	124	243
11:30 AM	5	3	0	8	1	104	0	0	105	128	7	0	135	248
11:45 AM	12	8	0	20	0	115	0	0	115	113	3	0	116	251
Total	29	29	0	58	4	432	0	0	436	452	21	0	473	967
12:00 PM	3	17	0	20	2	115	0	0	117	98	5	0	103	240
12:15 PM	3	13	0	16	3	102	0	0	105	105	3	0	108	229
12:30 PM	7	8	0	15	1	106	0	0	107	121	3	0	124	246
12:45 PM	7	3	0	10	0	102	0	0	102	133	4	0	137	249
Total	20	41	0	61	6	425	0	0	431	457	15	0	472	964
01:00 PM	9	13	0	22	1	99	1	0	101	132	3	0	135	258
01:15 PM	9	13	0	22	1	105	1	0	107	117	1	0	118	247
01:30 PM	4	13	0	17	2	124	1	0	127	101	5	0	106	250
01:45 PM	7	9	0	16	4	108	0	0	112	107	5	0	112	240
Total	29	48	0	77	8	436	3	0	447	457	14	0	471	995
02:00 PM	8	9	0	17	1	134	0	0	135	85	9	0	94	246
02:15 PM	8	13	0	21	4	127	0	0	131	127	4	0	131	283
02:30 PM	12	11	0	23	1	136	0	0	137	121	1	0	122	282
02:45 PM	6	4	0	10	1	126	0	0	127	114	4	1	119	256
Total	34	37	0	71	7	523	0	0	530	447	18	1	466	1067
03:00 PM	7	6	0	13	1	124	0	0	125	98	6	0	104	242
03:15 PM	10	10	0	20	0	128	0	0	128	135	5	0	140	288
03:30 PM	4	8	0	12	1	163	0	0	164	131	5	0	136	312
03:45 PM	2	13	0	15	6	144	0	0	150	160	8	0	168	333
Total	23	37	0	60	8	559	0	0	567	524	24	0	548	1175
04:00 PM	19	7	0	26	4	143	0	0	147	132	3	0	135	308
04:15 PM	10	13	0	23	2	120	0	0	122	157	5	0	162	307
04:30 PM	8	6	0	14	0	160	0	0	160	118	1	0	119	293
04:45 PM	9	9	0	18	3	162	0	0	165	143	4	0	147	330
Total	46	35	0	81	9	585	0	0	594	550	13	0	563	1238
05:00 PM	18	10	0	28	1	173	0	0	174	136	6	0	142	344
05:15 PM	15	16	0	31	2	151	0	0	153	124	4	0	128	312
05:30 PM	12	7	0	19	4	147	0	0	151	137	2	0	139	309
05:45 PM	15	5	0	20	2	110	0	0	112	111	2	0	113	245
Total	60	38	0	98	9	581	0	0	590	508	14	0	522	1210
06:00 PM	6	7	0	13	1	116	0	0	117	108	2	0	110	240
06:15 PM	5	2	0	7	4	99	0	0	103	130	5	0	135	245
06:30 PM	7	9	0	16	2	101	0	0	103	96	5	0	101	220
06:45 PM	9	6	0	15	3	85	0	0	88	72	2	0	74	177
Total	27	24	0	51	10	401	0	0	411	406	14	0	420	882
Grand Total	344	377	0	721	82	5239	5	0	5326	5857	182	1	6040	12087
Apprch %	47.7	52.3	0		1.5	98.4	0.1	0		97	3	0		
Total %	2.8	3.1	0	6	0.7	43.3	0	0	44.1	48.5	1.5	0	50	

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	Acme Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	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 07:45 AM											
07:45 AM	1	5	6	**4**	**100**	0	**104**	**181**	3	**184**	**294**
08:00 AM	4	6	10	0	82	0	82	170	1	171	263
08:15 AM	3	4	7	0	83	0	83	164	**8**	172	262
08:30 AM	**6**	**10**	**16**	2	74	**1**	77	145	1	146	239
Total Volume	14	25	39	6	339	1	346	660	13	673	1058
% App. Total	35.9	64.1		1.7	98	0.3		98.1	1.9		
PHF	.583	.625	.609	.375	.848	.250	.832	.912	.406	.914	.900
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	9	9	18	3	162	0	165	**143**	4	**147**	330
05:00 PM	**18**	10	28	1	**173**	0	**174**	136	**6**	142	**344**
05:15 PM	15	**16**	**31**	2	151	0	153	124	4	128	312
05:30 PM	12	7	19	**4**	147	0	151	137	2	139	309
Total Volume	54	42	96	10	633	0	643	540	16	556	1295
% App. Total	56.2	43.8		1.6	98.4	0		97.1	2.9		
PHF	.750	.656	.774	.625	.915	.000	.924	.944	.667	.946	.941

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File Name : 3-Clearview Rd. and US 460 AM
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Groups Printed- Car

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	65	0	0	65	86	0	0	86	151
07:15 AM	0	0	0	0	0	70	0	0	70	114	0	1	115	185
07:30 AM	0	1	0	1	0	77	0	0	77	126	2	0	128	206
07:45 AM	0	1	0	1	0	104	0	0	104	180	3	0	183	288
Total	0	2	0	2	0	316	0	0	316	506	5	1	512	830
08:00 AM	0	1	0	1	0	78	0	0	78	158	3	0	161	240
08:15 AM	0	1	0	1	0	85	1	0	86	152	7	0	159	246
08:30 AM	1	0	1	2	0	75	0	2	77	157	0	0	157	236
08:45 AM	0	0	0	0	0	75	0	0	75	114	0	0	114	189
Total	1	2	1	4	0	313	1	2	316	581	10	0	591	911
Grand Total	1	4	1	6	0	629	1	2	632	1087	15	1	1103	1741
Apprch %	16.7	66.7	16.7		0	99.5	0.2	0.3		98.5	1.4	0.1		
Total %	0.1	0.2	0.1	0.3	0	36.1	0.1	0.1	36.3	62.4	0.9	0.1	63.4	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	**1**	**1**	0	**104**	0	**104**	**180**	3	**183**	**288**
08:00 AM	0	1	1	0	78	0	78	158	3	161	240
08:15 AM	0	1	1	0	85	**1**	86	152	**7**	159	246
08:30 AM	**1**	0	1	0	75	0	75	157	0	157	233
Total Volume	1	3	4	0	342	1	343	647	13	660	1007
% App. Total	25	75		0	99.7	0.3		98	2		
PHF	.250	.750	1.00	.000	.822	.250	.825	.899	.464	.902	.874

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Groups Printed- Truck

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	0	0	9	6	0	0	6	15
07:15 AM	0	0	0	0	0	7	0	0	7	5	0	0	5	12
07:30 AM	0	0	0	0	0	7	0	0	7	13	0	0	13	20
07:45 AM	0	0	0	0	0	6	0	0	6	8	0	0	8	14
Total	0	0	0	0	0	29	0	0	29	32	0	0	32	61
08:00 AM	0	0	0	0	0	5	0	0	5	12	0	0	12	17
08:15 AM	0	0	0	0	0	4	0	0	4	10	0	0	10	14
08:30 AM	0	0	0	0	0	8	0	0	8	3	0	0	3	11
08:45 AM	0	0	0	0	0	18	0	0	18	3	0	0	3	21
Total	0	0	0	0	0	35	0	0	35	28	0	0	28	63
Grand Total	0	0	0	0	0	64	0	0	64	60	0	0	60	124
Apprch %	0	0	0		0	100	0	0		100	0	0		
Total %	0	0	0	0	0	51.6	0	0	51.6	48.4	0	0	48.4	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	0	0	**7**	0	**7**	**13**	0	**13**	**20**
07:45 AM	0	0	0	0	6	0	6	8	0	8	14
08:00 AM	0	0	0	0	5	0	5	12	0	12	17
08:15 AM	0	0	0	0	4	0	4	10	0	10	14
Total Volume	0	0	0	0	22	0	22	43	0	43	65
% App. Total	0	0		0	100	0		100	0		
PHF	.000	.000	.000	.000	.786	.000	.786	.827	.000	.827	.813

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File Name : 3-Clearview Rd. and US 460 AM
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Groups Printed- Combined

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	74	0	0	74	92	0	0	92	166
07:15 AM	0	0	0	0	0	77	0	0	77	119	0	1	120	197
07:30 AM	0	1	0	1	0	84	0	0	84	139	2	0	141	226
07:45 AM	0	1	0	1	0	110	0	0	110	188	3	0	191	302
Total	0	2	0	2	0	345	0	0	345	538	5	1	544	891
08:00 AM	0	1	0	1	0	83	0	0	83	170	3	0	173	257
08:15 AM	0	1	0	1	0	89	1	0	90	162	7	0	169	260
08:30 AM	1	0	1	2	0	83	0	2	85	160	0	0	160	247
08:45 AM	0	0	0	0	0	93	0	0	93	117	0	0	117	210
Total	1	2	1	4	0	348	1	2	351	609	10	0	619	974
Grand Total	1	4	1	6	0	693	1	2	696	1147	15	1	1163	1865
Apprch %	16.7	66.7	16.7		0	99.6	0.1	0.3		98.6	1.3	0.1		
Total %	0.1	0.2	0.1	0.3	0	37.2	0.1	0.1	37.3	61.5	0.8	0.1	62.4	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	**1**	**1**	0	**110**	0	**110**	**188**	3	**191**	**302**
08:00 AM	0	1	1	0	83	0	83	170	3	173	257
08:15 AM	0	1	1	0	89	**1**	90	162	**7**	169	260
08:30 AM	**1**	0	1	0	83	0	83	160	0	160	244
Total Volume	1	3	4	0	365	1	366	680	13	693	1063
% App. Total	25	75		0	99.7	0.3		98.1	1.9		
PHF	.250	.750	1.00	.000	.830	.250	.832	.904	.464	.907	.880

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File Name : 3-Clearview Rd. and US 460 PM
Site Code :
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Groups Printed- Car

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	157	0	0	158	131	3	0	134	292
04:15 PM	0	0	0	0	1	123	1	0	125	159	0	0	159	284
04:30 PM	0	1	0	1	1	168	0	0	169	117	0	0	117	287
04:45 PM	0	0	0	0	0	168	0	0	168	144	0	0	144	312
Total	0	1	0	1	3	616	1	0	620	551	3	0	554	1175
05:00 PM	0	0	0	0	1	199	0	0	200	137	1	0	138	338
05:15 PM	0	0	0	0	1	158	0	0	159	138	0	0	138	297
05:30 PM	0	0	0	0	0	159	0	0	159	142	2	0	144	303
05:45 PM	0	0	0	0	0	120	0	0	120	113	1	0	114	234
Total	0	0	0	0	2	636	0	0	638	530	4	0	534	1172
06:00 PM	0	0	0	0	0	122	0	0	122	110	2	0	112	234
06:15 PM	0	0	0	0	0	108	0	0	108	128	2	0	130	238
06:30 PM	0	1	0	1	0	106	0	0	106	98	2	0	100	207
06:45 PM	0	1	0	1	0	94	0	0	94	79	0	1	80	175
Total	0	2	0	2	0	430	0	0	430	415	6	1	422	854
Grand Total	0	3	0	3	5	1682	1	0	1688	1496	13	1	1510	3201
Apprch %	0	100	0		0.3	99.6	0.1	0		99.1	0.9	0.1		
Total %	0	0.1	0	0.1	0.2	52.5	0	0	52.7	46.7	0.4	0	47.2	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	0	0	0	0	168	0	168	**144**	0	**144**	312
05:00 PM	0	0	0	**1**	**199**	0	**200**	137	1	138	**338**
05:15 PM	0	0	0	1	158	0	159	138	0	138	297
05:30 PM	0	0	0	0	159	0	159	142	**2**	144	303
Total Volume	0	0	0	2	684	0	686	561	3	564	1250
% App. Total	0	0		0.3	99.7	0		99.5	0.5		
PHF	.000	.000	.000	.500	.859	.000	.858	.974	.375	.979	.925

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File Name : 3-Clearview Rd. and US 460 PM
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Groups Printed- Truck

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	10	0	0	10	8	0	0	8	18
04:15 PM	0	0	0	0	0	6	0	0	6	11	0	0	11	17
04:30 PM	0	0	0	0	0	3	0	0	3	6	0	0	6	9
04:45 PM	0	0	0	0	0	5	0	0	5	4	1	0	5	10
Total	0	0	0	0	0	24	0	0	24	29	1	0	30	54
05:00 PM	0	0	0	0	0	2	0	0	2	6	0	0	6	8
05:15 PM	0	0	0	0	0	7	0	0	7	5	0	0	5	12
05:30 PM	0	0	0	0	0	3	0	0	3	4	1	0	5	8
05:45 PM	0	0	0	0	0	2	0	0	2	6	0	0	6	8
Total	0	0	0	0	0	14	0	0	14	21	1	0	22	36
06:00 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:15 PM	0	0	0	0	0	4	0	0	4	5	0	0	5	9
06:30 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:45 PM	0	0	0	0	0	1	0	0	1	3	0	0	3	4
Total	0	0	0	0	0	9	0	0	9	10	0	0	10	19
Grand Total	0	0	0	0	0	47	0	0	47	60	2	0	62	109
Apprch %	0	0	0		0	100	0	0		96.8	3.2	0		
Total %	0	0	0	0	0	43.1	0	0	43.1	55	1.8	0	56.9	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	0	0	0	0	**10**	0	**10**	8	0	8	**18**
04:15 PM	0	0	0	0	6	0	6	**11**	0	**11**	17
04:30 PM	0	0	0	0	3	0	3	6	0	6	9
04:45 PM	0	0	0	0	5	0	5	4	**1**	5	10
Total Volume	0	0	0	0	24	0	24	29	1	30	54
% App. Total	0	0		0	100	0		96.7	3.3		
PHF	.000	.000	.000	.000	.600	.000	.600	.659	.250	.682	.750

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File Name : 3-Clearview Rd. and US 460 PM
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Groups Printed- Combined

	Clearview Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	1	167	0	0	168	139	3	0	142	310
04:15 PM	0	0	0	0	1	129	1	0	131	170	0	0	170	301
04:30 PM	0	1	0	1	1	171	0	0	172	123	0	0	123	296
04:45 PM	0	0	0	0	0	173	0	0	173	148	1	0	149	322
Total	0	1	0	1	3	640	1	0	644	580	4	0	584	1229
05:00 PM	0	0	0	0	1	201	0	0	202	143	1	0	144	346
05:15 PM	0	0	0	0	1	165	0	0	166	143	0	0	143	309
05:30 PM	0	0	0	0	0	162	0	0	162	146	3	0	149	311
05:45 PM	0	0	0	0	0	122	0	0	122	119	1	0	120	242
Total	0	0	0	0	2	650	0	0	652	551	5	0	556	1208
06:00 PM	0	0	0	0	0	124	0	0	124	111	2	0	113	237
06:15 PM	0	0	0	0	0	112	0	0	112	133	2	0	135	247
06:30 PM	0	1	0	1	0	108	0	0	108	99	2	0	101	210
06:45 PM	0	1	0	1	0	95	0	0	95	82	0	1	83	179
Total	0	2	0	2	0	439	0	0	439	425	6	1	432	873
Grand Total	0	3	0	3	5	1729	1	0	1735	1556	15	1	1572	3310
Apprch %	0	100	0		0.3	99.7	0.1	0		99	1	0.1		
Total %	0	0.1	0	0.1	0.2	52.2	0	0	52.4	47	0.5	0	47.5	

	Clearview Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	0	0	0	0	173	0	173	**148**	1	**149**	322
05:00 PM	0	0	0	**1**	**201**	0	**202**	143	1	144	**346**
05:15 PM	0	0	0	1	165	0	166	143	0	143	309
05:30 PM	0	0	0	0	162	0	162	146	**3**	149	311
Total Volume	0	0	0	2	701	0	703	580	5	585	1288
% App. Total	0	0		0.3	99.7	0		99.1	0.9		
PHF	.000	.000	.000	.500	.872	.000	.870	.980	.417	.982	.931

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File Name : 4-Baker Hollow Rd. and US 460 AM
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Groups Printed- Car

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	64	0	64	84	0	0	84	148
07:15 AM	0	6	0	6	0	72	0	72	118	0	0	118	196
07:30 AM	0	6	0	6	4	76	0	80	118	1	0	119	205
07:45 AM	0	2	0	2	1	104	0	105	183	1	0	184	291
Total	0	14	0	14	5	316	0	321	503	2	0	505	840
08:00 AM	0	3	0	3	2	82	0	84	165	0	0	165	252
08:15 AM	0	3	0	3	1	81	0	82	147	1	0	148	233
08:30 AM	0	5	0	5	0	79	0	79	160	2	0	162	246
08:45 AM	0	4	0	4	1	82	0	83	112	2	0	114	201
Total	0	15	0	15	4	324	0	328	584	5	0	589	932
Grand Total	0	29	0	29	9	640	0	649	1087	7	0	1094	1772
Apprch %	0	100	0		1.4	98.6	0		99.4	0.6	0		
Total %	0	1.6	0	1.6	0.5	36.1	0	36.6	61.3	0.4	0	61.7	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	2	2	1	**104**	**105**	**183**	1	**184**	**291**
08:00 AM	0	3	3	**2**	82	84	165	0	165	252
08:15 AM	0	3	3	1	81	82	147	1	148	233
08:30 AM	0	**5**	**5**	0	79	79	160	**2**	162	246
Total Volume	0	13	13	4	346	350	655	4	659	1022
% App. Total	0	100		1.1	98.9		99.4	0.6		
PHF	.000	.650	.650	.500	.832	.833	.895	.500	.895	.878

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File Name : 4-Baker Hollow Rd. and US 460 AM
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Groups Printed- Truck

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	0	9	5	0	0	5	14
07:15 AM	0	0	0	0	0	8	0	8	12	0	0	12	20
07:30 AM	0	0	0	0	0	7	0	7	8	0	0	8	15
07:45 AM	0	0	0	0	0	7	0	7	4	0	0	4	11
Total	0	0	0	0	0	31	0	31	29	0	0	29	60
08:00 AM	0	0	0	0	0	5	0	5	11	0	0	11	16
08:15 AM	0	0	0	0	0	4	0	4	12	0	0	12	16
08:30 AM	0	0	0	0	0	6	0	6	4	0	0	4	10
08:45 AM	0	0	0	0	0	16	0	16	3	0	0	3	19
Total	0	0	0	0	0	31	0	31	30	0	0	30	61
Grand Total	0	0	0	0	0	62	0	62	59	0	0	59	121
Apprch %	0	0	0		0	100	0		100	0	0		
Total %	0	0	0	0	0	51.2	0	51.2	48.8	0	0	48.8	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	**8**	**8**	**12**	0	**12**	**20**
07:30 AM	0	0	0	0	7	7	8	0	8	15
07:45 AM	0	0	0	0	7	7	4	0	4	11
08:00 AM	0	0	0	0	5	5	11	0	11	16
Total Volume	0	0	0	0	27	27	35	0	35	62
% App. Total	0	0		0	100		100	0		
PHF	.000	.000	.000	.000	.844	.844	.729	.000	.729	.775

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File Name : 4-Baker Hollow Rd. and US 460 AM
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Start Date : 5/10/2016
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Groups Printed- Combined

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	73	0	73	89	0	0	89	162
07:15 AM	0	6	0	6	0	80	0	80	130	0	0	130	216
07:30 AM	0	6	0	6	4	83	0	87	126	1	0	127	220
07:45 AM	0	2	0	2	1	111	0	112	187	1	0	188	302
Total	0	14	0	14	5	347	0	352	532	2	0	534	900
08:00 AM	0	3	0	3	2	87	0	89	176	0	0	176	268
08:15 AM	0	3	0	3	1	85	0	86	159	1	0	160	249
08:30 AM	0	5	0	5	0	85	0	85	164	2	0	166	256
08:45 AM	0	4	0	4	1	98	0	99	115	2	0	117	220
Total	0	15	0	15	4	355	0	359	614	5	0	619	993
Grand Total	0	29	0	29	9	702	0	711	1146	7	0	1153	1893
Apprch %	0	100	0		1.3	98.7	0		99.4	0.6	0		
Total %	0	1.5	0	1.5	0.5	37.1	0	37.6	60.5	0.4	0	60.9	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	2	2	1	**111**	**112**	**187**	1	**188**	**302**
08:00 AM	0	3	3	**2**	87	89	176	0	176	268
08:15 AM	0	3	3	1	85	86	159	1	160	249
08:30 AM	0	**5**	**5**	0	85	85	164	**2**	166	256
Total Volume	0	13	13	4	368	372	686	4	690	1075
% App. Total	0	100		1.1	98.9		99.4	0.6		
PHF	.000	.650	.650	.500	.829	.830	.917	.500	.918	.890

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File Name : 4-Baker Hollow Rd. and US 460 PM
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Groups Printed- Car

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	6	0	7	2	161	0	163	122	4	0	126	296
04:15 PM	2	3	0	5	4	122	0	126	161	2	0	163	294
04:30 PM	0	4	0	4	3	167	0	170	117	0	0	117	291
04:45 PM	0	3	0	3	2	170	0	172	132	4	0	136	311
Total	3	16	0	19	11	620	0	631	532	10	0	542	1192
05:00 PM	0	1	0	1	5	193	0	198	139	3	0	142	341
05:15 PM	1	2	1	4	1	156	0	157	132	2	0	134	295
05:30 PM	3	5	0	8	5	154	0	159	136	2	0	138	305
05:45 PM	1	6	0	7	1	125	0	126	113	2	0	115	248
Total	5	14	1	20	12	628	0	640	520	9	0	529	1189
06:00 PM	1	4	0	5	4	115	0	119	102	2	0	104	228
06:15 PM	3	6	0	9	6	106	0	112	128	3	0	131	252
06:30 PM	1	2	0	3	0	99	0	99	97	0	0	97	199
06:45 PM	0	3	0	3	3	95	0	98	77	0	0	77	178
Total	5	15	0	20	13	415	0	428	404	5	0	409	857
Grand Total	13	45	1	59	36	1663	0	1699	1456	24	0	1480	3238
Apprch %	22	76.3	1.7		2.1	97.9	0		98.4	1.6	0		
Total %	0.4	1.4	0	1.8	1.1	51.4	0	52.5	45	0.7	0	45.7	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	3	3	2	170	172	132	**4**	136	311
05:00 PM	0	1	1	**5**	**193**	**198**	**139**	3	**142**	**341**
05:15 PM	1	2	3	1	156	157	132	2	134	294
05:30 PM	**3**	**5**	**8**	5	154	159	136	2	138	305
Total Volume	4	11	15	13	673	686	539	11	550	1251
% App. Total	26.7	73.3		1.9	98.1		98	2		
PHF	.333	.550	.469	.650	.872	.866	.969	.688	.968	.917

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File Name : 4-Baker Hollow Rd. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Truck

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	9	0	9	8	0	0	8	17
04:15 PM	0	0	0	0	0	6	0	6	11	0	0	11	17
04:30 PM	0	0	0	0	0	3	0	3	7	0	0	7	10
04:45 PM	0	0	0	0	0	6	0	6	4	0	0	4	10
Total	0	0	0	0	0	24	0	24	30	0	0	30	54
05:00 PM	0	0	0	0	0	2	0	2	6	0	0	6	8
05:15 PM	0	0	0	0	0	7	0	7	5	0	0	5	12
05:30 PM	0	0	0	0	0	2	0	2	4	0	0	4	6
05:45 PM	0	0	0	0	0	2	0	2	6	0	0	6	8
Total	0	0	0	0	0	13	0	13	21	0	0	21	34
06:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
06:15 PM	0	0	0	0	0	4	0	4	4	0	0	4	8
06:30 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
06:45 PM	0	0	0	0	0	1	0	1	3	0	0	3	4
Total	0	0	0	0	0	9	0	9	9	0	0	9	18
Grand Total	0	0	0	0	0	46	0	46	60	0	0	60	106
Apprch %	0	0	0		0	100	0		100	0	0		
Total %	0	0	0	0	0	43.4	0	43.4	56.6	0	0	56.6	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	**9**	**9**	8	0	8	**17**
04:15 PM	0	0	0	0	6	6	**11**	0	**11**	17
04:30 PM	0	0	0	0	3	3	7	0	7	10
04:45 PM	0	0	0	0	6	6	4	0	4	10
Total Volume	0	0	0	0	24	24	30	0	30	54
% App. Total	0	0		0	100		100	0		
PHF	.000	.000	.000	.000	.667	.667	.682	.000	.682	.794

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File Name : 4-Baker Hollow Rd. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Combined

	Baker Hollow Rd. Southbound				US 460 Westbound				US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	6	0	7	2	170	0	172	130	4	0	134	313
04:15 PM	2	3	0	5	4	128	0	132	172	2	0	174	311
04:30 PM	0	4	0	4	3	170	0	173	124	0	0	124	301
04:45 PM	0	3	0	3	2	176	0	178	136	4	0	140	321
Total	3	16	0	19	11	644	0	655	562	10	0	572	1246
05:00 PM	0	1	0	1	5	195	0	200	145	3	0	148	349
05:15 PM	1	2	1	4	1	163	0	164	137	2	0	139	307
05:30 PM	3	5	0	8	5	156	0	161	140	2	0	142	311
05:45 PM	1	6	0	7	1	127	0	128	119	2	0	121	256
Total	5	14	1	20	12	641	0	653	541	9	0	550	1223
06:00 PM	1	4	0	5	4	117	0	121	103	2	0	105	231
06:15 PM	3	6	0	9	6	110	0	116	132	3	0	135	260
06:30 PM	1	2	0	3	0	101	0	101	98	0	0	98	202
06:45 PM	0	3	0	3	3	96	0	99	80	0	0	80	182
Total	5	15	0	20	13	424	0	437	413	5	0	418	875
Grand Total	13	45	1	59	36	1709	0	1745	1516	24	0	1540	3344
Apprch %	22	76.3	1.7		2.1	97.9	0		98.4	1.6	0		
Total %	0.4	1.3	0	1.8	1.1	51.1	0	52.2	45.3	0.7	0	46.1	

	Baker Hollow Rd. Southbound			US 460 Westbound			US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	3	3	2	176	178	136	**4**	140	321
05:00 PM	0	1	1	**5**	**195**	**200**	**145**	3	**148**	**349**
05:15 PM	1	2	3	1	163	164	137	2	139	306
05:30 PM	**3**	**5**	**8**	5	156	161	140	2	142	311
Total Volume	4	11	15	13	690	703	558	11	569	1287
% App. Total	26.7	73.3		1.8	98.2		98.1	1.9		
PHF	.333	.550	.469	.650	.885	.879	.962	.688	.961	.922

Peggy Malone & Associates, Inc.
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File Name : 5-Patteson St. and US 460 AM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Car

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	0	1	0	63	0	0	63	80	1	0	81	145
07:15 AM	0	1	0	1	0	68	0	0	68	125	0	0	125	194
07:30 AM	1	1	0	2	1	84	1	0	86	122	0	0	122	210
07:45 AM	1	1	0	2	0	98	0	0	98	188	0	0	188	288
Total	2	4	0	6	1	313	1	0	315	515	1	0	516	837
08:00 AM	3	1	0	4	1	81	0	0	82	166	1	0	167	253
08:15 AM	0	1	0	1	0	82	0	0	82	150	1	0	151	234
08:30 AM	0	0	0	0	1	78	0	0	79	162	1	0	163	242
08:45 AM	2	1	0	3	0	80	0	0	80	114	1	0	115	198
Total	5	3	0	8	2	321	0	0	323	592	4	0	596	927
Grand Total	7	7	0	14	3	634	1	0	638	1107	5	0	1112	1764
Apprch %	50	50	0		0.5	99.4	0.2	0		99.6	0.4	0		
Total %	0.4	0.4	0	0.8	0.2	35.9	0.1	0	36.2	62.8	0.3	0	63	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	1	**1**	2	0	**98**	0	**98**	**188**	0	**188**	**288**
08:00 AM	**3**	1	**4**	**1**	81	0	82	166	**1**	167	253
08:15 AM	0	1	1	0	82	0	82	150	1	151	234
08:30 AM	0	0	0	1	78	0	79	162	1	163	242
Total Volume	4	3	7	2	339	0	341	666	3	669	1017
% App. Total	57.1	42.9		0.6	99.4	0		99.6	0.4		
PHF	.333	.750	.438	.500	.865	.000	.870	.886	.750	.890	.883

Peggy Malone & Associates, Inc.
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File Name : 5-Patteson St. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Truck

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	0	0	1	0	8	0	0	8	5	0	0	5	14
07:15 AM	0	0	0	0	0	8	0	0	8	5	0	0	5	13
07:30 AM	0	0	0	0	0	7	0	0	7	12	0	0	12	19
07:45 AM	0	0	0	0	0	7	0	0	7	8	0	0	8	15
Total	1	0	0	1	0	30	0	0	30	30	0	0	30	61
08:00 AM	0	0	0	0	0	6	0	0	6	10	0	0	10	16
08:15 AM	0	0	0	0	0	4	0	0	4	12	0	0	12	16
08:30 AM	0	0	0	0	1	7	0	0	8	3	1	0	4	12
08:45 AM	1	0	0	1	1	13	0	0	14	3	0	0	3	18
Total	1	0	0	1	2	30	0	0	32	28	1	0	29	62
Grand Total	2	0	0	2	2	60	0	0	62	58	1	0	59	123
Apprch %	100	0	0		3.2	96.8	0	0		98.3	1.7	0		
Total %	1.6	0	0	1.6	1.6	48.8	0	0	50.4	47.2	0.8	0	48	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	0	0	**7**	0	**7**	**12**	0	**12**	**19**
07:45 AM	0	0	0	0	7	0	7	8	0	8	15
08:00 AM	0	0	0	0	6	0	6	10	0	10	16
08:15 AM	0	0	0	0	4	0	4	12	0	12	16
Total Volume	0	0	0	0	24	0	24	42	0	42	66
% App. Total	0	0		0	100	0		100	0		
PHF	.000	.000	.000	.000	.857	.000	.857	.875	.000	.875	.868

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File Name : 5-Patteson St. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Combined

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	1	0	2	0	71	0	0	71	85	1	0	86	159
07:15 AM	0	1	0	1	0	76	0	0	76	130	0	0	130	207
07:30 AM	1	1	0	2	1	91	1	0	93	134	0	0	134	229
07:45 AM	1	1	0	2	0	105	0	0	105	196	0	0	196	303
Total	3	4	0	7	1	343	1	0	345	545	1	0	546	898
08:00 AM	3	1	0	4	1	87	0	0	88	176	1	0	177	269
08:15 AM	0	1	0	1	0	86	0	0	86	162	1	0	163	250
08:30 AM	0	0	0	0	2	85	0	0	87	165	2	0	167	254
08:45 AM	3	1	0	4	1	93	0	0	94	117	1	0	118	216
Total	6	3	0	9	4	351	0	0	355	620	5	0	625	989
Grand Total	9	7	0	16	5	694	1	0	700	1165	6	0	1171	1887
Apprch %	56.2	43.8	0		0.7	99.1	0.1	0		99.5	0.5	0		
Total %	0.5	0.4	0	0.8	0.3	36.8	0.1	0	37.1	61.7	0.3	0	62.1	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	1	**1**	2	0	**105**	0	**105**	**196**	0	**196**	**303**
08:00 AM	**3**	1	**4**	1	87	0	88	176	1	177	269
08:15 AM	0	1	1	0	86	0	86	162	1	163	250
08:30 AM	0	0	0	**2**	85	0	87	165	**2**	167	254
Total Volume	4	3	7	3	363	0	366	699	4	703	1076
% App. Total	57.1	42.9		0.8	99.2	0		99.4	0.6		
PHF	.333	.750	.438	.375	.864	.000	.871	.892	.500	.897	.888

Peggy Malone & Associates, Inc.
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File Name : 5-Patteson St. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Car

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	3	2	0	5	1	151	0	0	152	125	6	0	131	288
04:15 PM	2	0	0	2	3	125	0	0	128	165	1	0	166	296
04:30 PM	0	4	0	4	0	169	0	0	169	115	2	0	117	290
04:45 PM	2	2	0	4	4	173	0	0	177	131	2	0	133	314
Total	7	8	0	15	8	618	0	0	626	536	11	0	547	1188
05:00 PM	4	0	0	4	2	188	0	0	190	142	0	0	142	336
05:15 PM	2	1	1	4	3	153	0	0	156	135	0	0	135	295
05:30 PM	0	0	0	0	1	160	0	0	161	141	1	0	142	303
05:45 PM	1	1	0	2	1	120	0	0	121	116	2	0	118	241
Total	7	2	1	10	7	621	0	0	628	534	3	0	537	1175
06:00 PM	2	4	0	6	0	121	0	0	121	102	2	0	104	231
06:15 PM	3	2	0	5	5	104	0	0	109	135	1	0	136	250
06:30 PM	2	1	0	3	4	97	0	0	101	102	1	0	103	207
06:45 PM	2	0	0	2	2	95	0	0	97	77	0	0	77	176
Total	9	7	0	16	11	417	0	0	428	416	4	0	420	864
Grand Total	23	17	1	41	26	1656	0	0	1682	1486	18	0	1504	3227
Apprch %	56.1	41.5	2.4		1.5	98.5	0	0		98.8	1.2	0		
Total %	0.7	0.5	0	1.3	0.8	51.3	0	0	52.1	46	0.6	0	46.6	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	2	**2**	**4**	**4**	173	0	177	131	**2**	133	314
05:00 PM	**4**	0	4	2	**188**	0	**190**	**142**	0	**142**	**336**
05:15 PM	2	1	3	3	153	0	156	135	0	135	294
05:30 PM	0	0	0	1	160	0	161	141	1	142	303
Total Volume	8	3	11	10	674	0	684	549	3	552	1247
% App. Total	72.7	27.3		1.5	98.5	0		99.5	0.5		
PHF	.500	.375	.688	.625	.896	.000	.900	.967	.375	.972	.928

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File Name : 5-Patteson St. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Truck

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	3	0	0	3	0	9	0	0	9	7	0	0	7	19
04:15 PM	1	0	0	1	0	5	0	0	5	12	0	0	12	18
04:30 PM	0	0	0	0	0	3	0	0	3	7	0	0	7	10
04:45 PM	0	0	0	0	0	6	0	0	6	4	1	0	5	11
Total	4	0	0	4	0	23	0	0	23	30	1	0	31	58
05:00 PM	0	0	0	0	0	1	0	0	1	6	0	0	6	7
05:15 PM	0	0	0	0	0	5	0	0	5	5	0	0	5	10
05:30 PM	0	0	0	0	0	2	0	0	2	3	0	0	3	5
05:45 PM	0	0	0	0	0	2	0	0	2	5	0	0	5	7
Total	0	0	0	0	0	10	0	0	10	19	0	0	19	29
06:00 PM	0	0	0	0	0	2	0	0	2	2	0	0	2	4
06:15 PM	0	0	0	0	0	4	0	0	4	4	0	0	4	8
06:30 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:45 PM	0	0	0	0	0	2	0	0	2	2	1	0	3	5
Total	0	0	0	0	0	10	0	0	10	9	1	0	10	20
Grand Total	4	0	0	4	0	43	0	0	43	58	2	0	60	107
Apprch %	100	0	0		0	100	0	0		96.7	3.3	0		
Total %	3.7	0	0	3.7	0	40.2	0	0	40.2	54.2	1.9	0	56.1	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	**3**	0	**3**	0	**9**	0	**9**	7	0	7	**19**
04:15 PM	1	0	1	0	5	0	5	**12**	0	**12**	18
04:30 PM	0	0	0	0	3	0	3	7	0	7	10
04:45 PM	0	0	0	0	6	0	6	4	**1**	5	11
Total Volume	4	0	4	0	23	0	23	30	1	31	58
% App. Total	100	0		0	100	0		96.8	3.2		
PHF	.333	.000	.333	.000	.639	.000	.639	.625	.250	.646	.763

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File Name : 5-Patteson St. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Combined

	Patteson St. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	2	0	8	1	160	0	0	161	132	6	0	138	307
04:15 PM	3	0	0	3	3	130	0	0	133	177	1	0	178	314
04:30 PM	0	4	0	4	0	172	0	0	172	122	2	0	124	300
04:45 PM	2	2	0	4	4	179	0	0	183	135	3	0	138	325
Total	11	8	0	19	8	641	0	0	649	566	12	0	578	1246
05:00 PM	4	0	0	4	2	189	0	0	191	148	0	0	148	343
05:15 PM	2	1	1	4	3	158	0	0	161	140	0	0	140	305
05:30 PM	0	0	0	0	1	162	0	0	163	144	1	0	145	308
05:45 PM	1	1	0	2	1	122	0	0	123	121	2	0	123	248
Total	7	2	1	10	7	631	0	0	638	553	3	0	556	1204
06:00 PM	2	4	0	6	0	123	0	0	123	104	2	0	106	235
06:15 PM	3	2	0	5	5	108	0	0	113	139	1	0	140	258
06:30 PM	2	1	0	3	4	99	0	0	103	103	1	0	104	210
06:45 PM	2	0	0	2	2	97	0	0	99	79	1	0	80	181
Total	9	7	0	16	11	427	0	0	438	425	5	0	430	884
Grand Total	27	17	1	45	26	1699	0	0	1725	1544	20	0	1564	3334
Apprch %	60	37.8	2.2		1.5	98.5	0	0		98.7	1.3	0		
Total %	0.8	0.5	0	1.3	0.8	51	0	0	51.7	46.3	0.6	0	46.9	

	Patteson St. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	3	0	3	3	130	0	133	**177**	1	**178**	314
04:30 PM	0	**4**	**4**	0	172	0	172	122	2	124	300
04:45 PM	2	2	4	**4**	179	0	183	135	**3**	138	325
05:00 PM	**4**	0	4	2	**189**	0	**191**	148	0	148	**343**
Total Volume	9	6	15	9	670	0	679	582	6	588	1282
% App. Total	60	40		1.3	98.7	0		99	1		
PHF	.563	.375	.938	.563	.886	.000	.889	.822	.500	.826	.934

Peggy Malone & Associates, Inc.
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File Name : 6-Hillcreek Rd. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Car

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	2	0	2	1	64	0	0	65	82	0	0	82	149
07:15 AM	0	3	0	3	1	66	0	0	67	126	0	0	126	196
07:30 AM	0	3	0	3	0	86	0	0	86	125	0	0	125	214
07:45 AM	0	7	0	7	3	96	0	0	99	188	0	0	188	294
Total	0	15	0	15	5	312	0	0	317	521	0	0	521	853
08:00 AM	0	7	0	7	4	85	0	0	89	165	2	0	167	263
08:15 AM	0	5	0	5	2	83	3	0	88	150	1	0	151	244
08:30 AM	0	3	0	3	2	79	0	0	81	162	0	0	162	246
08:45 AM	0	5	0	5	3	75	0	1	79	114	0	0	114	198
Total	0	20	0	20	11	322	3	1	337	591	3	0	594	951
Grand Total	0	35	0	35	16	634	3	1	654	1112	3	0	1115	1804
Apprch %	0	100	0		2.4	96.9	0.5	0.2		99.7	0.3	0		
Total %	0	1.9	0	1.9	0.9	35.1	0.2	0.1	36.3	61.6	0.2	0	61.8	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	**7**	**7**	3	**96**	0	**99**	**188**	0	**188**	**294**
08:00 AM	0	7	7	**4**	85	0	89	165	**2**	167	263
08:15 AM	0	5	5	2	83	**3**	88	150	1	151	244
08:30 AM	0	3	3	2	79	0	81	162	0	162	246
Total Volume	0	22	22	11	343	3	357	665	3	668	1047
% App. Total	0	100		3.1	96.1	0.8		99.6	0.4		
PHF	.000	.786	.786	.688	.893	.250	.902	.884	.375	.888	.890

Peggy Malone & Associates, Inc.
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File Name : 6-Hillcreek Rd. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Truck

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	10	0	0	11	5	0	0	5	16
07:15 AM	0	0	0	0	0	6	0	0	6	6	0	0	6	12
07:30 AM	0	0	0	0	0	7	0	0	7	12	0	0	12	19
07:45 AM	0	0	0	0	0	7	0	0	7	8	0	0	8	15
Total	0	0	0	0	1	30	0	0	31	31	0	0	31	62
08:00 AM	0	0	0	0	0	6	0	0	6	10	0	0	10	16
08:15 AM	0	0	0	0	0	4	0	0	4	11	0	0	11	15
08:30 AM	0	0	0	0	0	6	0	0	6	3	0	0	3	9
08:45 AM	0	0	0	0	0	15	0	0	15	3	0	0	3	18
Total	0	0	0	0	0	31	0	0	31	27	0	0	27	58
Grand Total	0	0	0	0	1	61	0	0	62	58	0	0	58	120
Apprch %	0	0	0		1.6	98.4	0	0		100	0	0		
Total %	0	0	0	0	0.8	50.8	0	0	51.7	48.3	0	0	48.3	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	0	0	**7**	0	**7**	**12**	0	**12**	**19**
07:45 AM	0	0	0	0	7	0	7	8	0	8	15
08:00 AM	0	0	0	0	6	0	6	10	0	10	16
08:15 AM	0	0	0	0	4	0	4	11	0	11	15
Total Volume	0	0	0	0	24	0	24	41	0	41	65
% App. Total	0	0		0	100	0		100	0		
PHF	.000	.000	.000	.000	.857	.000	.857	.854	.000	.854	.855

Peggy Malone & Associates, Inc.
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File Name : 6-Hillcreek Rd. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Combined

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	2	0	2	2	74	0	0	76	87	0	0	87	165
07:15 AM	0	3	0	3	1	72	0	0	73	132	0	0	132	208
07:30 AM	0	3	0	3	0	93	0	0	93	137	0	0	137	233
07:45 AM	0	7	0	7	3	103	0	0	106	196	0	0	196	309
Total	0	15	0	15	6	342	0	0	348	552	0	0	552	915
08:00 AM	0	7	0	7	4	91	0	0	95	175	2	0	177	279
08:15 AM	0	5	0	5	2	87	3	0	92	161	1	0	162	259
08:30 AM	0	3	0	3	2	85	0	0	87	165	0	0	165	255
08:45 AM	0	5	0	5	3	90	0	1	94	117	0	0	117	216
Total	0	20	0	20	11	353	3	1	368	618	3	0	621	1009
Grand Total	0	35	0	35	17	695	3	1	716	1170	3	0	1173	1924
Apprch %	0	100	0		2.4	97.1	0.4	0.1		99.7	0.3	0		
Total %	0	1.8	0	1.8	0.9	36.1	0.2	0.1	37.2	60.8	0.2	0	61	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:45 AM											
07:45 AM	0	**7**	**7**	3	**103**	0	**106**	**196**	0	**196**	**309**
08:00 AM	0	7	7	**4**	91	0	95	175	**2**	177	279
08:15 AM	0	5	5	2	87	**3**	92	161	1	162	259
08:30 AM	0	3	3	2	85	0	87	165	0	165	255
Total Volume	0	22	22	11	366	3	380	697	3	700	1102
% App. Total	0	100		2.9	96.3	0.8		99.6	0.4		
PHF	.000	.786	.786	.688	.888	.250	.896	.889	.375	.893	.892

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File Name : 6-Hillcreek Rd. and US 460 PM
Site Code :
Start Date : 5/10/2016
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Groups Printed- Car

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	5	0	5	2	149	1	0	152	129	0	0	129	286
04:15 PM	0	6	0	6	5	128	2	0	135	164	0	0	164	305
04:30 PM	2	8	0	10	5	164	0	0	169	120	1	0	121	300
04:45 PM	0	6	0	6	9	179	0	0	188	134	0	0	134	328
Total	2	25	0	27	21	620	3	0	644	547	1	0	548	1219
05:00 PM	0	4	1	5	8	195	0	0	203	142	0	0	142	350
05:15 PM	0	10	0	10	11	150	1	0	162	138	0	0	138	310
05:30 PM	0	2	0	2	4	173	0	0	177	139	0	0	139	318
05:45 PM	1	4	0	5	9	115	0	1	125	117	0	0	117	247
Total	1	20	1	22	32	633	1	1	667	536	0	0	536	1225
06:00 PM	0	2	0	2	4	119	0	0	123	111	0	0	111	236
06:15 PM	0	5	0	5	3	114	1	0	118	134	0	0	134	257
06:30 PM	1	4	0	5	4	103	0	0	107	94	0	0	94	206
06:45 PM	1	11	0	12	5	94	0	0	99	84	0	0	84	195
Total	2	22	0	24	16	430	1	0	447	423	0	0	423	894
Grand Total	5	67	1	73	69	1683	5	1	1758	1506	1	0	1507	3338
Apprch %	6.8	91.8	1.4		3.9	95.7	0.3	0.1		99.9	0.1	0		
Total %	0.1	2	0	2.2	2.1	50.4	0.1	0	52.7	45.1	0	0	45.1	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	0	6	6	9	179	0	188	134	0	134	328
05:00 PM	0	4	4	8	**195**	0	**203**	**142**	0	**142**	**349**
05:15 PM	0	**10**	**10**	**11**	150	**1**	162	138	0	138	310
05:30 PM	0	2	2	4	173	0	177	139	0	139	318
Total Volume	0	22	22	32	697	1	730	553	0	553	1305
% App. Total	0	100		4.4	95.5	0.1		100	0		
PHF	.000	.550	.550	.727	.894	.250	.899	.974	.000	.974	.935

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File Name : 6-Hillcreek Rd. and US 460 PM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Truck

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	10	0	0	10	7	0	0	7	17
04:15 PM	0	0	0	0	1	6	0	0	7	12	0	0	12	19
04:30 PM	0	0	0	0	0	3	0	0	3	7	0	0	7	10
04:45 PM	0	1	0	1	0	7	0	0	7	4	0	0	4	12
Total	0	1	0	1	1	26	0	0	27	30	0	0	30	58
05:00 PM	0	0	0	0	0	1	0	0	1	6	0	0	6	7
05:15 PM	0	0	0	0	0	6	0	0	6	6	0	0	6	12
05:30 PM	0	0	0	0	0	2	0	0	2	3	0	0	3	5
05:45 PM	0	0	0	0	0	2	0	0	2	6	0	0	6	8
Total	0	0	0	0	0	11	0	0	11	21	0	0	21	32
06:00 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
06:15 PM	0	0	0	0	1	4	0	0	5	4	0	0	4	9
06:30 PM	0	1	0	1	0	3	0	0	3	1	0	0	1	5
06:45 PM	0	1	0	1	0	2	0	0	2	1	0	0	1	4
Total	0	2	0	2	1	11	0	0	12	7	0	0	7	21
Grand Total	0	3	0	3	2	48	0	0	50	58	0	0	58	111
Apprch %	0	100	0		4	96	0	0		100	0	0		
Total %	0	2.7	0	2.7	1.8	43.2	0	0	45	52.3	0	0	52.3	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	0	0	0	0	**10**	0	**10**	7	0	7	17
04:15 PM	0	0	0	**1**	6	0	7	**12**	0	**12**	**19**
04:30 PM	0	0	0	0	3	0	3	7	0	7	10
04:45 PM	0	**1**	**1**	0	7	0	7	4	0	4	12
Total Volume	0	1	1	1	26	0	27	30	0	30	58
% App. Total	0	100		3.7	96.3	0		100	0		
PHF	.000	.250	.250	.250	.650	.000	.675	.625	.000	.625	.763

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File Name : 6-Hillcreek Rd. and US 460 PM
Site Code :
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Groups Printed- Combined

	Hillcreek Rd. Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	5	0	5	2	159	1	0	162	136	0	0	136	303
04:15 PM	0	6	0	6	6	134	2	0	142	176	0	0	176	324
04:30 PM	2	8	0	10	5	167	0	0	172	127	1	0	128	310
04:45 PM	0	7	0	7	9	186	0	0	195	138	0	0	138	340
Total	2	26	0	28	22	646	3	0	671	577	1	0	578	1277
05:00 PM	0	4	1	5	8	196	0	0	204	148	0	0	148	357
05:15 PM	0	10	0	10	11	156	1	0	168	144	0	0	144	322
05:30 PM	0	2	0	2	4	175	0	0	179	142	0	0	142	323
05:45 PM	1	4	0	5	9	117	0	1	127	123	0	0	123	255
Total	1	20	1	22	32	644	1	1	678	557	0	0	557	1257
06:00 PM	0	2	0	2	4	121	0	0	125	112	0	0	112	239
06:15 PM	0	5	0	5	4	118	1	0	123	138	0	0	138	266
06:30 PM	1	5	0	6	4	106	0	0	110	95	0	0	95	211
06:45 PM	1	12	0	13	5	96	0	0	101	85	0	0	85	199
Total	2	24	0	26	17	441	1	0	459	430	0	0	430	915
Grand Total	5	70	1	76	71	1731	5	1	1808	1564	1	0	1565	3449
Apprch %	6.6	92.1	1.3		3.9	95.7	0.3	0.1		99.9	0.1	0		
Total %	0.1	2	0	2.2	2.1	50.2	0.1	0	52.4	45.3	0	0	45.4	

	Hillcreek Rd. Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	0	7	7	9	186	0	195	138	0	138	340
05:00 PM	0	4	4	8	**196**	0	**204**	**148**	0	**148**	**356**
05:15 PM	0	**10**	**10**	**11**	156	**1**	168	144	0	144	322
05:30 PM	0	2	2	4	175	0	179	142	0	142	323
Total Volume	0	23	23	32	713	1	746	572	0	572	1341
% App. Total	0	100		4.3	95.6	0.1		100	0		
PHF	.000	.575	.575	.727	.909	.250	.914	.966	.000	.966	.942

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File Name : 7-CVMC_Clinch St. and US 460 AM
Site Code :
Start Date : 5/10/2016
Page No : 1

Groups Printed- Car

	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	5	0	7	0	12	0	63	1	0	64	0	0	0	0	0	1	83	0	0	84	160
07:15 AM	8	0	9	0	17	0	58	1	1	60	2	0	1	0	3	3	117	0	0	120	200
07:30 AM	0	0	6	0	6	0	83	0	0	83	0	0	1	0	1	4	124	0	0	128	218
07:45 AM	2	1	1	0	4	0	103	0	0	103	0	0	1	0	1	12	178	0	0	190	298
Total	15	1	23	0	39	0	307	2	1	310	2	0	3	0	5	20	502	0	0	522	876
08:00 AM	3	0	4	0	7	0	79	4	0	83	2	1	4	0	7	5	166	0	0	171	268
08:15 AM	3	0	7	0	10	0	83	5	0	88	2	0	1	0	3	6	155	0	0	161	262
08:30 AM	2	0	12	0	14	0	77	2	0	79	5	1	4	0	10	12	152	0	0	164	267
08:45 AM	3	2	10	0	15	0	72	2	0	74	5	1	4	0	10	8	104	0	0	112	211
Total	11	2	33	0	46	0	311	13	0	324	14	3	13	0	30	31	577	0	0	608	1008
Grand Total	26	3	56	0	85	0	618	15	1	634	16	3	16	0	35	51	1079	0	0	1130	1884
Apprch %	30.6	3.5	65.9	0		0	97.5	2.4	0.2		45.7	8.6	45.7	0		4.5	95.5	0	0		
Total %	1.4	0.2	3	0	4.5	0	32.8	0.8	0.1	33.7	0.8	0.2	0.8	0	1.9	2.7	57.3	0	0	60	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	**1**	1	4	0	**103**	0	**103**	0	0	1	1	**12**	**178**	**0**	**190**	**298**
08:00 AM	**3**	0	4	7	0	79	4	83	2	**1**	**4**	7	5	166	**0**	171	268
08:15 AM	3	0	7	10	0	83	**5**	88	2	0	1	3	6	155	**0**	161	262
08:30 AM	2	0	**12**	**14**	0	77	2	79	**5**	1	4	**10**	12	152	**0**	164	267
Total Volume	10	1	24	35	0	342	11	353	9	2	10	21	35	651	**0**	686	1095
% App. Total	28.6	2.9	68.6		0	96.9	3.1		42.9	9.5	47.6		5.1	94.9	**0**		
PHF	.833	.250	.500	.625	.000	.830	.550	.857	.450	.500	.625	.525	.729	.914	.000	.903	.919

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File Name : 7-CVMC_Clinch St. and US 460 AM
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Groups Printed- Truck

	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	0	4	0	0	4	14
07:15 AM	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	6	0	0	6	13
07:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	12	0	0	12	20
07:45 AM	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	0	8	0	0	8	15
Total	0	0	1	0	1	0	29	1	0	30	0	0	1	0	1	0	30	0	0	30	62
08:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	10	0	0	10	15
08:15 AM	0	0	0	0	0	0	5	1	0	6	1	0	0	0	1	0	12	0	0	12	19
08:30 AM	1	0	0	0	1	0	5	1	0	6	0	0	0	0	0	0	3	0	0	3	10
08:45 AM	2	0	0	0	2	0	13	1	0	14	0	0	1	0	1	1	2	0	0	3	20
Total	3	0	0	0	3	0	28	3	0	31	1	0	1	0	2	1	27	0	0	28	64
Grand Total	3	0	1	0	4	0	57	4	0	61	1	0	2	0	3	1	57	0	0	58	126
Apprch %	75	0	25	0		0	93.4	6.6	0		33.3	0	66.7	0		1.7	98.3	0	0		
Total %	2.4	0	0.8	0	3.2	0	45.2	3.2	0	48.4	0.8	0	1.6	0	2.4	0.8	45.2	0	0	46	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**8**	0	**8**	0	0	0	0	0	**12**	0	**12**	**20**
07:45 AM	0	0	**1**	**1**	0	6	0	6	0	0	0	0	0	8	0	8	15
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10	15
08:15 AM	0	0	0	0	**0**	5	**1**	6	**1**	0	0	**1**	0	12	0	12	19
Total Volume	0	0	1	1	0	24	1	25	1	0	0	1	0	42	0	42	69
% App. Total	0	0	100		0	96	4		100	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.750	.250	.781	.250	.000	.000	.250	.000	.875	.000	.875	.863

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Groups Printed- Combined

	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	5	0	7	0	12	0	72	1	0	73	0	0	1	0	1	1	87	0	0	88	174
07:15 AM	8	0	9	0	17	0	64	2	1	67	2	0	1	0	3	3	123	0	0	126	213
07:30 AM	0	0	6	0	6	0	91	0	0	91	0	0	1	0	1	4	136	0	0	140	238
07:45 AM	2	1	2	0	5	0	109	0	0	109	0	0	1	0	1	12	186	0	0	198	313
Total	15	1	24	0	40	0	336	3	1	340	2	0	4	0	6	20	532	0	0	552	938
08:00 AM	3	0	4	0	7	0	84	4	0	88	2	1	4	0	7	5	176	0	0	181	283
08:15 AM	3	0	7	0	10	0	88	6	0	94	3	0	1	0	4	6	167	0	0	173	281
08:30 AM	3	0	12	0	15	0	82	3	0	85	5	1	4	0	10	12	155	0	0	167	277
08:45 AM	5	2	10	0	17	0	85	3	0	88	5	1	5	0	11	9	106	0	0	115	231
Total	14	2	33	0	49	0	339	16	0	355	15	3	14	0	32	32	604	0	0	636	1072
Grand Total	29	3	57	0	89	0	675	19	1	695	17	3	18	0	38	52	1136	0	0	1188	2010
Apprch %	32.6	3.4	64	0		0	97.1	2.7	0.1		44.7	7.9	47.4	0		4.4	95.6	0	0		
Total %	1.4	0.1	2.8	0	4.4	0	33.6	0.9	0	34.6	0.8	0.1	0.9	0	1.9	2.6	56.5	0	0	59.1	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	**1**	2	5	0	**109**	0	**109**	0	0	1	1	**12**	**186**	**0**	**198**	**313**
08:00 AM	**3**	0	4	7	0	84	4	88	2	**1**	**4**	7	5	176	**0**	181	283
08:15 AM	3	0	7	10	0	88	**6**	94	3	0	1	4	6	167	**0**	173	281
08:30 AM	3	0	**12**	**15**	0	82	3	85	**5**	1	4	**10**	12	155	**0**	167	277
Total Volume	11	1	25	37	0	363	13	376	10	2	10	22	35	684	**0**	719	1154
% App. Total	29.7	2.7	67.6		0	96.5	3.5		45.5	9.1	45.5		4.9	95.1	**0**		
PHF	.917	.250	.521	.617	.000	.833	.542	.862	.500	.500	.625	.550	.729	.919	.000	.908	.922

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File Name : 7-CVMC_Clinch St. and US 460 PM
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Groups Printed- Car

	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	7	4	25	0	36	0	123	12	0	135	4	0	20	0	24	16	120	0	0	136	331
04:15 PM	8	2	23	0	33	0	120	10	0	130	8	0	13	0	21	12	156	0	0	168	352
04:30 PM	12	3	30	0	45	0	130	11	1	142	12	0	23	0	35	15	114	0	0	129	351
04:45 PM	11	2	30	0	43	0	159	17	0	176	10	0	16	0	26	18	118	0	0	136	381
Total	38	11	108	0	157	0	532	50	1	583	34	0	72	0	106	61	508	0	0	569	1415
05:00 PM	13	2	28	0	43	0	155	11	0	166	9	0	36	0	45	11	135	0	0	146	400
05:15 PM	6	4	30	0	40	0	139	11	0	150	7	0	23	0	30	16	124	0	0	140	360
05:30 PM	8	1	19	0	28	0	146	10	0	156	13	0	23	0	36	20	130	0	0	150	370
05:45 PM	2	2	7	0	11	0	110	8	0	118	2	0	19	0	21	9	109	0	0	118	268
Total	29	9	84	0	122	0	550	40	0	590	31	0	101	0	132	56	498	0	0	554	1398
06:00 PM	7	2	14	0	23	1	95	8	0	104	7	0	17	0	24	13	103	0	0	116	267
06:15 PM	2	3	10	0	15	0	105	7	0	112	3	0	13	0	16	11	125	0	0	136	279
06:30 PM	4	2	9	0	15	0	94	2	1	97	9	0	6	0	15	9	97	0	0	106	233
06:45 PM	5	2	9	0	16	0	76	4	0	80	5	0	22	0	27	12	85	1	0	98	221
Total	18	9	42	0	69	1	370	21	1	393	24	0	58	0	82	45	410	1	0	456	1000
Grand Total	85	29	234	0	348	1	1452	111	2	1566	89	0	231	0	320	162	1416	1	0	1579	3813
Apprch %	24.4	8.3	67.2	0		0.1	92.7	7.1	0.1		27.8	0	72.2	0		10.3	89.7	0.1	0		
Total %	2.2	0.8	6.1	0	9.1	0	38.1	2.9	0.1	41.1	2.3	0	6.1	0	8.4	4.2	37.1	0	0	41.4	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	11	2	**30**	**43**	0	**159**	**17**	**176**	10	0	16	26	18	118	0	136	381
05:00 PM	**13**	2	28	43	0	155	11	166	9	0	**36**	**45**	11	**135**	0	146	**400**
05:15 PM	6	**4**	30	40	0	139	11	150	7	0	23	30	16	124	0	140	360
05:30 PM	8	1	19	28	0	146	10	156	**13**	0	23	36	**20**	130	0	**150**	370
Total Volume	38	9	107	154	0	599	49	648	39	0	98	137	65	507	0	572	1511
% App. Total	24.7	5.8	69.5		0	92.4	7.6		28.5	0	71.5		11.4	88.6	0		
PHF	.731	.563	.892	.895	.000	.942	.721	.920	.750	.000	.681	.761	.813	.939	.000	.953	.944

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Groups Printed- Truck

	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	1	7	0	0	8	17
04:15 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	11	0	0	11	17
04:30 PM	0	0	1	0	1	0	5	0	0	5	1	0	0	0	1	0	8	0	0	8	15
04:45 PM	1	0	1	0	2	0	6	0	0	6	0	0	0	0	0	1	4	0	0	5	13
Total	1	0	3	0	4	0	25	0	0	25	1	0	0	0	1	2	30	0	0	32	62
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	5	0	0	6	7
05:15 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	10
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	7
Total	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	1	17	0	0	18	29
06:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
06:15 PM	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	0	7	0	0	7	15
06:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
06:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
Total	0	0	0	0	0	0	13	1	0	14	1	0	0	0	1	0	14	0	0	14	29
Grand Total	1	0	3	0	4	0	49	1	0	50	2	0	0	0	2	3	61	0	0	64	120
Apprch %	25	0	75	0		0	98	2	0		100	0	0	0		4.7	95.3	0	0		
Total %	0.8	0	2.5	0	3.3	0	40.8	0.8	0	41.7	1.7	0	0	0	1.7	2.5	50.8	0	0	53.3	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**9**	0	**9**	0	0	0	0	**1**	7	0	8	**17**
04:15 PM	0	0	**1**	1	0	5	0	5	0	0	0	0	0	**11**	0	**11**	17
04:30 PM	0	0	1	1	0	5	0	5	**1**	0	0	**1**	0	8	0	8	15
04:45 PM	**1**	0	1	**2**	0	6	0	6	0	0	0	0	1	4	0	5	13
Total Volume	1	0	3	4	0	25	0	25	1	0	0	1	2	30	0	32	62
% App. Total	25	0	75		0	100	0		100	0	0		6.2	93.8	0		
PHF	.250	.000	.750	.500	.000	.694	.000	.694	.250	.000	.000	.250	.500	.682	.000	.727	.912

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	Clinch Valley Medical Ctr Southbound					US 460 Westbound					Clinch St. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	7	4	25	0	36	0	132	12	0	144	4	0	20	0	24	17	127	0	0	144	348
04:15 PM	8	2	24	0	34	0	125	10	0	135	8	0	13	0	21	12	167	0	0	179	369
04:30 PM	12	3	31	0	46	0	135	11	1	147	13	0	23	0	36	15	122	0	0	137	366
04:45 PM	12	2	31	0	45	0	165	17	0	182	10	0	16	0	26	19	122	0	0	141	394
Total	39	11	111	0	161	0	557	50	1	608	35	0	72	0	107	63	538	0	0	601	1477
05:00 PM	13	2	28	0	43	0	156	11	0	167	9	0	36	0	45	12	140	0	0	152	407
05:15 PM	6	4	30	0	40	0	145	11	0	156	7	0	23	0	30	16	128	0	0	144	370
05:30 PM	8	1	19	0	28	0	148	10	0	158	13	0	23	0	36	20	133	0	0	153	375
05:45 PM	2	2	7	0	11	0	112	8	0	120	2	0	19	0	21	9	114	0	0	123	275
Total	29	9	84	0	122	0	561	40	0	601	31	0	101	0	132	57	515	0	0	572	1427
06:00 PM	7	2	14	0	23	1	97	8	0	106	7	0	17	0	24	13	105	0	0	118	271
06:15 PM	2	3	10	0	15	0	111	8	0	119	4	0	13	0	17	11	132	0	0	143	294
06:30 PM	4	2	9	0	15	0	97	2	1	100	9	0	6	0	15	9	99	0	0	108	238
06:45 PM	5	2	9	0	16	0	78	4	0	82	5	0	22	0	27	12	88	1	0	101	226
Total	18	9	42	0	69	1	383	22	1	407	25	0	58	0	83	45	424	1	0	470	1029
Grand Total	86	29	237	0	352	1	1501	112	2	1616	91	0	231	0	322	165	1477	1	0	1643	3933
Apprch %	24.4	8.2	67.3	0		0.1	92.9	6.9	0.1		28.3	0	71.7	0		10	89.9	0.1	0		
Total %	2.2	0.7	6	0	8.9	0	38.2	2.8	0.1	41.1	2.3	0	5.9	0	8.2	4.2	37.6	0	0	41.8	

	Clinch Valley Medical Ctr Southbound				US 460 Westbound				Clinch St. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	12	2	**31**	**45**	0	**165**	**17**	**182**	10	0	16	26	19	122	0	141	394
05:00 PM	**13**	2	28	43	0	156	11	167	9	0	**36**	**45**	12	**140**	0	152	**407**
05:15 PM	6	**4**	30	40	0	145	11	156	7	0	23	30	16	128	0	144	370
05:30 PM	8	1	19	28	0	148	10	158	**13**	0	23	36	**20**	133	0	**153**	375
Total Volume	39	9	108	156	0	614	49	663	39	0	98	137	67	523	0	590	1546
% App. Total	25	5.8	69.2		0	92.6	7.4		28.5	0	71.5		11.4	88.6	0		
PHF	.750	.563	.871	.867	.000	.930	.721	.911	.750	.000	.681	.761	.838	.934	.000	.964	.950

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Groups Printed- Car

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	24	57	0	0	81	72	6	0	78	159
07:15 AM	0	0	0	0	28	56	0	0	84	94	10	0	104	188
07:30 AM	0	0	1	1	23	85	0	0	108	141	12	0	153	262
07:45 AM	1	0	0	1	30	109	0	0	139	157	14	0	171	311
Total	1	0	1	2	105	307	0	0	412	464	42	0	506	920
08:00 AM	0	0	0	0	36	99	0	0	135	140	10	0	150	285
08:15 AM	0	0	0	0	34	86	0	0	120	149	15	0	164	284
08:30 AM	0	0	0	0	36	73	0	0	109	136	12	0	148	257
08:45 AM	0	0	0	0	29	75	1	0	105	128	11	0	139	244
Total	0	0	0	0	135	333	1	0	469	553	48	0	601	1070
Grand Total	1	0	1	2	240	640	1	0	881	1017	90	0	1107	1990
Apprch %	50	0	50		27.2	72.6	0.1	0		91.9	8.1	0		
Total %	0.1	0	0.1	0.1	12.1	32.2	0.1	0	44.3	51.1	4.5	0	55.6	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	0	23	85	0	108	141	12	153	261
07:45 AM	**1**	0	**1**	30	**109**	0	**139**	**157**	14	**171**	**311**
08:00 AM	0	0	0	**36**	99	0	135	140	10	150	285
08:15 AM	0	0	0	34	86	0	120	149	**15**	164	284
Total Volume	1	0	1	123	379	0	502	587	51	638	1141
% App. Total	100	0		24.5	75.5	0		92	8		
PHF	.250	.000	.250	.854	.869	.000	.903	.935	.850	.933	.917

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Groups Printed- Truck

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	8	0	0	8	4	0	0	4	12
07:15 AM	0	0	0	0	0	11	0	0	11	4	0	0	4	15
07:30 AM	0	0	0	0	2	5	0	0	7	10	0	0	10	17
07:45 AM	0	0	0	0	0	5	0	0	5	10	0	0	10	15
Total	0	0	0	0	2	29	0	0	31	28	0	0	28	59
08:00 AM	0	0	0	0	2	4	0	0	6	2	0	0	2	8
08:15 AM	0	0	0	0	1	10	0	0	11	16	0	0	16	27
08:30 AM	0	0	0	0	1	10	0	0	11	4	0	0	4	15
08:45 AM	0	0	0	0	1	10	0	0	11	8	0	0	8	19
Total	0	0	0	0	5	34	0	0	39	30	0	0	30	69
Grand Total	0	0	0	0	7	63	0	0	70	58	0	0	58	128
Apprch %	0	0	0		10	90	0	0		100	0	0		
Total %	0	0	0	0	5.5	49.2	0	0	54.7	45.3	0	0	45.3	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 08:00 AM											
08:00 AM	0	0	0	**2**	4	0	6	2	0	2	8
08:15 AM	0	0	0	1	**10**	0	**11**	**16**	0	**16**	**27**
08:30 AM	0	0	0	1	10	0	11	4	0	4	15
08:45 AM	0	0	0	1	10	0	11	8	0	8	19
Total Volume	0	0	0	5	34	0	39	30	0	30	69
% App. Total	0	0		12.8	87.2	0		100	0		
PHF	.000	.000	.000	.625	.850	.000	.886	.469	.000	.469	.639

Peggy Malone & Associates, Inc.
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File Name : 8-CVMC Entrance and US 460 AM
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Groups Printed- Combined

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	24	65	0	0	89	76	6	0	82	171
07:15 AM	0	0	0	0	28	67	0	0	95	98	10	0	108	203
07:30 AM	0	0	1	1	25	90	0	0	115	151	12	0	163	279
07:45 AM	1	0	0	1	30	114	0	0	144	167	14	0	181	326
Total	1	0	1	2	107	336	0	0	443	492	42	0	534	979
08:00 AM	0	0	0	0	38	103	0	0	141	142	10	0	152	293
08:15 AM	0	0	0	0	35	96	0	0	131	165	15	0	180	311
08:30 AM	0	0	0	0	37	83	0	0	120	140	12	0	152	272
08:45 AM	0	0	0	0	30	85	1	0	116	136	11	0	147	263
Total	0	0	0	0	140	367	1	0	508	583	48	0	631	1139
Grand Total	1	0	1	2	247	703	1	0	951	1075	90	0	1165	2118
Apprch %	50	0	50		26	73.9	0.1	0		92.3	7.7	0		
Total %	0	0	0	0.1	11.7	33.2	0	0	44.9	50.8	4.2	0	55	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	0	25	90	0	115	151	12	163	278
07:45 AM	**1**	0	**1**	30	**114**	0	**144**	**167**	14	**181**	**326**
08:00 AM	0	0	0	**38**	103	0	141	142	10	152	293
08:15 AM	0	0	0	35	96	0	131	165	**15**	180	311
Total Volume	1	0	1	128	403	0	531	625	51	676	1208
% App. Total	100	0		24.1	75.9	0		92.5	7.5		
PHF	.250	.000	.250	.842	.884	.000	.922	.936	.850	.934	.926

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File Name : 8-CVMC Entrance and US 460 PM
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Groups Printed- Car

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	1	9	142	0	0	151	169	5	0	174	326
04:15 PM	0	0	0	0	9	121	0	0	130	184	6	0	190	320
04:30 PM	0	0	1	1	8	157	0	2	167	140	4	0	144	312
04:45 PM	0	0	1	1	12	145	0	0	157	150	5	0	155	313
Total	0	1	2	3	38	565	0	2	605	643	20	0	663	1271
05:00 PM	0	0	0	0	5	164	0	0	169	183	2	0	185	354
05:15 PM	0	0	0	0	7	159	0	0	166	135	2	0	137	303
05:30 PM	0	0	0	0	8	134	0	0	142	154	1	0	155	297
05:45 PM	0	0	0	0	9	143	0	0	152	118	5	0	123	275
Total	0	0	0	0	29	600	0	0	629	590	10	0	600	1229
06:00 PM	0	0	0	0	7	135	0	0	142	119	3	0	122	264
06:15 PM	0	0	0	0	3	98	0	0	101	95	7	0	102	203
06:30 PM	0	0	0	0	8	123	1	0	132	114	7	0	121	253
06:45 PM	0	0	0	0	11	132	0	0	143	90	4	0	94	237
Total	0	0	0	0	29	488	1	0	518	418	21	0	439	957
Grand Total	0	1	2	3	96	1653	1	2	1752	1651	51	0	1702	3457
Apprch %	0	33.3	66.7		5.5	94.3	0.1	0.1		97	3	0		
Total %	0	0	0.1	0.1	2.8	47.8	0	0.1	50.7	47.8	1.5	0	49.2	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	0	0	0	9	121	0	130	**184**	**6**	**190**	320
04:30 PM	0	0	0	8	157	0	165	140	4	144	309
04:45 PM	0	0	0	**12**	145	0	157	150	5	155	312
05:00 PM	0	0	0	5	**164**	0	**169**	183	2	185	**354**
Total Volume	0	0	0	34	587	0	621	657	17	674	1295
% App. Total	0	0		5.5	94.5	0		97.5	2.5		
PHF	.000	.000	.000	.708	.895	.000	.919	.893	.708	.887	.915

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File Name : 8-CVMC Entrance and US 460 PM
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Groups Printed- Truck

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	9	0	0	9	8	0	0	8	17
04:15 PM	0	0	0	0	0	3	0	0	3	3	0	0	3	6
04:30 PM	0	0	0	0	2	5	0	0	7	1	0	0	1	8
04:45 PM	0	0	0	0	0	4	0	0	4	8	0	0	8	12
Total	0	0	0	0	2	21	0	0	23	20	0	0	20	43
05:00 PM	0	0	0	0	0	3	0	0	3	4	0	0	4	7
05:15 PM	0	0	0	0	0	2	0	0	2	5	0	0	5	7
05:30 PM	0	0	0	0	0	5	0	0	5	5	0	0	5	10
05:45 PM	0	0	0	0	0	2	0	0	2	1	0	0	1	3
Total	0	0	0	0	0	12	0	0	12	15	0	0	15	27
06:00 PM	0	0	0	0	0	2	0	0	2	6	0	0	6	8
06:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	3	0	0	3	9	0	0	9	12
Grand Total	0	0	0	0	2	36	0	0	38	44	0	0	44	82
Apprch %	0	0	0		5.3	94.7	0	0		100	0	0		
Total %	0	0	0	0	2.4	43.9	0	0	46.3	53.7	0	0	53.7	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	0	0	0	0	**9**	0	**9**	**8**	0	**8**	**17**
04:15 PM	0	0	0	0	3	0	3	3	0	3	6
04:30 PM	0	0	0	**2**	5	0	7	1	0	1	8
04:45 PM	0	0	0	0	4	0	4	8	0	8	12
Total Volume	0	0	0	2	21	0	23	20	0	20	43
% App. Total	0	0		8.7	91.3	0		100	0		
PHF	.000	.000	.000	.250	.583	.000	.639	.625	.000	.625	.632

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Groups Printed- Combined

	Clinch Valley Medical Entrance Southbound				US 460 Westbound					US 460 Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	1	9	151	0	0	160	177	5	0	182	343
04:15 PM	0	0	0	0	9	124	0	0	133	187	6	0	193	326
04:30 PM	0	0	1	1	10	162	0	2	174	141	4	0	145	320
04:45 PM	0	0	1	1	12	149	0	0	161	158	5	0	163	325
Total	0	1	2	3	40	586	0	2	628	663	20	0	683	1314
05:00 PM	0	0	0	0	5	167	0	0	172	187	2	0	189	361
05:15 PM	0	0	0	0	7	161	0	0	168	140	2	0	142	310
05:30 PM	0	0	0	0	8	139	0	0	147	159	1	0	160	307
05:45 PM	0	0	0	0	9	145	0	0	154	119	5	0	124	278
Total	0	0	0	0	29	612	0	0	641	605	10	0	615	1256
06:00 PM	0	0	0	0	7	137	0	0	144	125	3	0	128	272
06:15 PM	0	0	0	0	3	98	0	0	101	97	7	0	104	205
06:30 PM	0	0	0	0	8	123	1	0	132	115	7	0	122	254
06:45 PM	0	0	0	0	11	133	0	0	144	90	4	0	94	238
Total	0	0	0	0	29	491	1	0	521	427	21	0	448	969
Grand Total	0	1	2	3	98	1689	1	2	1790	1695	51	0	1746	3539
Apprch %	0	33.3	66.7		5.5	94.4	0.1	0.1		97.1	2.9	0		
Total %	0	0	0.1	0.1	2.8	47.7	0	0.1	50.6	47.9	1.4	0	49.3	

	Clinch Valley Medical Entrance Southbound			US 460 Westbound				US 460 Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	0	0	0	9	124	0	133	**187**	**6**	**193**	326
04:30 PM	0	0	0	10	162	0	**172**	141	4	145	317
04:45 PM	0	0	0	**12**	149	0	161	158	5	163	324
05:00 PM	0	0	0	5	**167**	0	172	187	2	189	**361**
Total Volume	0	0	0	36	602	0	638	673	17	690	1328
% App. Total	0	0		5.6	94.4	0		97.5	2.5		
PHF	.000	.000	.000	.750	.901	.000	.927	.900	.708	.894	.920

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Groups Printed- Car

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	10	0	10	1	74	4	0	79	6	0	0	0	6	1	74	1	0	76	171
07:15 AM	1	0	9	0	10	3	84	11	0	98	7	0	0	0	7	0	89	1	0	90	205
07:30 AM	4	0	15	1	20	4	105	9	0	118	7	0	0	0	7	0	144	0	0	144	289
07:45 AM	1	1	15	0	17	3	134	16	0	153	5	0	0	0	5	0	160	1	0	161	336
Total	6	1	49	1	57	11	397	40	0	448	25	0	0	0	25	1	467	3	0	471	1001
08:00 AM	2	0	8	0	10	7	137	10	0	154	8	0	0	0	8	0	133	4	0	137	309
08:15 AM	1	1	9	0	11	5	116	11	0	132	4	0	1	0	5	0	149	0	0	149	297
08:30 AM	2	3	12	0	17	7	113	9	0	129	12	1	1	1	15	0	136	3	0	139	300
08:45 AM	3	0	9	0	12	6	97	13	0	116	8	0	1	0	9	1	129	2	0	132	269
Total	8	4	38	0	50	25	463	43	0	531	32	1	3	1	37	1	547	9	0	557	1175
Grand Total	14	5	87	1	107	36	860	83	0	979	57	1	3	1	62	2	1014	12	0	1028	2176
Apprch %	13.1	4.7	81.3	0.9		3.7	87.8	8.5	0		91.9	1.6	4.8	1.6		0.2	98.6	1.2	0		
Total %	0.6	0.2	4	0	4.9	1.7	39.5	3.8	0	45	2.6	0	0.1	0	2.8	0.1	46.6	0.6	0	47.2	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	1	**15**	**17**	3	134	**16**	153	5	0	0	5	0	**160**	1	**161**	**336**
08:00 AM	**2**	0	8	10	**7**	**137**	10	**154**	8	0	0	8	0	133	**4**	137	309
08:15 AM	1	1	9	11	5	116	11	132	4	0	**1**	5	0	149	0	149	297
08:30 AM	2	**3**	12	17	7	113	9	129	**12**	**1**	1	**14**	0	136	3	139	299
Total Volume	6	5	44	55	22	500	46	568	29	1	2	32	0	578	8	586	1241
% App. Total	10.9	9.1	80		3.9	88	8.1		90.6	3.1	6.2		0	98.6	1.4		
PHF	.750	.417	.733	.809	.786	.912	.719	.922	.604	.250	.500	.571	.000	.903	.500	.910	.923

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Groups Printed- Truck

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	8	0	0	8	0	0	0	0	0	0	4	0	0	4	13
07:15 AM	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	4	1	0	5	17
07:30 AM	0	0	0	0	0	0	7	1	0	8	1	0	0	0	1	0	11	0	0	11	20
07:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	9	0	0	9	15
Total	0	1	0	0	1	0	33	1	0	34	1	0	0	0	1	0	28	1	0	29	65
08:00 AM	0	0	0	0	0	2	8	0	0	10	0	0	0	0	0	0	1	0	0	1	11
08:15 AM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	16	0	0	16	26
08:30 AM	1	0	0	0	1	1	8	2	0	11	1	0	0	0	1	1	6	0	0	7	20
08:45 AM	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	0	9	0	0	9	21
Total	1	0	0	0	1	3	37	2	0	42	2	0	0	0	2	1	32	0	0	33	78
Grand Total	1	1	0	0	2	3	70	3	0	76	3	0	0	0	3	1	60	1	0	62	143
Apprch %	50	50	0	0		3.9	92.1	3.9	0		100	0	0	0		1.6	96.8	1.6	0		
Total %	0.7	0.7	0	0	1.4	2.1	49	2.1	0	53.1	2.1	0	0	0	2.1	0.7	42	0.7	0	43.4	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	**2**	8	0	10	0	0	0	0	0	1	0	1	11
08:15 AM	0	0	0	0	0	10	0	10	0	0	0	0	0	**16**	0	**16**	**26**
08:30 AM	**1**	0	0	**1**	1	8	**2**	**11**	**1**	0	0	**1**	**1**	6	0	7	20
08:45 AM	0	0	0	0	**0**	**11**	0	11	1	0	0	1	0	9	0	9	21
Total Volume	1	0	0	1	3	37	2	42	2	0	0	2	1	32	0	33	78
% App. Total	100	0	0		7.1	88.1	4.8		100	0	0		3	97	0		
PHF	.250	.000	.000	.250	.375	.841	.250	.955	.500	.000	.000	.500	.250	.500	.000	.516	.750

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Groups Printed- Combined

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	10	0	11	1	82	4	0	87	6	0	0	0	6	1	78	1	0	80	184
07:15 AM	1	0	9	0	10	3	96	11	0	110	7	0	0	0	7	0	93	2	0	95	222
07:30 AM	4	0	15	1	20	4	112	10	0	126	8	0	0	0	8	0	155	0	0	155	309
07:45 AM	1	1	15	0	17	3	140	16	0	159	5	0	0	0	5	0	169	1	0	170	351
Total	6	2	49	1	58	11	430	41	0	482	26	0	0	0	26	1	495	4	0	500	1066
08:00 AM	2	0	8	0	10	9	145	10	0	164	8	0	0	0	8	0	134	4	0	138	320
08:15 AM	1	1	9	0	11	5	126	11	0	142	4	0	1	0	5	0	165	0	0	165	323
08:30 AM	3	3	12	0	18	8	121	11	0	140	13	1	1	1	16	1	142	3	0	146	320
08:45 AM	3	0	9	0	12	6	108	13	0	127	9	0	1	0	10	1	138	2	0	141	290
Total	9	4	38	0	51	28	500	45	0	573	34	1	3	1	39	2	579	9	0	590	1253
Grand Total	15	6	87	1	109	39	930	86	0	1055	60	1	3	1	65	3	1074	13	0	1090	2319
Apprch %	13.8	5.5	79.8	0.9		3.7	88.2	8.2	0		92.3	1.5	4.6	1.5		0.3	98.5	1.2	0		
Total %	0.6	0.3	3.8	0	4.7	1.7	40.1	3.7	0	45.5	2.6	0	0.1	0	2.8	0.1	46.3	0.6	0	47	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	1	**15**	17	3	140	**16**	159	5	0	0	5	0	**169**	1	**170**	**351**
08:00 AM	2	0	8	10	**9**	**145**	10	**164**	8	0	0	8	0	134	**4**	138	320
08:15 AM	1	1	9	11	5	126	11	142	4	0	**1**	5	0	165	0	165	323
08:30 AM	**3**	**3**	12	**18**	8	121	11	140	**13**	**1**	1	**15**	**1**	142	3	146	319
Total Volume	7	5	44	56	25	532	48	605	30	1	2	33	1	610	8	619	1313
% App. Total	12.5	8.9	78.6		4.1	87.9	7.9		90.9	3	6.1		0.2	98.5	1.3		
PHF	.583	.417	.733	.778	.694	.917	.750	.922	.577	.250	.500	.550	.250	.902	.500	.910	.935

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 9-Lake Park Dr. and US 460 PM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Car

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	1	2	0	4	11	151	15	0	177	34	1	1	0	36	2	181	1	0	184	401
04:15 PM	2	1	11	0	14	16	133	24	0	173	28	1	0	0	29	1	178	1	0	180	396
04:30 PM	1	1	10	0	12	14	157	30	0	201	29	0	3	1	33	0	136	2	0	138	384
04:45 PM	3	0	14	0	17	12	150	24	0	186	27	1	0	0	28	0	143	6	0	149	380
Total	7	3	37	0	47	53	591	93	0	737	118	3	4	1	126	3	638	10	0	651	1561
05:00 PM	3	0	18	0	21	17	172	21	0	210	34	1	1	0	36	2	170	0	1	173	440
05:15 PM	2	1	13	0	16	10	159	23	0	192	29	2	1	0	32	0	142	2	0	144	384
05:30 PM	4	1	11	0	16	23	131	19	0	173	29	0	1	0	30	4	136	4	0	144	363
05:45 PM	2	1	11	0	14	12	146	8	0	166	27	3	2	0	32	1	113	3	0	117	329
Total	11	3	53	0	67	62	608	71	0	741	119	6	5	0	130	7	561	9	1	578	1516
06:00 PM	2	2	10	0	14	17	135	14	0	166	20	0	1	2	23	0	118	3	0	121	324
06:15 PM	1	0	8	0	9	7	104	17	0	128	17	0	0	1	18	0	95	1	0	96	251
06:30 PM	1	1	10	0	12	8	129	25	0	162	23	0	2	0	25	1	123	1	0	125	324
06:45 PM	3	3	6	0	12	6	136	17	0	159	18	2	2	0	22	0	93	1	0	94	287
Total	7	6	34	0	47	38	504	73	0	615	78	2	5	3	88	1	429	6	0	436	1186
Grand Total	25	12	124	0	161	153	1703	237	0	2093	315	11	14	4	344	11	1628	25	1	1665	4263
Apprch %	15.5	7.5	77	0		7.3	81.4	11.3	0		91.6	3.2	4.1	1.2		0.7	97.8	1.5	0.1		
Total %	0.6	0.3	2.9	0	3.8	3.6	39.9	5.6	0	49.1	7.4	0.3	0.3	0.1	8.1	0.3	38.2	0.6	0	39.1	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	**1**	11	14	16	133	24	173	28	**1**	0	29	1	**178**	1	**180**	396
04:30 PM	1	1	10	12	14	157	**30**	201	29	0	**3**	32	0	136	2	138	383
04:45 PM	**3**	0	14	17	12	150	24	186	27	1	0	28	0	143	**6**	149	380
05:00 PM	3	0	**18**	**21**	**17**	**172**	21	**210**	**34**	1	1	**36**	**2**	170	0	172	**439**
Total Volume	9	2	53	64	59	612	99	770	118	3	4	125	3	627	9	639	1598
% App. Total	14.1	3.1	82.8		7.7	79.5	12.9		94.4	2.4	3.2		0.5	98.1	1.4		
PHF	.750	.500	.736	.762	.868	.890	.825	.917	.868	.750	.333	.868	.375	.881	.375	.888	.910

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 9-Lake Park Dr. and US 460 PM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Truck

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	8	0	0	9	1	0	0	0	1	0	9	0	0	9	19
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9
04:30 PM	0	0	0	0	0	0	6	1	0	7	1	0	1	0	2	0	1	0	0	1	10
04:45 PM	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	13
Total	1	0	0	0	1	1	22	1	0	24	2	0	1	0	3	0	23	0	0	23	51
05:00 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	5	0	0	5	9
05:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8
05:30 PM	0	0	0	0	0	1	6	0	0	7	0	0	1	0	1	0	5	0	0	5	13
05:45 PM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	8
Total	0	0	1	0	1	1	14	1	0	16	1	0	1	0	2	0	19	0	0	19	38
06:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	9
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	13
Grand Total	1	0	1	0	2	2	40	2	0	44	3	0	2	0	5	0	51	0	0	51	102
Apprch %	50	0	50	0		4.5	90.9	4.5	0		60	0	40	0		0	100	0	0		
Total %	1	0	1	0	2	2	39.2	2	0	43.1	2.9	0	2	0	4.9	0	50	0	0	50	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**1**	**8**	0	**9**	**1**	0	0	1	0	**9**	0	**9**	**19**
04:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
04:30 PM	0	0	0	0	0	6	**1**	7	1	0	**1**	**2**	0	1	0	1	10
04:45 PM	**1**	0	0	**1**	0	4	0	4	0	0	0	0	0	8	0	8	13
Total Volume	1	0	0	1	1	22	1	24	2	0	1	3	0	23	0	23	51
% App. Total	100	0	0		4.2	91.7	4.2		66.7	0	33.3		0	100	0		
PHF	.250	.000	.000	.250	.250	.688	.250	.667	.500	.000	.250	.375	.000	.639	.000	.639	.671

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 9-Lake Park Dr. and US 460 PM
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Groups Printed- Combined

	Lake Park Dr. Southbound					US 460 Westbound					Lake Park Dr. Northbound					US 460 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	1	2	0	4	12	159	15	0	186	35	1	1	0	37	2	190	1	0	193	420
04:15 PM	2	1	11	0	14	16	137	24	0	177	28	1	0	0	29	1	183	1	0	185	405
04:30 PM	1	1	10	0	12	14	163	31	0	208	30	0	4	1	35	0	137	2	0	139	394
04:45 PM	4	0	14	0	18	12	154	24	0	190	27	1	0	0	28	0	151	6	0	157	393
Total	8	3	37	0	48	54	613	94	0	761	120	3	5	1	129	3	661	10	0	674	1612
05:00 PM	3	0	18	0	21	17	175	22	0	214	34	1	1	0	36	2	175	0	1	178	449
05:15 PM	2	1	13	0	16	10	161	23	0	194	29	2	1	0	32	0	148	2	0	150	392
05:30 PM	4	1	11	0	16	24	137	19	0	180	29	0	2	0	31	4	141	4	0	149	376
05:45 PM	2	1	12	0	15	12	149	8	0	169	28	3	2	0	33	1	116	3	0	120	337
Total	11	3	54	0	68	63	622	72	0	757	120	6	6	0	132	7	580	9	1	597	1554
06:00 PM	2	2	10	0	14	17	138	14	0	169	20	0	1	2	23	0	124	3	0	127	333
06:15 PM	1	0	8	0	9	7	104	17	0	128	17	0	0	1	18	0	97	1	0	98	253
06:30 PM	1	1	10	0	12	8	129	25	0	162	23	0	2	0	25	1	124	1	0	126	325
06:45 PM	3	3	6	0	12	6	137	17	0	160	18	2	2	0	22	0	93	1	0	94	288
Total	7	6	34	0	47	38	508	73	0	619	78	2	5	3	88	1	438	6	0	445	1199
Grand Total	26	12	125	0	163	155	1743	239	0	2137	318	11	16	4	349	11	1679	25	1	1716	4365
Apprch %	16	7.4	76.7	0		7.3	81.6	11.2	0		91.1	3.2	4.6	1.1		0.6	97.8	1.5	0.1		
Total %	0.6	0.3	2.9	0	3.7	3.6	39.9	5.5	0	49	7.3	0.3	0.4	0.1	8	0.3	38.5	0.6	0	39.3	

	Lake Park Dr. Southbound				US 460 Westbound				Lake Park Dr. Northbound				US 460 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	**1**	11	14	16	137	24	177	28	**1**	0	29	1	**183**	1	**185**	405
04:30 PM	1	1	10	12	14	163	**31**	208	30	0	**4**	34	0	137	2	139	393
04:45 PM	**4**	0	14	18	12	154	24	190	27	1	0	28	0	151	**6**	157	393
05:00 PM	3	0	**18**	**21**	**17**	**175**	22	**214**	**34**	1	1	**36**	**2**	175	0	177	**448**
Total Volume	10	2	53	65	59	629	101	789	119	3	5	127	3	646	9	658	1639
% App. Total	15.4	3.1	81.5		7.5	79.7	12.8		93.7	2.4	3.9		0.5	98.2	1.4		
PHF	.625	.500	.736	.774	.868	.899	.815	.922	.875	.750	.313	.882	.375	.883	.375	.889	.915

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 10-Front St. and US 460 AM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Car

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	50	3	0	53	4	28	0	32	46	39	0	0	85	170
07:15 AM	62	11	0	73	27	38	0	65	44	58	0	0	102	240
07:30 AM	55	13	0	68	42	74	0	116	68	98	0	0	166	350
07:45 AM	75	19	0	94	38	72	0	110	100	88	0	0	188	392
Total	242	46	0	288	111	212	0	323	258	283	0	0	541	1152
08:00 AM	75	16	0	91	19	77	0	96	64	79	0	0	143	330
08:15 AM	66	9	0	75	34	67	0	101	85	76	0	0	161	337
08:30 AM	56	14	0	70	20	68	0	88	87	75	0	0	162	320
08:45 AM	62	7	0	69	22	52	0	74	79	65	0	0	144	287
Total	259	46	0	305	95	264	0	359	315	295	0	0	610	1274
Grand Total	501	92	0	593	206	476	0	682	573	578	0	0	1151	2426
Apprch %	84.5	15.5	0		30.2	69.8	0		49.8	50.2	0	0		
Total %	20.7	3.8	0	24.4	8.5	19.6	0	28.1	23.6	23.8	0	0	47.4	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	55	13	68	**42**	74	**116**	68	**98**	0	166	350
07:45 AM	**75**	**19**	**94**	38	72	110	**100**	88	0	**188**	**392**
08:00 AM	75	16	91	19	**77**	96	64	79	0	143	330
08:15 AM	66	9	75	34	67	101	85	76	0	161	337
Total Volume	271	57	328	133	290	423	317	341	0	658	1409
% App. Total	82.6	17.4		31.4	68.6		48.2	51.8	0		
PHF	.903	.750	.872	.792	.942	.912	.793	.870	.000	.875	.899

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 10-Front St. and US 460 AM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Truck

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	4	0	0	4	2	3	0	5	2	4	0	0	6	15
07:15 AM	9	1	0	10	0	2	0	2	1	3	0	0	4	16
07:30 AM	6	2	0	8	0	2	0	2	1	9	0	0	10	20
07:45 AM	5	1	0	6	2	0	0	2	5	6	0	0	11	19
Total	24	4	0	28	4	7	0	11	9	22	0	0	31	70
08:00 AM	5	3	0	8	4	5	0	9	1	0	0	0	1	18
08:15 AM	5	2	0	7	1	2	0	3	3	14	0	0	17	27
08:30 AM	4	0	0	4	3	7	0	10	1	6	0	0	7	21
08:45 AM	10	0	0	10	0	0	0	0	2	10	0	0	12	22
Total	24	5	0	29	8	14	0	22	7	30	0	0	37	88
Grand Total	48	9	0	57	12	21	0	33	16	52	0	0	68	158
Apprch %	84.2	15.8	0		36.4	63.6	0		23.5	76.5	0	0		
Total %	30.4	5.7	0	36.1	7.6	13.3	0	20.9	10.1	32.9	0	0	43	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 08:00 AM											
08:00 AM	5	**3**	8	**4**	5	9	1	0	0	1	18
08:15 AM	5	2	7	1	2	3	**3**	**14**	0	**17**	**27**
08:30 AM	4	0	4	3	**7**	**10**	1	6	0	7	21
08:45 AM	**10**	0	**10**	0	0	0	2	10	0	12	22
Total Volume	24	5	29	8	14	22	7	30	0	37	88
% App. Total	82.8	17.2		36.4	63.6		18.9	81.1	0		
PHF	.600	.417	.725	.500	.500	.550	.583	.536	.000	.544	.815

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 10-Front St. and US 460 AM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Combined

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	54	3	0	57	6	31	0	37	48	43	0	0	91	185
07:15 AM	71	12	0	83	27	40	0	67	45	61	0	0	106	256
07:30 AM	61	15	0	76	42	76	0	118	69	107	0	0	176	370
07:45 AM	80	20	0	100	40	72	0	112	105	94	0	0	199	411
Total	266	50	0	316	115	219	0	334	267	305	0	0	572	1222
08:00 AM	80	19	0	99	23	82	0	105	65	79	0	0	144	348
08:15 AM	71	11	0	82	35	69	0	104	88	90	0	0	178	364
08:30 AM	60	14	0	74	23	75	0	98	88	81	0	0	169	341
08:45 AM	72	7	0	79	22	52	0	74	81	75	0	0	156	309
Total	283	51	0	334	103	278	0	381	322	325	0	0	647	1362
Grand Total	549	101	0	650	218	497	0	715	589	630	0	0	1219	2584
Apprch %	84.5	15.5	0		30.5	69.5	0		48.3	51.7	0	0		
Total %	21.2	3.9	0	25.2	8.4	19.2	0	27.7	22.8	24.4	0	0	47.2	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	61	15	76	**42**	76	**118**	69	**107**	0	176	370
07:45 AM	**80**	**20**	**100**	40	72	112	**105**	94	0	**199**	**411**
08:00 AM	80	19	99	23	**82**	105	65	79	0	144	348
08:15 AM	71	11	82	35	69	104	88	90	0	178	364
Total Volume	292	65	357	140	299	439	327	370	0	697	1493
% App. Total	81.8	18.2		31.9	68.1		46.9	53.1	0		
PHF	.913	.813	.893	.833	.912	.930	.779	.864	.000	.876	.908

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 10-Front St. and US 460 PM
Site Code :
Start Date : 5/11/2016
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Groups Printed- Car

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	78	13	0	91	25	99	0	124	118	105	0	0	223	438
04:15 PM	75	14	0	89	20	100	0	120	106	102	0	0	208	417
04:30 PM	67	7	0	74	25	135	0	160	101	81	1	0	183	417
04:45 PM	89	11	0	100	21	94	0	115	109	83	0	0	192	407
Total	309	45	0	354	91	428	0	519	434	371	1	0	806	1679
05:00 PM	111	17	0	128	28	104	0	132	116	111	0	0	227	487
05:15 PM	75	15	0	90	24	118	0	142	93	86	0	0	179	411
05:30 PM	78	10	0	88	28	93	0	121	105	80	0	0	185	394
05:45 PM	80	23	0	103	21	87	0	108	82	75	0	0	157	368
Total	344	65	0	409	101	402	0	503	396	352	0	0	748	1660
06:00 PM	66	12	0	78	19	108	0	127	70	76	0	0	146	351
06:15 PM	60	7	0	67	21	59	0	80	75	48	0	0	123	270
06:30 PM	80	8	0	88	16	83	0	99	83	65	0	0	148	335
06:45 PM	73	7	0	80	17	93	0	110	68	49	0	0	117	307
Total	279	34	0	313	73	343	0	416	296	238	0	0	534	1263
Grand Total	932	144	0	1076	265	1173	0	1438	1126	961	1	0	2088	4602
Apprch %	86.6	13.4	0		18.4	81.6	0		53.9	46	0	0		
Total %	20.3	3.1	0	23.4	5.8	25.5	0	31.2	24.5	20.9	0	0	45.4	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	75	14	89	20	100	120	106	102	0	208	417
04:30 PM	67	7	74	25	**135**	**160**	101	81	**1**	183	417
04:45 PM	89	11	100	21	94	115	109	83	0	192	407
05:00 PM	**111**	**17**	**128**	**28**	104	132	**116**	**111**	0	**227**	**487**
Total Volume	342	49	391	94	433	527	432	377	1	810	1728
% App. Total	87.5	12.5		17.8	82.2		53.3	46.5	0.1		
PHF	.770	.721	.764	.839	.802	.823	.931	.849	.250	.892	.887

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File Name : 10-Front St. and US 460 PM
Site Code :
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Groups Printed- Truck

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	8	1	0	9	1	1	0	2	4	7	0	0	11	22
04:15 PM	3	0	0	3	1	0	0	1	0	5	0	0	5	9
04:30 PM	5	2	0	7	0	2	0	2	1	2	0	0	3	12
04:45 PM	4	0	0	4	1	1	0	2	2	6	0	0	8	14
Total	20	3	0	23	3	4	0	7	7	20	0	0	27	57
05:00 PM	2	0	0	2	1	0	0	1	1	4	0	0	5	8
05:15 PM	2	1	0	3	1	0	0	1	2	4	0	0	6	10
05:30 PM	4	1	0	5	1	2	0	3	0	6	0	0	6	14
05:45 PM	3	0	0	3	1	0	0	1	2	2	0	0	4	8
Total	11	2	0	13	4	2	0	6	5	16	0	0	21	40
06:00 PM	2	0	0	2	1	1	0	2	1	5	0	0	6	10
06:15 PM	0	0	0	0	1	0	0	1	0	2	0	0	2	3
06:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	2
Total	2	1	0	3	2	2	0	4	1	8	0	0	9	16
Grand Total	33	6	0	39	9	8	0	17	13	44	0	0	57	113
Apprch %	84.6	15.4	0		52.9	47.1	0		22.8	77.2	0	0		
Total %	29.2	5.3	0	34.5	8	7.1	0	15	11.5	38.9	0	0	50.4	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	**8**	1	**9**	**1**	1	**2**	**4**	**7**	0	**11**	**22**
04:15 PM	3	0	3	1	0	1	0	5	0	5	9
04:30 PM	5	**2**	7	0	**2**	2	1	2	0	3	12
04:45 PM	4	0	4	1	1	2	2	6	0	8	14
Total Volume	20	3	23	3	4	7	7	20	0	27	57
% App. Total	87	13		42.9	57.1		25.9	74.1	0		
PHF	.625	.375	.639	.750	.500	.875	.438	.714	.000	.614	.648

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File Name : 10-Front St. and US 460 PM
Site Code :
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Groups Printed- Combined

	US 460 Westbound				Front St. Northbound				US 460 Eastbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	86	14	0	100	26	100	0	126	122	112	0	0	234	460
04:15 PM	78	14	0	92	21	100	0	121	106	107	0	0	213	426
04:30 PM	72	9	0	81	25	137	0	162	102	83	1	0	186	429
04:45 PM	93	11	0	104	22	95	0	117	111	89	0	0	200	421
Total	329	48	0	377	94	432	0	526	441	391	1	0	833	1736
05:00 PM	113	17	0	130	29	104	0	133	117	115	0	0	232	495
05:15 PM	77	16	0	93	25	118	0	143	95	90	0	0	185	421
05:30 PM	82	11	0	93	29	95	0	124	105	86	0	0	191	408
05:45 PM	83	23	0	106	22	87	0	109	84	77	0	0	161	376
Total	355	67	0	422	105	404	0	509	401	368	0	0	769	1700
06:00 PM	68	12	0	80	20	109	0	129	71	81	0	0	152	361
06:15 PM	60	7	0	67	22	59	0	81	75	50	0	0	125	273
06:30 PM	80	8	0	88	16	83	0	99	83	66	0	0	149	336
06:45 PM	73	8	0	81	17	94	0	111	68	49	0	0	117	309
Total	281	35	0	316	75	345	0	420	297	246	0	0	543	1279
Grand Total	965	150	0	1115	274	1181	0	1455	1139	1005	1	0	2145	4715
Apprch %	86.5	13.5	0		18.8	81.2	0		53.1	46.9	0	0		
Total %	20.5	3.2	0	23.6	5.8	25	0	30.9	24.2	21.3	0	0	45.5	

	US 460 Westbound			Front St. Northbound			US 460 Eastbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:15 PM											
04:15 PM	78	14	92	21	100	121	106	107	0	213	426
04:30 PM	72	9	81	25	**137**	**162**	102	83	**1**	186	429
04:45 PM	93	11	104	22	95	117	111	89	0	200	421
05:00 PM	**113**	**17**	**130**	**29**	104	133	**117**	**115**	0	**232**	**495**
Total Volume	356	51	407	97	436	533	436	394	1	831	1771
% App. Total	87.5	12.5		18.2	81.8		52.5	47.4	0.1		
PHF	.788	.750	.783	.836	.796	.823	.932	.857	.250	.895	.894

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File Name : 11-Kents Ridge _2nd St. and Front St. AM
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Groups Printed- Car

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	37	1	3	0	41	0	0	0	0	0	34	0	0	0	34	14	27	0	0	41	116
07:15 AM	65	11	3	0	79	0	0	0	0	0	56	0	0	0	56	19	21	0	0	40	175
07:30 AM	113	7	1	0	121	0	0	0	0	0	62	0	0	0	62	19	47	0	0	66	249
07:45 AM	96	13	2	0	111	0	0	0	0	0	60	0	0	0	60	30	65	0	0	95	266
Total	311	32	9	0	352	0	0	0	0	0	212	0	0	0	212	82	160	0	0	242	806
08:00 AM	83	10	2	0	95	0	0	0	1	1	46	0	0	0	46	18	48	0	0	66	208
08:15 AM	91	9	5	0	105	0	0	0	0	0	55	0	0	0	55	24	74	0	0	98	258
08:30 AM	82	9	7	0	98	0	0	0	0	0	41	0	0	0	41	30	62	0	0	92	231
08:45 AM	75	12	13	0	100	0	0	0	1	1	49	0	0	0	49	29	63	0	0	92	242
Total	331	40	27	0	398	0	0	0	2	2	191	0	0	0	191	101	247	0	0	348	939
Grand Total	642	72	36	0	750	0	0	0	2	2	403	0	0	0	403	183	407	0	0	590	1745
Apprch %	85.6	9.6	4.8	0		0	0	0	100		100	0	0	0		31	69	0	0		
Total %	36.8	4.1	2.1	0	43	0	0	0	0.1	0.1	23.1	0	0	0	23.1	10.5	23.3	0	0	33.8	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**113**	7	1	**121**	0	0	0	0	**62**	0	0	**62**	19	47	0	66	249
07:45 AM	96	**13**	2	111	0	0	0	0	60	0	0	60	**30**	65	0	95	**266**
08:00 AM	83	10	2	95	0	0	0	0	46	0	0	46	18	48	0	66	207
08:15 AM	91	9	**5**	105	0	0	0	0	55	0	0	55	24	**74**	0	**98**	258
Total Volume	383	39	10	432	0	0	0	0	223	0	0	223	91	234	0	325	980
% App. Total	88.7	9	2.3		0	0	0		100	0	0		28	72	0		
PHF	.847	.750	.500	.893	.000	.000	.000	.000	.899	.000	.000	.899	.758	.791	.000	.829	.921

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File Name : 11-Kents Ridge _2nd St. and Front St. AM
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Groups Printed- Truck

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	4
07:15 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	5
07:30 AM	5	0	0	0	5	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	7
07:45 AM	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	0	2	0	0	2	6
Total	10	2	0	0	12	0	0	0	0	0	5	0	0	0	5	2	3	0	0	5	22
08:00 AM	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
08:15 AM	2	0	0	0	2	0	0	0	0	0	4	0	0	0	4	3	1	0	0	4	10
08:30 AM	9	1	0	0	10	0	0	0	0	0	5	0	0	0	5	1	2	0	0	3	18
08:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	3
Total	15	4	0	0	19	0	0	0	0	0	10	0	0	0	10	4	4	0	0	8	37
Grand Total	25	6	0	0	31	0	0	0	0	0	15	0	0	0	15	6	7	0	0	13	59
Apprch %	80.6	19.4	0	0		0	0	0	0		100	0	0	0		46.2	53.8	0	0		
Total %	42.4	10.2	0	0	52.5	0	0	0	0	0	25.4	0	0	0	25.4	10.2	11.9	0	0	22	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**2**	0	2	0	0	0	0	2	0	0	2	0	**2**	0	2	6
08:00 AM	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
08:15 AM	2	0	0	2	0	0	0	0	4	0	0	4	**3**	1	0	**4**	10
08:30 AM	**9**	1	0	**10**	0	0	0	0	**5**	0	0	**5**	1	2	0	3	**18**
Total Volume	15	5	0	20	0	0	0	0	11	0	0	11	4	5	0	9	40
% App. Total	75	25	0		0	0	0		100	0	0		44.4	55.6	0		
PHF	.417	.625	.000	.500	.000	.000	.000	.000	.550	.000	.000	.550	.333	.625	.000	.563	.556

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File Name : 11-Kents Ridge _2nd St. and Front St. AM
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Groups Printed- Combined

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	39	1	3	0	43	0	0	0	0	0	35	0	0	0	35	15	27	0	0	42	120
07:15 AM	68	11	3	0	82	0	0	0	0	0	56	0	0	0	56	20	22	0	0	42	180
07:30 AM	118	7	1	0	126	0	0	0	0	0	64	0	0	0	64	19	47	0	0	66	256
07:45 AM	96	15	2	0	113	0	0	0	0	0	62	0	0	0	62	30	67	0	0	97	272
Total	321	34	9	0	364	0	0	0	0	0	217	0	0	0	217	84	163	0	0	247	828
08:00 AM	87	12	2	0	101	0	0	0	1	1	46	0	0	0	46	18	48	0	0	66	214
08:15 AM	93	9	5	0	107	0	0	0	0	0	59	0	0	0	59	27	75	0	0	102	268
08:30 AM	91	10	7	0	108	0	0	0	0	0	46	0	0	0	46	31	64	0	0	95	249
08:45 AM	75	13	13	0	101	0	0	0	1	1	50	0	0	0	50	29	64	0	0	93	245
Total	346	44	27	0	417	0	0	0	2	2	201	0	0	0	201	105	251	0	0	356	976
Grand Total	667	78	36	0	781	0	0	0	2	2	418	0	0	0	418	189	414	0	0	603	1804
Apprch %	85.4	10	4.6	0		0	0	0	100		100	0	0	0		31.3	68.7	0	0		
Total %	37	4.3	2	0	43.3	0	0	0	0.1	0.1	23.2	0	0	0	23.2	10.5	22.9	0	0	33.4	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**118**	7	1	**126**	0	0	0	0	**64**	0	0	**64**	19	47	0	66	256
07:45 AM	96	**15**	2	113	0	0	0	0	62	0	0	62	**30**	67	0	97	**272**
08:00 AM	87	12	2	101	0	0	0	0	46	0	0	46	18	48	0	66	213
08:15 AM	93	9	**5**	107	0	0	0	0	59	0	0	59	27	**75**	0	**102**	268
Total Volume	394	43	10	447	0	0	0	0	231	0	0	231	94	237	0	331	1009
% App. Total	88.1	9.6	2.2		0	0	0		100	0	0		28.4	71.6	0		
PHF	.835	.717	.500	.887	.000	.000	.000	.000	.902	.000	.000	.902	.783	.790	.000	.811	.927

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File Name : 11-Kents Ridge _2nd St. and Front St. PM
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Groups Printed- Car

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	109	24	9	0	142	0	0	0	1	1	75	0	0	1	76	55	82	0	0	137	356
04:15 PM	127	28	10	0	165	0	0	0	0	0	88	0	0	0	88	58	59	0	0	117	370
04:30 PM	135	30	8	0	173	0	0	0	0	0	68	0	0	0	68	55	56	0	0	111	352
04:45 PM	104	23	7	0	134	0	0	0	0	0	74	0	0	0	74	44	70	0	0	114	322
Total	475	105	34	0	614	0	0	0	1	1	305	0	0	1	306	212	267	0	0	479	1400
05:00 PM	135	29	6	0	170	0	0	0	0	0	74	0	0	1	75	77	61	0	1	139	384
05:15 PM	138	28	8	0	174	0	0	0	1	1	78	0	0	0	78	47	55	0	0	102	355
05:30 PM	104	23	8	0	135	0	0	0	0	0	94	0	0	0	94	50	68	0	0	118	347
05:45 PM	109	22	7	0	138	0	0	0	0	0	86	0	0	0	86	53	41	0	1	95	319
Total	486	102	29	0	617	0	0	0	1	1	332	0	0	1	333	227	225	0	2	454	1405
06:00 PM	105	26	4	0	135	0	0	0	0	0	58	0	0	0	58	43	52	0	0	95	288
06:15 PM	81	30	9	0	120	0	0	0	0	0	83	1	0	0	84	48	52	0	0	100	304
06:30 PM	110	23	4	0	137	0	0	0	0	0	69	0	0	0	69	42	46	0	0	88	294
06:45 PM	98	21	4	0	123	0	0	0	0	0	67	0	0	0	67	34	41	0	0	75	265
Total	394	100	21	0	515	0	0	0	0	0	277	1	0	0	278	167	191	0	0	358	1151
Grand Total	1355	307	84	0	1746	0	0	0	2	2	914	1	0	2	917	606	683	0	2	1291	3956
Apprch %	77.6	17.6	4.8	0		0	0	0	100		99.7	0.1	0	0.2		46.9	52.9	0	0.2		
Total %	34.3	7.8	2.1	0	44.1	0	0	0	0.1	0.1	23.1	0	0	0.1	23.2	15.3	17.3	0	0.1	32.6	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	127	28	**10**	165	0	0	0	0	**88**	0	0	**88**	58	59	0	117	370
04:30 PM	**135**	**30**	8	**173**	0	0	0	0	68	0	0	68	55	56	0	111	352
04:45 PM	104	23	7	134	0	0	0	0	74	0	0	74	44	**70**	0	114	322
05:00 PM	135	29	6	170	0	0	0	0	74	0	0	74	**77**	61	0	**138**	**382**
Total Volume	501	110	31	642	0	0	0	0	304	0	0	304	234	246	0	480	1426
% App. Total	78	17.1	4.8		0	0	0		100	0	0		48.8	51.2	0		
PHF	.928	.917	.775	.928	.000	.000	.000	.000	.864	.000	.000	.864	.760	.879	.000	.870	.933

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Groups Printed- Truck

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	2	0	0	0	2	5
04:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	1	0	0	4	7
04:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
04:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	2	0	0	3	5
Total	4	2	0	0	6	0	0	0	0	0	5	0	0	0	5	6	4	0	0	10	21
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4	0	0	6	8
06:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	3
06:15 PM	1	0	0	0	1	0	0	0	0	0	4	0	0	0	4	0	1	0	0	1	6
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	6	0	0	0	6	0	2	0	0	2	9
Grand Total	7	2	0	0	9	0	0	0	0	0	11	0	0	0	11	8	10	0	0	18	38
Apprch %	77.8	22.2	0	0		0	0	0	0		100	0	0	0		44.4	55.6	0	0		
Total %	18.4	5.3	0	0	23.7	0	0	0	0	0	28.9	0	0	0	28.9	21.1	26.3	0	0	47.4	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	**1**	0	2	0	0	0	0	1	0	0	1	2	0	0	2	5
04:15 PM	0	0	0	0	0	0	0	0	**3**	0	0	**3**	**3**	1	0	**4**	**7**
04:30 PM	**3**	0	0	**3**	0	0	0	0	0	0	0	0	0	1	0	1	4
04:45 PM	0	1	0	1	0	0	0	0	1	0	0	1	1	**2**	0	3	5
Total Volume	4	2	0	6	0	0	0	0	5	0	0	5	6	4	0	10	21
% App. Total	66.7	33.3	0		0	0	0		100	0	0		60	40	0		
PHF	.333	.500	.000	.500	.000	.000	.000	.000	.417	.000	.000	.417	.500	.500	.000	.625	.750

Peggy Malone & Associates, Inc.
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File Name : 11-Kents Ridge _2nd St. and Front St. PM
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Groups Printed- Combined

	2nd St. Southbound					Front St. Westbound					Kents Ridge Rd. Northbound					Front St. Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	110	25	9	0	144	0	0	0	1	1	76	0	0	1	77	57	82	0	0	139	361
04:15 PM	127	28	10	0	165	0	0	0	0	0	91	0	0	0	91	61	60	0	0	121	377
04:30 PM	138	30	8	0	176	0	0	0	0	0	68	0	0	0	68	55	57	0	0	112	356
04:45 PM	104	24	7	0	135	0	0	0	0	0	75	0	0	0	75	45	72	0	0	117	327
Total	479	107	34	0	620	0	0	0	1	1	310	0	0	1	311	218	271	0	0	489	1421
05:00 PM	135	29	6	0	170	0	0	0	0	0	74	0	0	1	75	77	61	0	1	139	384
05:15 PM	139	28	8	0	175	0	0	0	1	1	78	0	0	0	78	47	58	0	0	105	359
05:30 PM	105	23	8	0	136	0	0	0	0	0	94	0	0	0	94	50	68	0	0	118	348
05:45 PM	109	22	7	0	138	0	0	0	0	0	86	0	0	0	86	55	42	0	1	98	322
Total	488	102	29	0	619	0	0	0	1	1	332	0	0	1	333	229	229	0	2	460	1413
06:00 PM	105	26	4	0	135	0	0	0	0	0	60	0	0	0	60	43	53	0	0	96	291
06:15 PM	82	30	9	0	121	0	0	0	0	0	87	1	0	0	88	48	53	0	0	101	310
06:30 PM	110	23	4	0	137	0	0	0	0	0	69	0	0	0	69	42	46	0	0	88	294
06:45 PM	98	21	4	0	123	0	0	0	0	0	67	0	0	0	67	34	41	0	0	75	265
Total	395	100	21	0	516	0	0	0	0	0	283	1	0	0	284	167	193	0	0	360	1160
Grand Total	1362	309	84	0	1755	0	0	0	2	2	925	1	0	2	928	614	693	0	2	1309	3994
Apprch %	77.6	17.6	4.8	0		0	0	0	100		99.7	0.1	0	0.2		46.9	52.9	0	0.2		
Total %	34.1	7.7	2.1	0	43.9	0	0	0	0.1	0.1	23.2	0	0	0.1	23.2	15.4	17.4	0	0.1	32.8	

	2nd St. Southbound				Front St. Westbound				Kents Ridge Rd. Northbound				Front St. 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 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	127	28	**10**	165	0	0	0	0	**91**	0	0	**91**	61	60	0	121	377
04:30 PM	**138**	**30**	8	**176**	0	0	0	0	68	0	0	68	55	57	0	112	356
04:45 PM	104	24	7	135	0	0	0	0	75	0	0	75	45	**72**	0	117	327
05:00 PM	135	29	6	170	0	0	0	0	74	0	0	74	**77**	61	0	**138**	**382**
Total Volume	504	111	31	646	0	0	0	0	308	0	0	308	238	250	0	488	1442
% App. Total	78	17.2	4.8		0	0	0		100	0	0		48.8	51.2	0		
PHF	.913	.925	.775	.918	.000	.000	.000	.000	.846	.000	.000	.846	.773	.868	.000	.884	.944

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File Name : 12-Rockbridge Ave. and Front St. AM
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Groups Printed- Car

	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	48	16	0	64	64
07:15 AM	0	0	0	0	0	0	0	0	52	28	0	80	80
07:30 AM	0	0	0	0	0	0	0	0	69	39	0	108	108
07:45 AM	0	0	0	0	0	0	0	0	90	35	0	125	125
Total	0	0	0	0	0	0	0	0	259	118	0	377	377
08:00 AM	0	0	2	2	0	0	0	0	79	22	0	101	103
08:15 AM	0	0	1	1	0	0	0	0	92	38	0	130	131
08:30 AM	0	0	1	1	0	0	0	0	83	26	0	109	110
08:45 AM	0	0	1	1	0	0	0	0	100	25	0	125	126
Total	0	0	5	5	0	0	0	0	354	111	0	465	470
Grand Total	0	0	5	5	0	0	0	0	613	229	0	842	847
Apprch %	0	0	100		0	0	0		72.8	27.2	0		
Total %	0	0	0.6	0.6	0	0	0	0	72.4	27	0	99.4	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	90	35	125	125
08:00 AM	0	0	0	0	0	0	79	22	101	101
08:15 AM	0	0	0	0	0	0	**92**	**38**	**130**	**130**
08:30 AM	0	0	0	0	0	0	83	26	109	109
Total Volume	0	0	0	0	0	0	344	121	465	465
% App. Total	0	0		0	0		74	26		
PHF	.000	.000	.000	.000	.000	.000	.935	.796	.894	.894

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File Name : 12-Rockbridge Ave. and Front St. AM
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Groups Printed- Truck

	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	4	4
Total	0	0	0	0	0	0	0	0	5	3	0	8	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	4	1	0	5	5
08:30 AM	0	0	0	0	0	0	0	0	2	5	0	7	7
08:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	0	0	0	0	0	0	8	6	0	14	14
Grand Total	0	0	0	0	0	0	0	0	13	9	0	22	22
Apprch %	0	0	0		0	0	0		59.1	40.9	0		
Total %	0	0	0	0	0	0	0	0	59.1	40.9	0	100	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	2	2	4	4
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	**4**	1	5	5
08:30 AM	0	0	0	0	0	0	2	**5**	**7**	7
Total Volume	0	0	0	0	0	0	8	8	16	16
% App. Total	0	0		0	0		50	50		
PHF	.000	.000	.000	.000	.000	.000	.500	.400	.571	.571

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Groups Printed- Combined

	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	49	16	0	65	65
07:15 AM	0	0	0	0	0	0	0	0	53	28	0	81	81
07:30 AM	0	0	0	0	0	0	0	0	70	40	0	110	110
07:45 AM	0	0	0	0	0	0	0	0	92	37	0	129	129
Total	0	0	0	0	0	0	0	0	264	121	0	385	385
08:00 AM	0	0	2	2	0	0	0	0	79	22	0	101	103
08:15 AM	0	0	1	1	0	0	0	0	96	39	0	135	136
08:30 AM	0	0	1	1	0	0	0	0	85	31	0	116	117
08:45 AM	0	0	1	1	0	0	0	0	102	25	0	127	128
Total	0	0	5	5	0	0	0	0	362	117	0	479	484
Grand Total	0	0	5	5	0	0	0	0	626	238	0	864	869
Apprch %	0	0	100		0	0	0		72.5	27.5	0		
Total %	0	0	0.6	0.6	0	0	0	0	72	27.4	0	99.4	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	92	37	129	129
08:00 AM	0	0	0	0	0	0	79	22	101	101
08:15 AM	0	0	0	0	0	0	**96**	**39**	**135**	**135**
08:30 AM	0	0	0	0	0	0	85	31	116	116
Total Volume	0	0	0	0	0	0	352	129	481	481
% App. Total	0	0		0	0		73.2	26.8		
PHF	.000	.000	.000	.000	.000	.000	.917	.827	.891	.891

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File Name : 12-Rockbridge Ave. and Front St. PM
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Groups Printed- Car

	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	126	38	0	164	164
04:15 PM	0	0	0	0	0	0	2	2	113	41	0	154	156
04:30 PM	0	0	0	0	0	0	2	2	84	46	0	130	132
04:45 PM	0	0	1	1	0	0	0	0	107	42	0	149	150
Total	0	0	1	1	0	0	4	4	430	167	0	597	602
05:00 PM	0	0	3	3	0	0	0	0	100	41	0	141	144
05:15 PM	0	0	0	0	0	0	0	0	95	47	0	142	142
05:30 PM	0	0	0	0	0	0	0	0	124	49	0	173	173
05:45 PM	0	0	0	0	0	0	0	0	87	47	0	134	134
Total	0	0	3	3	0	0	0	0	406	184	0	590	593
06:00 PM	0	0	0	0	0	0	0	0	78	35	0	113	113
06:15 PM	0	0	0	0	0	0	0	0	106	40	0	146	146
06:30 PM	0	0	0	0	0	0	0	0	74	46	0	120	120
06:45 PM	0	0	1	1	0	0	0	0	72	41	0	113	114
Total	0	0	1	1	0	0	0	0	330	162	0	492	493
Grand Total	0	0	5	5	0	0	4	4	1166	513	0	1679	1688
Apprch %	0	0	100		0	0	100		69.4	30.6	0		
Total %	0	0	0.3	0.3	0	0	0.2	0.2	69.1	30.4	0	99.5	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	107	42	149	149
05:00 PM	0	0	0	0	0	0	100	41	141	141
05:15 PM	0	0	0	0	0	0	95	47	142	142
05:30 PM	0	0	0	0	0	0	**124**	**49**	**173**	**173**
Total Volume	0	0	0	0	0	0	426	179	605	605
% App. Total	0	0		0	0		70.4	29.6		
PHF	.000	.000	.000	.000	.000	.000	.859	.913	.874	.874

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Groups Printed- Truck

	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
04:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	0	0	0	0	0	0	0	9	0	0	9	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	0	0	3	3
06:00 PM	0	0	0	0	0	0	0	0	2	1	0	3	3
06:15 PM	0	0	0	0	0	0	0	0	5	0	0	5	5
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	7	1	0	8	8
Grand Total	0	0	0	0	0	0	0	0	19	1	0	20	20
Apprch %	0	0	0		0	0	0		95	5	0		
Total %	0	0	0	0	0	0	0	0	95	5	0	100	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	**3**	0	**3**	**3**
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	3	0	3	3
Total Volume	0	0	0	0	0	0	9	0	9	9
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.000	.750	.750

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	Rockbridge Ave. Southbound				Front St. Westbound				Front St. Eastbound				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	127	38	0	165	165
04:15 PM	0	0	0	0	0	0	2	2	116	41	0	157	159
04:30 PM	0	0	0	0	0	0	2	2	86	46	0	132	134
04:45 PM	0	0	1	1	0	0	0	0	110	42	0	152	153
Total	0	0	1	1	0	0	4	4	439	167	0	606	611
05:00 PM	0	0	3	3	0	0	0	0	100	41	0	141	144
05:15 PM	0	0	0	0	0	0	0	0	98	47	0	145	145
05:30 PM	0	0	0	0	0	0	0	0	124	49	0	173	173
05:45 PM	0	0	0	0	0	0	0	0	87	47	0	134	134
Total	0	0	3	3	0	0	0	0	409	184	0	593	596
06:00 PM	0	0	0	0	0	0	0	0	80	36	0	116	116
06:15 PM	0	0	0	0	0	0	0	0	111	40	0	151	151
06:30 PM	0	0	0	0	0	0	0	0	74	46	0	120	120
06:45 PM	0	0	1	1	0	0	0	0	72	41	0	113	114
Total	0	0	1	1	0	0	0	0	337	163	0	500	501
Grand Total	0	0	5	5	0	0	4	4	1185	514	0	1699	1708
Apprch %	0	0	100		0	0	100		69.7	30.3	0		
Total %	0	0	0.3	0.3	0	0	0.2	0.2	69.4	30.1	0	99.5	

	Rockbridge Ave. Southbound			Front St. Westbound			Front St. Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	110	42	152	152
05:00 PM	0	0	0	0	0	0	100	41	141	141
05:15 PM	0	0	0	0	0	0	98	47	145	145
05:30 PM	0	0	0	0	0	0	**124**	**49**	**173**	**173**
Total Volume	0	0	0	0	0	0	432	179	611	611
% App. Total	0	0		0	0		70.7	29.3		
PHF	.000	.000	.000	.000	.000	.000	.871	.913	.883	.883

APPENDIX A-2: 48 HOUR VEHICLE CLASSIFICATION COUNT DATA

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
00:30	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
00:45	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	5
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	5	4	0	0	0	0	0	4	0	0	0	0	0	0	13
01:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	4
01:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	6	4	0	0	1	0	0	1	0	0	0	0	0	0	12
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
03:15	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	4
03:30	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	5
03:45	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	3
04:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	7	2	0	1	0	0	0	3	2	0	0	1	0	0	16
04:15	0	2	3	0	1	0	0	0	0	0	0	0	0	0	0	6
04:30	0	4	3	0	0	0	0	0	1	0	0	0	2	0	0	10
04:45	0	3	5	1	1	0	0	0	0	0	0	0	0	0	0	10
05:00	0	11	4	0	1	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	20	15	1	3	0	0	0	1	0	0	0	2	0	0	42
05:15	0	8	7	0	0	0	0	0	1	0	0	0	0	0	0	16
05:30	0	9	8	0	0	0	1	0	2	1	0	0	2	0	0	23
05:45	0	17	8	0	0	0	0	0	0	2	0	0	0	0	0	27
06:00	0	14	11	0	0	0	0	0	1	1	0	0	0	0	0	27
Hour Total	0	48	34	0	0	0	1	0	4	4	0	0	2	0	0	93
06:15	0	24	10	0	0	0	0	0	0	0	0	0	0	0	0	34
06:30	0	24	17	0	0	0	0	0	0	1	0	0	0	0	0	42
06:45	1	18	20	0	1	3	0	0	0	0	0	0	0	0	0	43
07:00	0	21	17	0	1	0	2	0	0	0	0	0	0	0	0	41
Hour Total	1	87	64	0	2	3	2	0	0	1	0	0	0	0	0	160
07:15	0	14	15	0	2	0	2	0	0	1	0	0	0	0	0	34
07:30	0	23	20	0	0	3	0	0	0	1	0	0	0	0	0	47
07:45	0	27	17	0	1	0	1	0	1	0	0	0	0	0	0	47
08:00	0	22	12	0	1	0	1	0	0	2	0	0	0	0	0	38
Hour Total	0	86	64	0	4	3	4	0	1	4	0	0	0	0	0	166
08:15	0	14	15	0	3	1	3	0	1	1	0	0	0	0	0	38
08:30	0	18	19	0	3	2	1	0	0	0	0	0	0	0	0	43
08:45	0	23	14	0	2	0	0	0	2	1	0	0	0	0	0	42
09:00	0	15	20	0	3	0	3	2	1	2	0	0	0	0	0	46

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	70	68	0	11	3	7	2	4	4	0	0	0	0	0	169
09:15	0	8	15	0	0	2	2	0	2	0	0	0	0	0	0	29
09:30	0	18	11	0	2	1	3	1	3	2	0	0	0	0	0	41
09:45	0	26	19	0	1	1	1	1	2	0	0	0	0	0	0	51
10:00	0	13	9	0	1	2	0	2	1	0	0	0	0	0	0	28
Hour Total	0	65	54	0	4	6	6	4	8	2	0	0	0	0	0	149
10:15	0	21	6	0	1	0	0	2	0	0	0	0	0	0	0	30
10:30	0	17	13	0	3	1	1	0	0	0	0	0	0	0	0	35
10:45	0	17	14	0	0	0	0	0	1	2	0	0	0	0	0	34
11:00	0	24	12	0	0	2	1	1	1	2	0	0	1	0	0	44
Hour Total	0	79	45	0	4	3	2	3	2	4	0	0	1	0	0	143
11:15	0	27	17	0	1	1	0	0	0	1	0	0	0	0	0	47
11:30	0	24	15	0	0	1	0	2	0	2	0	0	0	0	0	44
11:45	0	24	17	0	0	0	1	0	2	0	0	0	0	0	0	44
12:00	0	24	15	0	1	4	4	0	1	0	0	0	1	0	0	50
Hour Total	0	99	64	0	2	6	5	2	3	3	0	0	1	0	0	185
12:15	0	29	18	0	3	2	0	0	1	1	0	0	0	0	0	54
12:30	0	31	13	1	1	0	0	0	1	0	0	0	1	0	0	48
12:45	0	31	10	0	1	0	0	0	0	2	0	0	0	0	0	44
13:00	0	32	16	0	0	0	2	0	2	0	0	0	0	0	0	52
Hour Total	0	123	57	1	5	2	2	0	4	3	0	0	1	0	0	198
13:15	0	29	9	0	0	0	0	1	0	0	0	0	0	0	0	39
13:30	0	26	15	0	0	1	1	0	1	0	0	0	1	0	0	45
13:45	0	29	14	0	1	1	0	0	0	0	0	0	0	0	0	45
14:00	0	28	17	0	1	1	0	1	2	1	0	0	0	0	0	51
Hour Total	0	112	55	0	2	3	1	2	3	1	0	0	1	0	0	180
14:15	0	27	21	0	0	3	2	1	0	1	0	0	0	0	0	55
14:30	0	36	13	0	3	0	1	0	0	1	0	0	0	0	0	54
14:45	1	41	11	0	1	3	1	1	0	0	0	0	0	0	0	59
15:00	0	33	9	0	1	1	0	1	1	0	0	0	0	0	0	46
Hour Total	1	137	54	0	5	7	4	3	1	2	0	0	0	0	0	214
15:15	0	26	15	0	0	3	1	0	1	1	0	0	0	0	0	47
15:30	0	35	15	0	1	0	0	0	0	0	0	0	0	0	0	51
15:45	0	34	18	0	2	2	0	0	0	1	0	0	0	0	0	57
16:00	0	40	22	0	1	0	0	0	2	1	0	0	0	0	0	66
Hour Total	0	135	70	0	4	5	1	0	3	3	0	0	0	0	0	221
16:15	0	46	15	0	0	2	0	0	1	0	0	0	0	0	0	64
16:30	0	34	13	0	0	2	0	0	1	0	0	0	0	0	0	50
16:45	0	50	13	0	0	2	0	0	0	0	0	0	0	0	0	65
17:00	0	44	20	0	0	0	0	2	0	0	0	0	0	0	0	66
Hour Total	0	174	61	0	0	6	0	2	2	0	0	0	0	0	0	245

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Tue 5/10/2016

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	47	15	0	0	1	0	0	0	0	0	0	0	0	0	64
17:30	0	46	12	0	0	1	1	0	1	1	0	0	0	0	0	62
17:45	0	45	21	0	1	0	0	1	1	0	0	0	0	0	0	69
18:00	0	36	16	0	0	1	0	0	0	1	0	0	0	0	0	54
Hour Total	1	174	64	0	1	3	1	1	2	2	0	0	0	0	0	249
18:15	0	37	9	0	0	0	0	0	1	1	0	0	0	0	0	48
18:30	0	19	14	0	0	1	0	0	1	0	0	0	0	0	0	35
18:45	1	31	10	0	0	0	0	0	1	0	0	0	0	0	0	43
19:00	0	28	10	0	0	0	0	0	1	0	0	0	0	0	0	39
Hour Total	1	115	43	0	0	1	0	0	4	1	0	0	0	0	0	165
19:15	1	29	11	0	0	0	0	0	0	0	0	0	0	0	0	41
19:30	0	28	13	0	1	0	0	0	1	0	0	0	0	0	0	43
19:45	0	27	8	0	0	0	0	0	0	0	0	0	0	0	0	35
20:00	0	24	16	0	1	0	0	0	0	0	0	0	0	0	0	41
Hour Total	1	108	48	0	2	0	0	0	1	0	0	0	0	0	0	160
20:15	0	21	2	0	0	1	0	0	0	0	0	0	0	0	0	24
20:30	0	30	2	0	0	1	0	0	2	0	0	0	0	0	0	35
20:45	0	17	6	0	1	0	0	0	0	0	0	0	0	0	0	24
21:00	0	22	10	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	90	20	0	1	2	0	0	2	0	0	0	0	0	0	115
21:15	0	14	8	0	0	0	0	0	1	0	0	0	0	0	0	23
21:30	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
21:45	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	22
22:00	0	23	5	0	0	0	0	0	2	0	0	0	1	0	0	31
Hour Total	0	77	19	0	0	0	0	0	3	0	0	0	1	0	0	100
22:15	0	17	6	0	0	0	0	0	1	0	0	0	0	0	0	24
22:30	0	24	10	0	0	0	0	0	0	0	0	0	0	0	0	34
22:45	0	18	7	0	0	0	0	0	2	1	0	0	0	0	0	28
23:00	0	19	5	0	0	0	0	0	1	0	0	0	0	0	0	25
Hour Total	0	78	28	0	0	0	0	0	4	1	0	0	0	0	0	111
23:15	0	9	0	0	0	0	0	0	2	1	0	0	0	0	0	12
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
24:00	1	8	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	26	8	0	0	0	0	0	2	1	0	0	0	0	0	38
DAY TOTAL	6	1926	947	2	51	54	36	19	62	38	0	0	10	0	0	3151
PERCENTS	0.2%	61.2%	30.1%	0.1%	1.6%	1.7%	1.1%	0.6%	1.9%	1.2%	0.0%	0.0%	0.3%	0.0%	0.0%	100%

Passenger Vehicles 91.3% Trucks & Buses 8.6%

AM Times	06:00	11:00	06:45	04:00	08:15	06:45	09:00	09:30	08:45	10:45	03:45	11:15
AM Peaks	1	99	72	1	11	6	9	6	8	7	3	185
PM Times	18:30	16:45	15:15	12:15	12:15	14:00	14:00	14:00	22:00	12:15	12:15	17:00
PM Peaks	2	187	70	1	5	7	4	3	5	3	1	261

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Wed 5/11/2016

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	5	2	0	0	0	0	0	1	0	0	0	0	0	0	8
00:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
01:00	0	3	2	0	0	0	0	0	0	1	0	0	0	0	0	6
Hour Total	0	18	6	0	0	0	0	0	2	1	0	0	0	0	0	27
01:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
02:30	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
02:45	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	5	4	0	0	0	0	0	3	0	0	0	0	0	0	12
03:15	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
03:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	3
04:00	0	1	1	0	0	0	0	0	2	2	0	0	0	0	0	6
Hour Total	0	4	1	1	1	1	0	0	2	2	0	0	1	0	0	13
04:15	0	6	0	0	0	0	0	0	1	0	0	0	0	0	0	7
04:30	0	2	1	0	0	0	0	0	0	0	0	0	1	0	0	4
04:45	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
05:00	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	22	11	0	0	0	0	0	1	0	0	0	1	0	0	35
05:15	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0	14
05:30	0	18	6	0	0	0	0	0	0	1	0	0	0	0	0	25
05:45	0	13	15	0	0	0	1	0	0	0	0	0	0	0	0	29
06:00	0	12	14	0	0	0	0	0	2	2	0	0	0	0	0	30
Hour Total	0	51	41	0	0	0	1	0	2	3	0	0	0	0	0	98
06:15	0	17	12	0	0	0	0	0	1	1	0	0	0	0	0	31
06:30	0	17	25	0	2	0	0	0	0	1	0	0	0	0	0	45
06:45	0	27	16	0	0	3	2	0	1	0	0	0	0	0	0	49
07:00	0	18	17	0	1	2	2	0	0	1	0	0	0	0	0	41
Hour Total	0	79	70	0	3	5	4	0	2	3	0	0	0	0	0	166
07:15	0	12	19	0	1	1	1	1	0	0	0	0	0	0	0	35
07:30	1	19	14	0	4	3	1	1	0	4	0	0	0	0	0	47
07:45	1	24	16	0	0	2	3	0	1	0	0	0	0	0	0	47
08:00	0	20	13	0	3	0	0	1	1	1	0	0	0	0	0	39
Hour Total	2	75	62	0	8	6	5	3	2	5	0	0	0	0	0	168
08:15	0	18	21	1	2	4	2	0	0	0	0	0	0	0	0	48
08:30	0	18	14	0	1	3	2	1	1	0	0	0	0	0	0	40
08:45	0	17	8	0	1	4	2	0	1	1	0	0	0	0	0	34
09:00	0	19	10	0	0	1	0	0	0	2	0	0	0	0	0	32

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	72	53	1	4	12	6	1	2	3	0	0	0	0	0	154
09:15	0	16	17	0	0	1	1	0	1	0	0	0	0	0	0	36
09:30	0	22	18	0	0	6	0	0	3	0	0	0	0	0	0	49
09:45	0	16	19	0	1	1	0	2	0	2	0	0	0	0	0	41
10:00	0	14	10	0	3	2	1	0	1	0	0	0	0	0	0	31
Hour Total	0	68	64	0	4	10	2	2	5	2	0	0	0	0	0	157
10:15	0	15	11	0	0	1	0	0	0	0	0	0	0	0	0	27
10:30	0	23	14	0	0	1	2	0	2	0	0	0	0	0	0	42
10:45	0	23	8	0	1	1	0	0	0	0	0	0	0	0	0	33
11:00	0	17	13	0	0	1	0	0	0	1	0	0	1	0	0	33
Hour Total	0	78	46	0	1	4	2	0	2	1	0	0	1	0	0	135
11:15	0	26	13	0	0	0	1	0	1	4	0	0	0	0	0	45
11:30	0	16	17	0	2	2	0	1	1	1	0	0	0	0	0	40
11:45	0	31	11	0	1	4	2	1	1	0	0	0	0	0	0	51
12:00	0	35	12	0	1	2	1	1	1	1	0	0	0	0	0	54
Hour Total	0	108	53	0	4	8	4	3	4	6	0	0	0	0	0	190
12:15	1	25	15	0	0	0	0	0	2	0	0	0	0	0	0	43
12:30	0	35	12	0	2	0	0	0	0	1	0	0	0	0	0	50
12:45	0	29	15	0	1	2	1	0	2	0	0	0	0	0	0	50
13:00	0	27	9	0	0	0	0	1	1	0	0	0	0	0	0	38
Hour Total	1	116	51	0	3	2	1	1	5	1	0	0	0	0	0	181
13:15	0	25	7	0	1	0	1	0	0	1	0	0	0	0	0	35
13:30	1	35	17	0	1	0	0	0	0	1	0	0	0	0	0	55
13:45	0	30	8	0	1	0	2	0	0	0	0	0	0	0	0	41
14:00	0	32	11	0	0	1	1	1	0	0	0	0	0	0	0	46
Hour Total	1	122	43	0	3	1	4	1	0	2	0	0	0	0	0	177
14:15	0	29	20	0	0	2	0	0	0	3	0	0	0	0	0	54
14:30	0	29	18	0	0	2	0	0	2	0	0	0	0	0	0	51
14:45	0	39	10	0	0	1	1	0	0	1	0	0	0	0	0	52
15:00	0	34	11	0	2	0	0	0	0	0	0	0	0	0	0	47
Hour Total	0	131	59	0	2	5	1	0	2	4	0	0	0	0	0	204
15:15	0	40	7	0	1	1	2	1	1	0	0	0	0	0	0	53
15:30	0	30	20	0	1	2	0	0	0	2	0	0	0	0	0	55
15:45	0	36	15	0	1	1	0	0	0	0	0	0	0	0	0	53
16:00	0	46	12	0	1	0	2	0	2	2	0	0	0	0	0	65
Hour Total	0	152	54	0	4	4	4	1	3	4	0	0	0	0	0	226
16:15	0	51	19	0	0	0	0	0	2	2	0	0	0	0	0	74
16:30	0	43	11	0	2	1	0	0	0	0	0	0	0	0	0	57
16:45	0	52	17	0	1	0	0	0	1	0	0	0	0	0	0	71
17:00	0	37	15	0	0	1	0	0	2	0	0	0	0	0	0	55
Hour Total	0	183	62	0	3	2	0	0	5	2	0	0	0	0	0	257

Station #: Site A-WBO
Site ID: 000000003716
Location: US 460, W of Rt. 67 (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	44	17	0	1	0	0	0	0	0	0	0	0	0	0	62
17:30	0	49	16	0	0	1	1	0	0	0	0	0	0	0	0	67
17:45	0	49	13	0	0	1	0	1	0	2	0	0	0	0	0	66
18:00	0	39	15	0	0	0	1	0	0	0	0	0	0	0	0	55
Hour Total	0	181	61	0	1	2	2	1	0	2	0	0	0	0	0	250
18:15	0	33	17	0	0	1	0	0	0	0	0	0	0	0	0	51
18:30	0	38	6	0	0	0	0	1	0	0	0	0	0	0	0	45
18:45	0	39	9	0	0	0	0	1	0	0	0	0	0	0	0	49
19:00	0	39	13	0	0	0	0	1	0	0	0	0	0	0	0	53
Hour Total	0	149	45	0	0	1	0	3	0	0	0	0	0	0	0	198
19:15	0	33	4	0	0	0	0	0	1	0	0	0	0	0	0	38
19:30	0	20	10	0	0	0	0	0	1	0	0	0	0	0	0	31
19:45	0	23	5	0	0	0	0	0	0	0	0	0	0	0	0	28
20:00	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25
Hour Total	0	95	25	0	0	0	0	0	2	0	0	0	0	0	0	122
20:15	0	22	12	0	0	1	0	0	1	0	0	0	0	0	0	36
20:30	0	20	10	0	0	0	0	0	1	0	0	0	0	0	0	31
20:45	0	19	5	0	0	0	0	0	0	0	0	0	0	0	0	24
21:00	0	17	8	0	1	0	0	0	2	0	0	0	0	0	0	28
Hour Total	0	78	35	0	1	1	0	0	4	0	0	0	0	0	0	119
21:15	0	20	6	0	0	0	0	0	0	1	0	0	0	0	0	27
21:30	0	19	8	0	0	0	0	0	0	0	0	0	0	0	0	27
21:45	0	21	7	0	0	0	0	0	1	0	0	0	0	0	0	29
22:00	0	26	7	0	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	86	28	0	0	0	0	0	1	1	0	0	0	0	0	116
22:15	0	23	6	0	0	0	0	0	1	1	0	0	0	0	0	31
22:30	0	14	8	0	0	0	0	0	0	0	0	0	0	0	0	22
22:45	0	18	7	0	0	0	0	0	1	0	0	0	0	0	0	26
23:00	0	9	7	0	0	0	0	0	2	0	0	0	0	0	0	18
Hour Total	0	64	28	0	0	0	0	0	4	1	0	0	0	0	0	97
23:15	0	7	2	0	0	0	0	0	1	0	0	0	0	0	0	10
23:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
23:45	0	6	3	0	0	0	0	0	1	0	0	0	0	0	0	10
24:00	1	4	2	0	0	0	0	0	0	1	0	0	0	0	0	8
Hour Total	1	26	9	0	0	0	0	0	2	1	0	0	0	0	0	39
DAY TOTAL	5	1967	914	2	42	64	36	16	55	44	0	0	3	0	0	3148
PERCENTS	0.2%	62.5%	29.1%	0.1%	1.4%	2.1%	1.1%	0.5%	1.7%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 91.6% Trucks & Buses 8.3%

AM Times	07:00	11:15	06:30	02:45	07:30	08:15	07:00	07:15	08:45	10:45	03:45	11:15
AM Peaks	2	108	77	1	9	12	7	3	5	6	2	190
PM Times	12:15	16:00	15:30	15:00	14:00	13:15	18:15	12:15	15:30	16:00		
PM Peaks	1	192	66	5	6	4	3	5	6	267		

GRAND TOTAL	11	3893	1861	4	93	118	72	35	117	82	0	0	13	0	0	6299
PERCENTS	0.2%	61.9%	29.6%	0.1%	1.5%	1.8%	1.1%	0.5%	1.8%	1.3%	0.0%	0.0%	0.2%	0.0%	0.0%	100%

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
00:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
01:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
05:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
05:45	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
06:00	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	12	10	0	0	0	0	0	0	0	0	0	0	0	0	22
06:15	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
06:30	0	6	7	0	0	0	0	0	0	0	0	0	0	0	0	13
06:45	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	14
07:00	0	3	7	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	25	25	0	0	0	0	0	0	0	0	0	0	0	0	50
07:15	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0	14
07:30	0	12	4	0	1	0	0	0	0	0	0	0	0	0	0	17
07:45	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	7
08:00	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	33	18	0	1	0	0	1	0	0	0	0	0	0	0	53
08:15	0	12	6	0	0	0	0	0	0	0	0	0	0	0	0	18
08:30	0	12	3	0	1	0	0	0	0	0	0	0	0	0	0	16
08:45	0	5	8	0	0	0	0	0	0	1	0	0	0	0	0	14
09:00	0	6	7	0	0	0	0	0	1	0	0	0	0	0	0	14

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	35	24	0	1	0	0	0	1	1	0	0	0	0	0	62
09:15	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
09:30	0	4	6	0	0	0	0	1	0	0	0	0	0	0	0	11
09:45	0	10	3	0	0	2	0	0	0	0	0	0	0	0	0	15
10:00	0	5	5	0	1	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	26	18	0	1	2	0	1	0	0	0	0	0	0	0	48
10:15	0	5	2	0	1	0	0	0	0	0	0	0	0	0	0	8
10:30	1	8	4	0	0	0	0	0	0	0	0	0	0	0	0	13
10:45	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
11:00	3	11	8	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	4	33	16	0	1	0	0	0	0	0	0	0	0	0	0	54
11:15	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0	14
11:30	0	17	5	0	0	1	0	0	0	0	0	0	0	0	0	23
11:45	0	15	5	0	0	0	0	0	1	0	0	0	0	0	0	21
12:00	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	0	57	20	0	0	1	0	0	1	0	0	0	0	0	0	79
12:15	0	8	5	0	0	1	0	0	0	0	0	0	0	0	0	14
12:30	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
12:45	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
13:00	0	13	8	0	0	0	0	1	1	0	0	0	0	0	0	23
Hour Total	0	40	17	0	0	1	0	1	1	0	0	0	0	0	0	60
13:15	0	18	6	0	1	0	0	0	0	0	0	0	0	0	0	25
13:30	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0	23
13:45	0	12	6	0	0	1	0	0	0	0	0	0	0	0	0	19
14:00	0	15	5	0	0	0	0	0	2	0	0	0	0	0	0	22
Hour Total	0	60	25	0	1	1	0	0	2	0	0	0	0	0	0	89
14:15	0	11	8	0	0	0	0	1	0	0	0	0	0	0	0	20
14:30	0	22	2	0	0	1	0	0	1	0	0	0	0	0	0	26
14:45	0	13	7	0	0	0	0	0	0	0	0	0	0	0	0	20
15:00	0	17	3	0	0	0	0	1	0	0	0	0	0	0	0	21
Hour Total	0	63	20	0	0	1	0	2	1	0	0	0	0	0	0	87
15:15	0	14	6	0	0	0	1	1	0	0	0	0	0	0	0	22
15:30	0	20	7	0	0	0	0	0	0	0	0	0	0	0	0	27
15:45	0	17	5	0	0	0	0	0	0	0	0	0	0	0	0	22
16:00	0	11	6	0	1	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	62	24	0	1	0	1	1	0	0	0	0	0	0	0	89
16:15	0	20	10	0	0	1	0	1	0	0	0	0	0	0	0	32
16:30	0	16	6	0	1	0	0	0	0	0	0	0	0	0	0	23
16:45	0	23	7	0	0	0	0	0	0	0	0	0	0	0	0	30
17:00	0	21	7	0	0	1	0	0	0	0	0	0	0	0	0	29
Hour Total	0	80	30	0	1	2	0	1	0	0	0	0	0	0	0	114

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Tue 5/10/2016

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	21	12	0	0	0	0	0	0	0	0	0	0	0	0	33
17:30	0	22	9	0	0	1	0	0	0	0	0	0	0	0	0	32
17:45	0	12	7	0	0	0	0	0	0	0	0	0	0	0	0	19
18:00	1	16	4	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	1	71	32	0	0	1	0	0	0	0	0	0	0	0	0	105
18:15	0	17	3	0	0	0	0	0	1	0	0	0	0	0	0	21
18:30	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	16
18:45	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
19:00	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	48	12	0	0	0	0	0	1	0	0	0	0	0	0	61
19:15	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
19:30	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
19:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
20:00	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	1	27	11	0	0	0	0	0	0	0	0	0	0	0	0	39
20:15	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
20:30	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
20:45	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	12
21:00	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	28	11	0	0	0	0	0	0	0	0	0	0	0	0	39
21:15	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11
21:30	0	16	1	0	0	0	0	0	0	0	0	0	0	0	0	17
21:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
22:00	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	36	9	0	0	0	0	0	0	0	0	0	0	0	0	45
22:15	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
22:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
22:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	17	5	0	0	0	0	0	0	0	0	0	0	0	0	22
23:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
24:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
DAY TOTAL	7	770	341	0	7	9	1	7	7	1	0	0	0	0	0	1150
PERCENTS	0.7%	67.0%	29.7%	0.0%	0.7%	0.7%	0.0%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.2% Trucks & Buses 2.7%

AM Times	10:15	11:15	06:30	09:30	09:00	07:00	08:15	08:00			11:00
AM Peaks	4	57	27	2	2	1	1	1			80
PM Times	17:15	16:45	16:45	15:45	13:45	14:30	14:15	13:45			16:45
PM Peaks	1	87	35	2	2	1	2	3			124

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Wed 5/11/2016

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	3
Hour Total	0	2	1	0	0	0	0	0	1	1	0	0	0	0	0	5
04:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
05:15	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
05:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
05:45	0	5	8	0	0	0	0	0	0	0	0	0	0	0	0	13
06:00	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	23	16	0	0	0	0	0	0	0	0	0	0	0	0	39
06:15	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	13
06:30	0	7	9	0	0	0	0	0	0	0	0	0	0	0	0	16
06:45	0	10	6	0	1	0	0	0	0	0	0	0	0	0	0	17
07:00	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	28	25	0	1	0	0	0	0	0	0	0	0	0	0	54
07:15	0	6	4	0	1	0	0	0	0	0	0	0	0	0	0	11
07:30	0	9	6	0	0	0	1	0	0	0	0	0	0	0	0	16
07:45	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
08:00	0	9	7	0	1	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	37	20	0	2	0	1	0	0	0	0	0	0	0	0	60
08:15	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	14
08:30	0	10	8	0	0	0	0	0	0	0	0	0	0	0	0	18
08:45	0	7	6	0	0	0	0	0	0	0	0	0	0	0	0	13
09:00	0	3	4	0	0	1	0	0	1	0	0	0	0	0	0	9

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	30	22	0	0	1	0	0	1	0	0	0	0	0	0	54
09:15	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
09:30	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	15
09:45	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11
10:00	0	8	3	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	27	17	0	0	0	0	0	1	0	0	0	0	0	0	45
10:15	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
10:30	0	9	2	0	0	0	0	1	0	0	0	0	0	0	0	12
10:45	0	4	4	1	0	0	0	0	0	0	0	0	0	0	0	9
11:00	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	20	15	1	0	0	0	1	0	0	0	0	0	0	0	37
11:15	0	8	10	0	0	0	0	0	0	0	0	0	0	0	0	18
11:30	0	11	8	0	0	0	0	0	0	0	0	0	0	0	0	19
11:45	1	9	5	0	0	1	0	0	0	0	0	0	0	0	0	16
12:00	0	16	10	0	0	0	0	0	0	0	0	0	0	0	0	26
Hour Total	1	44	33	0	0	1	0	0	0	0	0	0	0	0	0	79
12:15	0	12	4	0	0	1	0	0	0	0	0	0	0	0	0	17
12:30	0	6	4	0	0	1	0	0	0	0	0	0	0	0	0	11
12:45	0	9	2	0	0	1	0	0	1	0	0	0	0	0	0	13
13:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	33	13	0	0	3	0	0	1	0	0	0	0	0	0	50
13:15	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
13:30	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	21
13:45	0	10	8	0	0	0	0	0	0	0	0	0	0	0	0	18
14:00	0	10	4	0	0	1	0	0	0	0	0	0	0	0	0	15
Hour Total	0	45	25	0	0	1	0	0	0	0	0	0	0	0	0	71
14:15	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	16
14:30	0	17	5	0	0	0	0	0	0	0	0	0	0	0	0	22
14:45	0	19	9	0	0	1	0	0	0	0	0	0	0	0	0	29
15:00	0	23	8	0	0	0	0	0	0	0	0	0	0	0	0	31
Hour Total	0	71	26	0	0	1	0	0	0	0	0	0	0	0	0	98
15:15	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
15:30	0	13	7	0	0	0	0	0	1	0	0	0	0	0	0	21
15:45	0	12	8	0	0	0	0	0	0	0	0	0	0	0	0	20
16:00	0	27	13	0	1	0	0	0	0	0	0	0	0	0	0	41
Hour Total	0	71	35	0	1	0	0	0	1	0	0	0	0	0	0	108
16:15	0	17	12	0	1	0	0	0	0	0	0	0	0	0	0	30
16:30	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
16:45	0	12	10	0	0	0	0	1	0	0	0	0	0	0	0	23
17:00	0	28	9	0	0	0	0	0	0	0	0	0	0	0	0	37
Hour Total	0	70	35	0	1	0	0	1	0	0	0	0	0	0	0	107

Station #: Site A-WBI
Site ID: 000000001262
Location: US 460, W of Rt. 67 (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	28	12	0	0	0	0	0	1	0	0	0	0	0	0	41
17:30	0	19	8	0	0	0	0	0	0	0	0	0	0	0	0	27
17:45	0	27	9	0	1	1	0	0	1	0	0	0	0	0	0	39
18:00	0	11	9	0	0	0	0	0	0	0	0	0	0	0	0	20
Hour Total	0	85	38	0	1	1	0	0	2	0	0	0	0	0	0	127
18:15	0	16	8	0	1	0	0	0	0	0	0	0	0	0	0	25
18:30	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	16
18:45	0	18	6	0	0	0	0	0	0	0	0	0	0	0	0	24
19:00	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	59	29	0	1	0	0	0	0	0	0	0	0	0	0	89
19:15	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
19:30	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	13
19:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
20:00	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	29	11	0	0	0	0	0	0	0	0	0	0	0	0	40
20:15	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	16
20:30	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	9
20:45	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
21:00	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	34	12	0	0	0	0	0	0	0	0	0	0	0	0	47
21:15	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
21:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
21:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
22:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	27	8	0	0	0	0	0	0	0	0	0	0	0	0	35
22:15	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
22:30	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
22:45	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
23:00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	14	11	0	0	0	0	0	0	0	0	0	0	0	0	25
23:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
23:30	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
23:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	13
DAY TOTAL	2	771	403	1	7	8	1	2	7	1	0	0	0	0	0	1203
PERCENTS	0.2%	64.1%	33.5%	0.1%	0.6%	0.7%	0.1%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.7% Trucks & Buses 2.2%

AM Times	11:00	11:15	11:15	10:00	06:30	08:15	06:45	09:45	03:15	03:15	11:15
AM Peaks	1	44	33	1	2	1	1	1	1	1	79
PM Times	19:45	17:00	15:30	15:30	12:15	16:00	17:00				17:00
PM Peaks	1	102	40	2	3	1	2				144

GRAND TOTAL	9	1541	744	1	14	17	2	9	14	2	0	0	0	0	0	2353
PERCENTS	0.4%	65.5%	31.7%	0.1%	0.6%	0.8%	0.1%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	10	2	0	0	1	0	0	0	0	0	0	0	0	0	13
00:30	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
01:00	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	28	12	0	0	1	0	0	0	0	0	0	0	0	0	41
01:15	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	8
01:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	5
Hour Total	0	12	7	0	0	0	0	0	1	0	0	0	0	0	0	20
02:15	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
02:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	4	7	0	0	0	0	0	1	0	0	0	0	0	0	12
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	1	8	4	0	0	0	0	0	0	0	0	0	0	0	0	13
04:15	0	2	3	0	0	1	0	0	0	0	0	0	0	0	0	6
04:30	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4
04:45	1	4	1	0	0	0	0	0	1	0	0	0	0	0	0	7
05:00	0	8	1	0	0	0	0	0	1	1	0	0	0	0	0	11
Hour Total	1	16	5	0	0	1	0	0	2	3	0	0	0	0	0	28
05:15	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	6
05:30	0	10	7	0	0	0	0	0	1	2	0	0	0	0	0	20
05:45	0	5	2	0	0	0	0	1	0	1	0	0	0	0	0	9
06:00	1	9	7	0	0	1	0	0	0	0	0	0	0	0	0	18
Hour Total	1	26	20	0	0	1	0	1	1	3	0	0	0	0	0	53
06:15	0	17	9	0	1	2	0	0	0	0	0	0	0	0	0	29
06:30	0	20	7	0	4	0	1	0	1	2	0	0	0	0	0	35
06:45	0	17	12	0	1	0	0	0	0	1	0	0	0	0	0	31
07:00	0	18	15	0	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	72	43	0	6	2	1	0	1	3	0	0	0	0	0	128
07:15	1	21	15	0	0	1	1	0	1	0	0	0	0	0	0	40
07:30	0	32	11	0	1	0	0	0	0	0	0	0	0	0	0	44
07:45	0	33	9	0	0	3	0	0	0	2	0	0	0	0	0	47
08:00	0	39	13	0	1	2	0	0	1	2	0	0	0	0	0	58
Hour Total	1	125	48	0	2	6	1	0	2	4	0	0	0	0	0	189
08:15	0	41	18	0	2	2	2	0	2	0	0	0	0	0	0	67
08:30	0	40	17	0	0	1	4	0	2	0	0	0	0	0	0	64
08:45	0	44	14	0	1	0	0	0	0	0	0	0	0	0	0	59
09:00	0	33	10	0	0	0	0	0	1	0	0	0	0	0	0	44

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	158	59	0	3	3	6	0	5	0	0	0	0	0	0	234
09:15	0	30	14	0	1	1	1	0	0	1	0	0	0	0	0	48
09:30	0	39	11	0	1	0	0	0	1	0	0	0	0	0	0	52
09:45	0	27	15	0	0	1	0	0	1	1	0	0	1	0	0	46
10:00	0	28	11	0	0	3	0	0	0	2	0	0	0	0	0	44
Hour Total	0	124	51	0	2	5	1	0	2	4	0	0	1	0	0	190
10:15	1	29	20	0	2	0	1	0	0	0	0	0	0	0	0	53
10:30	1	30	7	0	0	0	0	0	1	0	0	0	0	0	0	39
10:45	0	34	14	0	0	1	6	1	1	0	0	0	0	0	0	57
11:00	0	26	12	0	2	1	0	0	1	0	0	0	0	0	0	42
Hour Total	2	119	53	0	4	2	7	1	3	0	0	0	0	0	0	191
11:15	0	31	12	0	1	0	0	0	2	1	0	0	0	0	0	47
11:30	0	30	14	0	1	1	0	0	2	0	0	0	0	0	0	48
11:45	0	36	12	0	1	1	0	0	2	1	0	0	0	0	0	53
12:00	0	19	12	0	2	1	0	2	1	1	0	0	0	0	0	38
Hour Total	0	116	50	0	5	3	0	2	7	3	0	0	0	0	0	186
12:15	0	18	9	0	1	1	1	0	2	1	0	0	0	0	0	33
12:30	0	23	13	0	2	1	0	0	1	0	0	0	0	0	0	40
12:45	0	27	16	0	1	1	1	0	0	0	0	0	0	0	0	46
13:00	0	36	15	0	1	1	4	1	1	1	0	0	0	0	0	60
Hour Total	0	104	53	0	5	4	6	1	4	2	0	0	0	0	0	179
13:15	0	26	13	0	1	1	2	0	0	0	0	0	0	0	0	43
13:30	0	25	16	0	3	1	0	0	1	0	0	0	0	0	0	46
13:45	0	31	15	0	1	0	0	1	1	0	0	0	0	0	0	49
14:00	0	19	18	0	1	1	0	1	4	0	0	0	0	0	0	44
Hour Total	0	101	62	0	6	3	2	2	6	0	0	0	0	0	0	182
14:15	0	26	13	0	2	2	0	0	0	0	0	0	0	0	0	43
14:30	1	39	10	0	1	2	1	0	2	1	0	0	0	0	0	57
14:45	0	31	16	0	1	2	1	0	1	0	0	0	0	0	0	52
15:00	1	31	10	0	1	0	3	1	1	1	0	0	0	0	0	49
Hour Total	2	127	49	0	5	6	5	1	4	2	0	0	0	0	0	201
15:15	0	19	17	0	0	0	0	1	1	0	0	0	0	0	0	38
15:30	0	28	16	0	1	1	0	1	1	0	0	0	0	0	0	48
15:45	0	39	13	0	0	2	0	0	0	0	0	0	0	0	0	54
16:00	0	35	26	0	1	0	0	0	1	0	0	0	0	0	0	63
Hour Total	0	121	72	0	2	3	0	2	3	0	0	0	0	0	0	203
16:15	0	37	19	0	1	0	0	2	1	1	0	0	0	0	0	61
16:30	0	42	25	0	3	0	0	2	3	1	0	0	0	0	0	76
16:45	0	29	17	0	3	1	1	0	2	0	0	0	0	0	0	53
17:00	0	42	11	0	1	0	0	0	1	1	0	0	0	0	0	56
Hour Total	0	150	72	0	8	1	1	4	7	3	0	0	0	0	0	246

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	29	18	0	0	1	0	0	0	0	0	0	0	0	0	48
17:30	0	34	13	0	1	1	0	0	2	0	0	0	0	0	0	51
17:45	1	34	11	0	1	1	0	1	1	0	0	0	0	0	0	50
18:00	0	28	20	0	0	2	0	1	0	0	0	0	0	0	0	51
Hour Total	1	125	62	0	2	5	0	2	3	0	0	0	0	0	0	200
18:15	0	29	17	0	0	0	0	0	1	1	0	0	0	0	0	48
18:30	0	23	20	0	2	0	0	0	0	1	0	0	0	0	0	46
18:45	1	27	9	0	0	1	0	0	0	1	0	0	0	0	0	39
19:00	0	15	7	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	1	94	53	0	2	1	0	0	1	3	0	0	0	0	0	155
19:15	0	21	5	0	0	0	0	0	1	1	0	0	0	0	0	28
19:30	0	10	6	0	0	1	0	0	0	0	0	0	0	0	0	17
19:45	0	13	12	0	0	0	0	0	0	3	0	0	0	0	0	28
20:00	0	13	5	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	57	28	0	0	1	0	0	1	4	0	0	0	0	0	91
20:15	0	13	6	0	1	0	0	0	2	0	0	0	0	0	0	22
20:30	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	12
20:45	0	7	6	0	0	0	0	0	0	0	0	0	0	0	0	13
21:00	0	12	7	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	38	25	0	1	0	0	0	2	0	0	0	0	0	0	66
21:15	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
21:30	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	14
21:45	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
22:00	0	6	8	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	36	17	0	0	0	0	0	0	0	0	0	0	0	0	53
22:15	0	8	4	0	0	1	0	0	0	1	0	0	0	0	0	14
22:30	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
22:45	0	5	4	1	0	0	0	0	1	0	0	0	0	0	0	11
23:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	27	10	1	0	1	0	0	1	1	0	0	0	0	0	41
23:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
23:30	0	4	1	0	1	0	0	0	0	0	0	0	0	0	0	6
23:45	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
24:00	0	6	1	0	0	1	0	0	0	0	0	0	0	0	0	8
Hour Total	0	20	9	0	1	1	0	0	0	0	0	0	0	0	0	31
DAY TOTAL	10	1808	871	1	54	50	30	16	57	35	0	0	1	0	0	2933
PERCENTS	0.4%	61.7%	29.7%	0.1%	1.9%	1.7%	1.0%	0.5%	1.9%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 91.6% Trucks & Buses 8.3%

AM Times	09:45	08:00	08:00	06:00	07:45	10:00	11:15	11:00	05:00	09:00	08:00
AM Peaks	2	164	62	6	8	7	2	7	4	1	248
PM Times	14:15	15:45	16:00	22:00	16:00	14:00	12:30	15:45	13:45	19:00	15:45
PM Peaks	2	153	87	1	8	7	7	4	7	4	254

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
00:30	0	7	2	0	0	0	0	0	1	0	0	0	0	0	0	10
00:45	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	26	7	0	0	0	0	0	1	0	0	0	0	0	0	34
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
01:45	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
02:00	0	4	3	0	0	0	0	0	0	1	0	0	0	0	0	8
Hour Total	0	16	8	0	0	0	0	0	0	1	0	0	0	0	0	25
02:15	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
02:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	1	6	0	0	0	0	0	2	0	0	0	0	0	0	9
03:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3
04:00	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0	5
Hour Total	0	7	1	0	1	0	0	0	2	1	0	0	0	0	0	12
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	4	1	0	1	0	0	0	0	1	0	0	0	0	0	7
04:45	0	3	1	0	0	0	0	0	2	0	0	0	0	0	0	6
05:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	12	4	0	1	0	0	0	2	1	0	0	0	0	0	20
05:15	0	4	2	0	0	0	0	0	1	2	0	0	0	0	0	9
05:30	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	7
05:45	0	6	3	0	0	0	0	0	0	2	0	0	0	0	0	11
06:00	0	12	8	0	0	1	0	0	0	0	0	0	0	0	0	21
Hour Total	0	27	14	0	0	1	0	0	2	4	0	0	0	0	0	48
06:15	0	7	7	0	0	2	0	0	1	0	0	0	0	0	0	17
06:30	0	23	8	0	0	0	0	0	0	1	0	0	0	0	0	32
06:45	0	18	8	0	0	0	0	0	0	0	0	0	0	0	0	26
07:00	0	16	12	0	1	0	0	0	0	0	0	0	0	0	0	29
Hour Total	0	64	35	0	1	2	0	0	1	1	0	0	0	0	0	104
07:15	0	17	11	0	1	1	0	0	1	0	0	0	0	0	0	31
07:30	0	26	12	0	1	0	0	0	0	0	0	0	0	0	0	39
07:45	0	28	16	0	0	1	0	0	0	0	0	0	0	0	0	45
08:00	0	34	23	0	0	0	4	0	1	0	0	0	0	0	0	62
Hour Total	0	105	62	0	2	2	4	0	2	0	0	0	0	0	0	177
08:15	1	42	10	0	2	1	2	0	1	1	0	0	0	0	0	60
08:30	0	34	13	0	3	1	1	1	2	1	0	0	0	0	0	56
08:45	0	35	15	0	0	0	1	0	1	0	0	0	0	0	0	52
09:00	0	38	14	0	0	0	0	0	4	1	0	0	0	0	0	57

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	149	52	0	5	2	4	1	8	3	0	0	0	0	0	225
09:15	0	34	12	0	0	1	0	0	2	1	0	0	0	0	0	50
09:30	0	35	10	0	1	1	0	0	1	0	0	0	0	0	0	48
09:45	0	57	9	0	0	0	0	1	0	0	0	0	0	0	0	67
10:00	0	35	15	0	0	1	0	0	1	0	0	0	0	0	0	52
Hour Total	0	161	46	0	1	3	0	1	4	1	0	0	0	0	0	217
10:15	0	23	15	0	0	0	2	0	2	2	0	0	0	0	0	44
10:30	0	24	13	0	0	0	2	2	0	2	0	0	0	0	0	43
10:45	0	16	11	0	0	0	1	0	3	0	0	0	0	0	0	31
11:00	0	25	21	0	0	3	1	0	3	0	0	0	0	0	0	53
Hour Total	0	88	60	0	0	3	6	2	8	4	0	0	0	0	0	171
11:15	0	35	17	0	1	1	2	0	0	1	0	0	0	0	0	57
11:30	0	31	11	0	1	0	0	0	1	0	0	0	0	0	0	44
11:45	0	29	14	0	1	0	0	0	1	0	0	0	0	0	0	45
12:00	0	28	19	0	1	2	1	0	2	0	0	0	0	0	0	53
Hour Total	0	123	61	0	4	3	3	0	4	1	0	0	0	0	0	199
12:15	0	23	10	0	0	1	0	0	2	0	0	0	0	0	0	36
12:30	0	24	19	0	1	1	0	1	3	1	0	0	0	0	0	50
12:45	0	34	9	0	0	1	1	0	1	1	0	0	0	0	0	47
13:00	0	31	13	0	1	2	6	0	1	1	0	0	0	0	0	55
Hour Total	0	112	51	0	2	5	7	1	7	3	0	0	0	0	0	188
13:15	0	20	10	0	0	2	0	1	3	0	0	0	0	0	0	36
13:30	0	37	9	0	0	0	0	1	3	0	0	0	0	0	0	50
13:45	0	32	14	0	1	1	2	0	0	0	0	0	0	0	0	50
14:00	0	18	15	0	2	0	0	0	2	0	0	0	0	0	0	37
Hour Total	0	107	48	0	3	3	2	2	8	0	0	0	0	0	0	173
14:15	0	30	15	0	0	1	0	0	2	0	0	0	0	0	0	48
14:30	0	34	13	0	3	1	0	0	1	0	0	0	0	0	0	52
14:45	0	21	6	0	1	2	0	0	2	1	0	0	0	0	0	33
15:00	0	24	15	0	0	2	3	0	0	2	0	0	0	0	0	46
Hour Total	0	109	49	0	4	6	3	0	5	3	0	0	0	0	0	179
15:15	0	33	19	0	1	0	3	3	1	0	0	0	0	0	0	60
15:30	0	28	15	1	1	0	0	1	0	1	0	0	0	0	0	47
15:45	0	40	18	1	2	1	0	1	0	0	0	0	0	0	0	63
16:00	0	28	27	0	2	0	1	0	2	0	0	0	0	0	0	60
Hour Total	0	129	79	2	6	1	4	5	3	1	0	0	0	0	0	230
16:15	0	34	23	0	2	1	0	0	1	0	0	0	0	0	0	61
16:30	0	34	23	0	1	1	0	0	0	0	0	0	0	0	0	59
16:45	0	34	21	0	0	1	0	2	0	0	0	0	0	0	0	58
17:00	0	33	21	0	0	1	0	0	0	1	0	0	0	0	0	56
Hour Total	0	135	88	0	3	4	0	2	1	1	0	0	0	0	0	234

Station #: Site A-EBO
Site ID: 000000003606
Location: US 460, W of Rt. 67 (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	31	17	0	1	0	0	0	1	0	0	0	0	0	0	50
17:30	0	28	22	0	0	0	0	1	1	2	0	0	0	0	0	54
17:45	0	32	20	0	0	1	0	0	2	0	0	0	0	0	0	55
18:00	0	21	18	0	0	1	0	0	0	0	0	0	0	0	0	40
Hour Total	0	112	77	0	1	2	0	1	4	2	0	0	0	0	0	199
18:15	0	24	11	0	1	1	0	0	1	0	0	0	0	0	0	38
18:30	0	37	10	0	0	0	0	0	1	1	0	0	0	0	0	49
18:45	0	18	10	0	0	0	0	0	0	0	0	0	0	0	0	28
19:00	0	13	11	0	0	1	0	0	0	0	0	0	0	0	0	25
Hour Total	0	92	42	0	1	2	0	0	2	1	0	0	0	0	0	140
19:15	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0	23
19:30	0	13	11	0	1	0	0	0	0	0	0	0	0	0	0	25
19:45	0	11	11	0	0	1	0	0	0	2	0	0	0	0	0	25
20:00	0	12	5	0	1	0	0	0	0	1	0	0	0	0	0	19
Hour Total	0	51	35	0	2	1	0	0	0	3	0	0	0	0	0	92
20:15	0	22	7	0	1	0	0	0	0	0	0	0	0	0	0	30
20:30	0	16	6	0	1	0	0	0	0	0	0	0	0	0	0	23
20:45	0	20	5	0	1	0	0	0	0	0	0	0	0	0	0	26
21:00	0	21	9	0	0	0	1	0	0	0	0	0	0	0	0	31
Hour Total	0	79	27	0	3	0	1	0	0	0	0	0	0	0	0	110
21:15	0	19	5	0	0	0	0	0	0	0	0	0	0	0	0	24
21:30	0	18	8	0	0	0	0	0	0	0	0	0	0	0	0	26
21:45	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	17
22:00	0	12	6	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	58	27	0	0	0	0	0	0	0	0	0	0	0	0	85
22:15	0	10	3	0	0	0	0	0	1	0	0	0	0	0	0	14
22:30	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
22:45	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
23:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	34	5	0	0	0	0	0	1	0	0	0	0	0	0	40
23:15	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
23:30	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	6
23:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	4	1	0	0	0	0	0	2	0	0	0	0	0	0	7
Hour Total	0	15	9	0	0	0	0	0	2	0	0	0	0	0	0	26
DAY TOTAL	1	1812	893	2	40	40	34	15	69	31	0	0	0	0	0	2937
PERCENTS	0.1%	61.7%	30.5%	0.1%	1.4%	1.3%	1.1%	0.5%	2.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 92.1% Trucks & Buses 7.8%

AM Times	07:30	09:00	11:00	07:45	10:30	08:00	09:45	08:30	05:00			08:00
AM Peaks	1	164	63	5	4	8	3	9	4			230
PM Times	15:45	16:00	15:00	15:30	12:30	13:00	15:00	12:30	14:45			15:45
PM Peaks	136	94	2	7	6	8	5	8	4			243

GRAND TOTAL	11	3620	1764	3	94	90	64	31	126	66	0	0	1	0	0	5870
PERCENTS	0.2%	61.7%	30.1%	0.1%	1.7%	1.5%	1.0%	0.5%	2.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	4
03:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	2	0	0	0	0	0	0	3	0	0	0	0	0	0	5
04:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	1	3	0	0	0	0	0	0	1	0	0	0	0	0	5
05:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
06:15	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
06:30	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
06:45	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	5
07:00	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	23	11	0	0	0	0	0	0	0	0	0	0	0	0	35
07:15	0	4	7	0	0	0	0	0	0	0	0	0	0	0	0	11
07:30	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	16
07:45	0	18	3	0	1	0	0	0	0	0	0	0	0	0	0	22
08:00	0	16	6	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	0	49	21	0	1	0	0	0	0	0	0	0	0	0	0	71
08:15	0	33	8	0	0	0	0	0	0	0	0	0	0	0	0	41
08:30	0	17	12	0	0	0	0	0	0	0	0	0	0	0	0	29
08:45	0	17	6	0	1	0	0	0	0	0	0	0	0	0	0	24
09:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	76	30	0	1	0	0	0	0	0	0	0	0	0	0	107
09:15	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
09:30	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
09:45	0	12	5	0	0	0	0	0	2	0	0	0	0	0	0	19
10:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	40	13	0	0	0	0	0	2	0	0	0	0	0	0	55
10:15	0	9	5	0	0	1	0	0	0	0	0	0	0	0	0	15
10:30	0	6	10	0	0	0	0	0	0	0	0	0	0	0	0	16
10:45	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	17
11:00	0	9	5	0	1	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	36	25	0	1	1	0	0	0	0	0	0	0	0	0	63
11:15	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
11:30	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
11:45	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
12:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	29	16	0	0	0	0	0	0	0	0	0	0	0	0	45
12:15	0	16	8	0	0	0	0	0	0	1	0	0	0	0	0	25
12:30	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	16
12:45	0	17	5	0	3	0	1	0	0	0	0	0	0	0	0	26
13:00	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	53	23	0	3	0	1	0	0	1	0	0	0	0	0	81
13:15	0	14	6	0	0	0	0	0	0	0	0	0	0	0	0	20
13:30	0	11	4	0	0	0	0	0	1	0	0	0	0	0	0	16
13:45	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
14:00	0	9	3	0	0	0	0	0	1	0	0	0	0	0	0	13
Hour Total	0	37	18	0	0	0	0	0	2	0	0	0	0	0	0	57
14:15	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	8
14:30	0	17	9	0	0	0	0	0	0	0	0	0	0	0	0	26
14:45	0	9	11	0	0	0	0	0	0	0	0	0	0	0	0	20
15:00	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	42	29	0	0	0	0	0	0	0	0	0	0	0	0	71
15:15	0	6	6	0	1	2	0	0	0	0	0	0	0	0	0	15
15:30	0	13	8	0	1	1	0	0	1	0	0	0	0	0	0	24
15:45	0	10	8	0	2	0	0	0	0	0	0	0	0	0	0	20
16:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	43	26	0	4	3	0	0	1	0	0	0	0	0	0	77
16:15	0	16	9	0	0	0	0	0	1	0	0	0	0	0	0	26
16:30	0	18	11	0	0	0	0	0	0	0	0	0	0	0	0	29
16:45	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	15
17:00	0	14	10	0	0	0	0	0	1	0	0	0	0	0	0	25
Hour Total	0	58	35	0	0	0	0	0	2	0	0	0	0	0	0	95

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	13	9	0	1	0	0	0	0	0	0	0	0	0	0	23
17:30	0	10	9	0	0	0	0	0	1	0	0	0	0	0	0	20
17:45	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
18:00	0	8	3	0	0	0	0	1	1	0	0	0	0	0	0	13
Hour Total	0	40	25	0	1	0	0	1	2	0	0	0	0	0	0	69
18:15	1	10	5	0	0	0	0	0	0	0	0	0	0	0	0	16
18:30	0	9	11	0	0	0	0	0	0	0	0	0	0	0	0	20
18:45	0	11	1	0	0	0	0	0	0	1	0	0	0	0	0	13
19:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	1	31	18	0	0	0	0	0	0	1	0	0	0	0	0	51
19:15	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
19:30	0	3	1	0	0	1	0	0	0	0	0	0	0	0	0	5
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	9	4	0	0	1	0	0	0	0	0	0	0	0	0	14
20:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
20:30	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
20:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	7	10	0	0	0	0	0	0	0	0	0	0	0	0	17
21:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
21:30	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
21:45	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
22:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
22:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
24:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
DAY TOTAL	2	599	318	0	11	5	1	1	13	3	0	0	0	0	0	953
PERCENTS	0.3%	62.9%	33.4%	0.0%	1.1%	0.5%	0.1%	0.1%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.4% Trucks & Buses 3.5%

AM Times	06:00	07:45	08:00	07:00	09:30				03:00	03:45						08:00
AM Peaks	1	84	32	1	1				3	1						116
PM Times	17:30	15:45	16:15	15:00	14:45	12:15	17:15	13:15	12:15							16:15
PM Peaks	1	58	35	4	3	1	1	2	1							95

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Hour Total	0	3	0	0	0	0	0	0	1	1	0	0	0	0	0	5
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	2	2	0	0	0	0	0	0	1	0	0	0	0	0	5
06:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
06:30	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
06:45	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
07:00	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	21	9	0	0	0	0	0	0	0	0	0	0	0	0	30
07:15	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
07:30	0	6	4	0	1	0	0	0	0	0	0	0	0	0	0	11
07:45	0	16	3	0	0	0	0	0	0	0	0	0	0	0	0	19
08:00	0	16	8	0	1	0	0	0	0	0	0	0	0	0	0	25
Hour Total	0	44	18	0	2	0	0	0	0	0	0	0	0	0	0	64
08:15	0	22	9	0	1	0	0	0	0	0	0	0	0	0	0	32
08:30	0	22	11	0	0	0	0	0	0	0	0	0	0	0	0	33
08:45	0	8	12	0	0	0	0	0	0	0	0	0	0	0	0	20
09:00	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	16

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	62	38	0	1	0	0	0	0	0	0	0	0	0	0	101
09:15	0	12	8	0	0	0	0	0	0	0	0	0	0	0	0	20
09:30	0	9	3	0	1	1	0	0	0	0	0	0	0	0	0	14
09:45	0	11	8	0	0	0	0	0	0	0	0	0	0	0	0	19
10:00	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	39	23	0	1	1	0	0	0	0	0	0	0	0	0	64
10:15	0	13	3	0	1	0	0	0	0	0	0	0	0	0	0	17
10:30	0	7	6	0	0	0	0	0	0	0	0	0	0	0	0	13
10:45	1	9	3	0	0	0	0	0	0	0	0	0	0	0	0	13
11:00	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	36	17	0	1	0	0	0	0	0	0	0	0	0	0	55
11:15	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
11:30	0	9	3	0	1	0	0	0	0	0	0	0	0	0	0	13
11:45	0	8	3	0	0	0	0	1	0	0	0	0	0	0	0	12
12:00	0	9	4	0	1	0	0	0	0	1	0	0	0	0	0	15
Hour Total	0	36	12	0	2	0	0	1	0	1	0	0	0	0	0	52
12:15	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
12:30	0	12	4	0	1	0	0	1	1	1	0	0	0	0	0	20
12:45	0	10	2	0	0	1	0	0	0	0	0	0	0	0	0	13
13:00	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	36	16	0	1	1	0	1	1	1	0	0	0	0	0	57
13:15	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
13:30	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
13:45	0	14	5	0	0	0	0	0	1	0	0	0	0	0	0	20
14:00	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	48	15	0	0	0	0	0	1	0	0	0	0	0	0	64
14:15	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
14:30	0	17	11	0	0	0	0	0	0	0	0	0	0	0	0	28
14:45	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	16
15:00	0	10	3	0	0	0	0	0	0	1	0	0	0	0	0	14
Hour Total	0	48	26	0	0	0	0	0	0	1	0	0	0	0	0	75
15:15	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	14
15:30	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
15:45	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	16
16:00	0	15	11	1	0	0	0	0	1	0	0	0	0	0	0	28
Hour Total	0	43	26	1	0	0	0	0	1	0	0	0	0	0	0	71
16:15	0	18	8	0	0	0	0	0	1	0	0	0	0	0	0	27
16:30	0	20	14	0	0	0	0	0	0	0	0	0	0	0	0	34
16:45	0	11	3	0	1	0	0	0	1	0	0	0	0	0	0	16
17:00	0	9	10	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	58	35	0	1	0	0	0	2	0	0	0	0	0	0	96

Station #: Site A-EBI
Site ID: 000000003809
Location: US 460, W of Rt. 67 (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS max
County: 37.09148, -81.83926

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	13	7	0	1	0	0	1	0	0	0	0	0	0	0	22
17:30	0	6	9	0	0	0	0	1	0	0	0	0	0	0	0	16
17:45	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
18:00	0	15	6	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	0	48	26	0	1	0	0	2	0	0	0	0	0	0	0	77
18:15	0	10	7	0	0	0	0	0	0	2	0	0	0	0	0	19
18:30	0	13	7	0	0	0	0	0	0	0	0	0	0	0	0	20
18:45	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
19:00	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	35	23	0	0	0	0	0	0	2	0	0	0	0	0	60
19:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
19:30	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
20:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
20:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
20:45	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
21:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
21:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
21:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
21:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
22:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	22	7	0	0	0	0	0	0	0	0	0	0	0	0	29
22:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
22:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
23:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
23:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	5	3	0	0	0	0	0	1	0	0	0	0	0	0	9
DAY TOTAL	1	620	313	1	10	2	0	4	8	7	0	0	0	0	0	966
PERCENTS	0.2%	64.2%	32.4%	0.1%	1.0%	0.2%	0.0%	0.4%	0.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.6% Trucks & Buses 3.3%

AM Times	10:00	07:45	08:00	07:30	08:45	11:00	01:30	03:15					08:00
AM Peaks	1	76	40	3	1	1	1	1					110
PM Times	15:45	15:45	15:15	16:30	12:15	16:45	16:00	17:30					15:45
PM Peaks	65	37	1	2	1	2	3	2					105

GRAND TOTAL	3	1219	631	1	21	7	1	5	21	10	0	0	0	0	0	1919
PERCENTS	0.2%	63.6%	32.9%	0.1%	1.1%	0.4%	0.0%	0.2%	1.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3
00:45	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	4	0	0	0	0	0	3	0	0	0	0	0	0	11
01:15	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:30	0	3	0	0	0	1	0	0	0	1	0	0	0	0	0	5
01:45	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	1	9	5	0	0	1	0	0	0	1	0	0	0	0	0	17
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	2	1	0	0	0	0	0	2	0	0	0	0	0	0	5
03:45	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	6	4	0	0	0	0	0	3	0	0	0	0	0	0	13
04:15	0	3	2	0	1	0	0	0	1	0	0	0	0	0	0	7
04:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
04:45	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
05:00	0	9	5	0	1	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	23	12	0	2	0	0	0	1	0	0	0	0	0	0	38
05:15	0	9	6	0	0	0	1	0	1	0	0	0	0	0	0	17
05:30	0	10	7	0	0	0	0	0	1	0	0	0	0	0	0	18
05:45	0	12	9	0	0	0	0	0	0	0	0	0	0	0	0	21
06:00	0	17	12	0	0	0	1	0	0	1	0	0	0	0	0	31
Hour Total	0	48	34	0	0	0	2	0	2	1	0	0	0	0	0	87
06:15	0	22	12	0	1	0	0	0	0	0	0	0	0	0	0	35
06:30	0	31	20	0	2	2	0	0	1	0	0	0	0	0	0	56
06:45	0	36	22	0	0	0	0	0	0	0	0	0	0	0	0	58
07:00	0	30	15	0	1	0	2	0	0	0	0	0	0	0	0	48
Hour Total	0	119	69	0	4	2	2	0	1	0	0	0	0	0	0	197
07:15	1	20	24	0	1	3	2	0	0	1	0	0	0	0	0	52
07:30	0	25	15	1	2	1	1	1	0	0	0	0	0	0	0	46
07:45	0	30	15	0	2	1	0	1	2	0	0	0	0	0	0	51
08:00	0	37	17	0	2	2	0	0	0	0	0	0	0	0	0	58
Hour Total	1	112	71	1	7	7	3	2	2	1	0	0	0	0	0	207
08:15	0	29	20	1	3	2	0	0	1	0	0	0	0	0	0	56
08:30	0	26	15	0	2	1	1	0	0	0	0	0	0	0	0	45
08:45	0	27	17	0	2	0	0	0	1	2	0	0	0	0	0	49
09:00	1	27	17	0	1	1	2	1	2	2	0	0	0	0	0	54

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	109	69	1	8	4	3	1	4	4	0	0	0	0	0	204
09:15	1	24	20	0	0	1	1	0	3	0	0	0	0	0	0	50
09:30	0	21	18	0	3	0	2	0	3	2	0	0	0	0	0	49
09:45	0	23	24	0	1	6	0	1	2	0	0	0	0	0	0	57
10:00	0	25	14	0	0	2	0	1	2	0	0	0	0	0	0	44
Hour Total	1	93	76	0	4	9	3	2	10	2	0	0	0	0	0	200
10:15	0	24	8	0	2	0	0	1	1	0	0	0	0	0	0	36
10:30	2	23	11	0	2	0	0	0	2	0	0	0	0	0	0	40
10:45	0	28	9	0	1	0	0	0	1	2	0	0	0	0	0	41
11:00	3	31	13	0	2	1	1	1	1	3	0	0	0	0	0	56
Hour Total	5	106	41	0	7	1	1	2	5	5	0	0	0	0	0	173
11:15	0	25	16	0	1	1	0	0	1	1	0	0	0	0	0	45
11:30	0	29	16	0	0	2	0	1	0	1	0	0	0	0	0	49
11:45	0	16	16	0	1	1	1	0	2	0	0	0	0	0	0	37
12:00	0	27	14	1	1	4	1	0	2	0	0	0	0	0	0	50
Hour Total	0	97	62	1	3	8	2	1	5	2	0	0	0	0	0	181
12:15	1	26	20	0	1	2	0	0	3	1	0	0	0	0	0	54
12:30	0	30	14	1	0	0	0	0	1	0	0	0	0	0	0	46
12:45	0	35	14	0	1	2	1	0	0	2	0	0	0	0	0	55
13:00	0	36	18	0	1	1	1	1	2	0	0	0	0	0	0	60
Hour Total	1	127	66	1	3	5	2	1	6	3	0	0	0	0	0	215
13:15	1	26	13	0	1	0	1	0	0	0	0	0	0	0	0	42
13:30	0	25	17	0	1	3	0	0	1	0	1	0	0	0	0	48
13:45	1	32	12	0	3	3	0	0	0	0	0	0	0	0	0	51
14:00	0	38	15	0	1	1	1	0	3	1	0	0	0	0	0	60
Hour Total	2	121	57	0	6	7	2	0	4	1	1	0	0	0	0	201
14:15	0	35	20	0	0	0	2	1	1	1	0	0	0	0	0	60
14:30	0	33	11	0	4	1	0	1	0	1	0	0	0	0	0	51
14:45	2	27	18	0	0	1	1	0	1	0	0	0	0	0	0	50
15:00	0	25	17	0	1	3	0	1	2	0	0	0	0	0	0	49
Hour Total	2	120	66	0	5	5	3	3	4	2	0	0	0	0	0	210
15:15	0	33	13	0	1	1	2	0	2	0	0	0	0	0	0	52
15:30	0	39	16	0	1	1	0	0	0	0	0	0	0	0	0	57
15:45	0	44	18	0	1	1	0	0	0	1	0	0	0	0	0	65
16:00	0	33	24	0	1	1	0	0	4	1	0	0	0	0	0	64
Hour Total	0	149	71	0	4	4	2	0	6	2	0	0	0	0	0	238
16:15	0	35	23	0	0	1	0	0	3	0	0	0	0	0	0	62
16:30	0	26	11	0	0	1	0	0	0	1	0	0	0	0	0	39
16:45	0	46	15	0	0	1	0	0	1	0	0	0	0	0	0	63
17:00	0	39	20	0	1	0	0	0	0	0	0	0	0	0	0	60
Hour Total	0	146	69	0	1	3	0	0	4	1	0	0	0	0	0	224

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Tue 5/10/2016

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	50	19	0	0	2	0	0	0	0	0	0	0	0	0	71
17:30	0	40	16	0	1	2	1	0	1	1	0	0	0	0	0	62
17:45	0	31	22	0	1	1	0	1	1	0	0	0	0	0	0	57
18:00	0	35	7	0	0	0	0	0	0	1	0	0	0	0	0	43
Hour Total	0	156	64	0	2	5	1	1	2	2	0	0	0	0	0	233
18:15	0	38	11	0	0	0	0	0	2	1	0	0	0	0	0	52
18:30	0	31	11	0	0	0	0	0	2	0	0	0	0	0	0	44
18:45	0	37	8	0	0	0	0	0	0	0	0	0	0	0	0	45
19:00	0	31	14	0	0	0	0	0	0	0	0	0	0	0	0	45
Hour Total	0	137	44	0	0	0	0	0	4	1	0	0	0	0	0	186
19:15	0	30	9	0	0	0	0	0	1	0	0	0	0	0	0	40
19:30	0	17	6	0	1	0	0	0	1	0	0	0	0	0	0	25
19:45	0	18	7	0	0	0	0	0	1	0	0	0	0	0	0	26
20:00	0	17	8	0	0	0	0	0	1	0	0	0	0	0	0	26
Hour Total	0	82	30	0	1	0	0	0	4	0	0	0	0	0	0	117
20:15	0	20	14	0	0	0	0	0	0	0	0	0	0	0	0	34
20:30	0	20	11	0	2	1	0	0	1	0	0	0	0	0	0	35
20:45	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
21:00	0	10	8	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	61	39	0	2	1	0	0	1	0	0	0	0	0	0	104
21:15	0	20	8	0	0	0	0	0	1	0	0	0	0	0	0	29
21:30	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
21:45	0	24	5	0	1	0	0	0	0	0	0	0	0	0	0	30
22:00	0	22	8	0	0	0	1	0	3	0	0	0	0	0	0	34
Hour Total	0	87	25	0	1	0	1	0	4	0	0	0	0	0	0	118
22:15	0	20	5	0	0	0	0	0	0	0	0	0	0	0	0	25
22:30	1	18	6	0	0	0	0	0	0	0	0	0	0	0	0	25
22:45	0	17	10	0	0	0	0	0	1	1	0	0	0	0	0	29
23:00	0	9	4	0	0	0	0	0	1	0	0	0	0	0	0	14
Hour Total	1	64	25	0	0	0	0	0	2	1	0	0	0	0	0	93
23:15	0	11	0	0	0	0	0	0	0	2	0	0	0	0	0	13
23:30	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	15
23:45	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
24:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	38	10	0	0	0	0	0	0	2	0	0	0	0	0	50
DAY TOTAL	15	2021	1017	4	60	62	27	13	77	31	1	0	0	0	0	3328
PERCENTS	0.5%	60.8%	30.6%	0.2%	1.8%	1.8%	0.8%	0.3%	2.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 91.7% Trucks & Buses 8.2%

AM Times	10:15	07:45	06:30	07:30	07:30	09:15	06:45	09:30	09:00	10:45		06:30
AM Peaks	5	122	81	2	9	9	5	3	10	7		214
PM Times	13:00	16:45	15:30	12:15	13:45	13:00	14:00	14:15	16:00	12:15	12:45	16:45
PM Peaks	2	175	81	1	8	7	4	3	8	3	1	256

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Wed 5/11/2016

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	5	2	0	1	0	0	0	1	0	0	0	0	0	0	9
00:45	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4
01:00	0	2	3	0	1	0	0	0	1	0	0	0	0	0	0	7
Hour Total	0	15	8	0	2	0	0	0	2	2	0	0	0	0	0	29
01:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	4	6	0	0	0	0	0	0	0	0	0	0	0	0	10
02:15	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
02:30	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	5
02:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	9	1	0	0	0	0	0	1	2	0	0	0	0	0	13
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	3
04:00	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	4
Hour Total	0	3	2	0	0	1	0	0	2	0	0	0	0	0	0	8
04:15	0	6	2	0	0	0	0	0	0	1	0	0	0	0	0	9
04:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45	0	9	6	0	1	0	0	0	0	0	0	0	0	0	0	16
05:00	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	22	12	0	1	0	0	0	0	1	0	0	0	0	0	36
05:15	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	16
05:30	0	13	6	0	0	1	1	0	0	0	0	0	0	0	0	21
05:45	0	8	12	0	0	0	0	0	0	0	0	0	0	0	0	20
06:00	0	15	9	0	0	0	0	0	3	1	0	0	0	0	0	28
Hour Total	0	47	32	0	0	1	1	0	3	1	0	0	0	0	0	85
06:15	0	19	14	0	1	1	0	0	0	1	0	0	0	0	0	36
06:30	0	27	22	0	1	3	0	0	0	0	0	0	0	0	0	53
06:45	0	36	18	0	3	0	2	0	1	0	0	0	0	0	0	60
07:00	0	23	22	0	0	1	0	0	0	1	0	0	0	0	0	47
Hour Total	0	105	76	0	5	5	2	0	1	2	0	0	0	0	0	196
07:15	0	19	19	0	1	0	2	1	0	0	0	0	0	0	0	42
07:30	0	32	20	1	3	2	1	0	0	1	0	1	0	0	0	61
07:45	1	27	12	1	0	0	3	0	0	0	0	0	0	0	0	44
08:00	0	33	12	0	3	1	0	1	1	1	0	0	0	0	0	52
Hour Total	1	111	63	2	7	3	6	2	1	2	0	1	0	0	0	199
08:15	0	40	19	0	3	0	1	0	1	1	0	0	0	0	0	65
08:30	0	38	15	0	2	2	0	1	1	0	0	0	0	0	0	59
08:45	0	33	17	0	0	0	0	0	1	0	0	0	0	0	0	51
09:00	0	35	14	0	2	2	0	1	1	4	0	0	0	0	0	59

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	146	65	0	7	4	1	2	4	5	0	0	0	0	0	234
09:15	0	23	25	0	4	0	0	0	0	0	0	0	0	0	0	52
09:30	0	22	19	0	4	2	0	0	2	1	0	0	0	0	0	50
09:45	0	27	17	0	4	1	0	2	0	1	0	0	0	0	0	52
10:00	1	21	18	0	2	1	1	0	1	1	0	0	0	0	0	46
Hour Total	1	93	79	0	14	4	1	2	3	3	0	0	0	0	0	200
10:15	0	22	16	0	1	0	0	0	0	0	1	0	0	0	0	40
10:30	0	27	14	0	1	3	2	1	0	0	0	0	0	0	0	48
10:45	0	26	13	1	0	0	1	0	0	0	0	0	0	0	0	41
11:00	0	28	13	0	1	1	0	0	1	2	0	0	0	0	0	46
Hour Total	0	103	56	1	3	4	3	1	1	2	1	0	0	0	0	175
11:15	0	29	18	0	1	0	1	0	0	3	0	0	0	0	0	52
11:30	0	17	14	0	1	3	0	0	1	1	0	0	0	0	0	37
11:45	1	31	15	0	0	5	2	0	1	0	0	0	0	0	0	55
12:00	0	14	19	1	1	1	1	1	2	0	0	0	0	0	0	40
Hour Total	1	91	66	1	3	9	4	1	4	4	0	0	0	0	0	184
12:15	0	24	18	0	1	1	0	0	1	0	0	0	0	0	0	45
12:30	0	33	9	0	1	1	0	0	0	0	0	0	0	0	0	44
12:45	0	33	20	0	1	2	1	0	3	1	0	0	0	0	0	61
13:00	0	23	11	0	0	0	0	0	0	0	0	0	0	0	0	34
Hour Total	0	113	58	0	3	4	1	0	4	1	0	0	0	0	0	184
13:15	0	26	12	0	1	2	1	0	0	1	0	0	0	0	0	43
13:30	0	41	18	0	1	0	0	0	0	1	0	0	0	0	0	61
13:45	0	41	10	0	0	0	2	0	2	0	0	0	0	0	0	55
14:00	0	28	6	0	0	2	2	0	1	0	0	0	0	0	0	39
Hour Total	0	136	46	0	2	4	5	0	3	2	0	0	0	0	0	198
14:15	0	27	15	0	1	2	0	0	0	1	0	0	0	0	0	46
14:30	0	33	16	0	2	2	0	0	1	1	0	0	0	0	0	55
14:45	0	45	29	0	1	1	1	0	0	0	0	0	0	0	0	77
15:00	0	26	20	0	3	0	0	0	0	0	0	0	0	0	0	49
Hour Total	0	131	80	0	7	5	1	0	1	2	0	0	0	0	0	227
15:15	0	41	13	0	2	3	0	0	2	0	0	0	0	0	0	61
15:30	0	51	26	0	2	1	0	0	1	0	0	0	0	0	0	81
15:45	0	42	21	0	0	0	1	0	0	1	0	0	0	0	0	65
16:00	0	41	15	0	1	0	1	0	2	1	0	0	0	0	0	61
Hour Total	0	175	75	0	5	4	2	0	5	2	0	0	0	0	0	268
16:15	0	36	25	0	1	2	0	0	2	2	0	1	0	0	0	69
16:30	0	43	15	0	1	3	0	0	0	0	0	0	0	0	0	62
16:45	0	32	11	0	2	0	1	1	1	0	0	0	0	0	0	48
17:00	0	41	18	0	1	2	0	0	0	0	0	0	0	0	0	62
Hour Total	0	152	69	0	5	7	1	1	3	2	0	1	0	0	0	241

Station #: Site B-WBO
Site ID: 000000009364
Location: US 460, E of Front St. (WO)
Direction: WEST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	46	26	0	0	1	0	0	1	0	0	0	0	0	0	74
17:30	0	31	14	0	0	1	0	0	1	0	0	0	0	0	0	47
17:45	0	35	24	0	1	2	0	1	0	1	0	0	0	0	0	64
18:00	0	44	20	0	1	1	2	0	0	0	0	0	0	0	0	68
Hour Total	0	156	84	0	2	5	2	1	2	1	0	0	0	0	0	253
18:15	0	43	8	0	0	1	0	0	0	0	0	0	0	0	0	52
18:30	0	26	12	0	0	0	0	1	0	0	0	0	0	0	0	39
18:45	0	50	9	0	0	0	0	1	0	0	0	0	0	0	0	60
19:00	0	39	14	0	0	0	0	0	0	0	0	0	0	0	0	53
Hour Total	0	158	43	0	0	1	0	2	0	0	0	0	0	0	0	204
19:15	0	27	7	0	0	0	0	0	0	0	0	0	0	0	0	34
19:30	0	29	13	0	0	0	0	0	0	0	0	0	0	0	0	42
19:45	0	17	12	0	0	0	0	0	0	0	0	0	0	0	0	29
20:00	0	22	5	0	1	0	0	0	0	1	0	0	0	0	0	29
Hour Total	0	95	37	0	1	0	0	0	0	1	0	0	0	0	0	134
20:15	0	27	8	0	0	1	0	0	1	0	0	0	0	0	0	37
20:30	0	12	6	0	0	0	0	1	0	0	0	0	0	0	0	19
20:45	0	17	7	0	0	0	0	0	2	0	0	0	0	0	0	26
21:00	0	18	6	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	74	27	0	0	1	0	1	3	0	0	0	0	0	0	106
21:15	0	24	5	0	0	0	0	0	1	0	0	0	0	0	0	30
21:30	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
21:45	0	21	6	0	0	0	0	0	1	1	0	0	0	0	0	29
22:00	0	26	4	0	0	0	0	0	0	0	0	0	0	0	0	30
Hour Total	0	90	22	0	0	0	0	0	2	1	0	0	0	0	0	115
22:15	0	23	8	0	0	0	0	0	1	0	0	0	0	0	0	32
22:30	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
22:45	0	15	12	0	0	0	0	0	1	0	0	0	0	0	0	28
23:00	0	11	5	0	0	0	0	0	2	1	0	0	0	0	0	19
Hour Total	0	60	31	0	0	0	0	0	4	1	0	0	0	0	0	96
23:15	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	13	6	0	0	0	0	0	0	0	0	0	0	0	0	19
23:45	0	8	2	0	0	0	0	0	1	0	0	0	0	0	0	11
24:00	1	8	1	0	0	0	0	0	1	0	0	0	0	0	0	11
Hour Total	1	34	11	0	0	0	0	0	2	0	0	0	0	0	0	48
DAY TOTAL	4	2123	1049	4	67	62	30	13	51	37	1	2	0	0	0	3443
PERCENTS	0.2%	61.7%	30.5%	0.2%	2.0%	1.9%	0.8%	0.3%	1.4%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 92.2% Trucks & Buses 7.7%

AM Times	07:00	08:15	06:30	07:00	09:00	11:00	07:00	09:00	06:00	09:00	09:30	06:45		08:15
AM Peaks	1	146	81	2	14	9	6	3	4	6	1	1		234
PM Times	23:15	15:15	14:45		14:30	14:00	13:15	17:45	15:15	15:30		15:30		15:30
PM Peaks	1	175	88		8	7	5	2	5	4		1		276

GRAND TOTAL	19	2066	127	57	128	2	0	0	4144	8	124	26	68	2	0	0	6771
PERCENTS	0.3%	61.3%	30.6%	0.2%	1.9%	1.8%	0.8%	0.3%	1.8%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
01:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	2	0	0	0	0	0	1	0	0	0	0	0	0	7
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	5
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	5
04:15	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	4
04:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	4	3	1	1	0	0	0	1	0	0	0	0	0	0	10
05:15	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
05:30	0	7	1	0	0	0	0	0	0	1	0	0	0	0	0	9
05:45	0	5	2	0	0	0	0	0	1	0	0	0	0	0	0	8
06:00	0	4	7	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	20	13	0	0	0	0	0	1	1	0	0	0	0	0	35
06:15	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	21
06:30	0	9	14	0	1	0	0	0	1	0	0	0	0	0	0	25
06:45	0	11	16	0	0	0	0	0	0	0	0	0	0	0	0	27
07:00	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	37	51	0	1	0	0	0	1	0	0	0	0	0	0	90
07:15	0	8	5	0	1	0	0	0	0	0	0	0	0	0	0	14
07:30	2	23	9	0	1	0	0	0	0	0	0	0	0	0	0	35
07:45	0	24	8	1	0	1	0	1	1	0	0	0	0	0	0	36
08:00	0	22	15	0	5	0	0	1	0	0	0	0	0	0	0	43
Hour Total	2	77	37	1	7	1	0	2	1	0	0	0	0	0	0	128
08:15	0	19	10	0	0	0	1	0	0	0	0	0	0	0	0	30
08:30	1	16	6	0	0	0	0	0	0	0	0	0	0	0	0	23
08:45	0	19	7	0	1	1	1	0	0	0	0	0	0	0	0	29
09:00	0	22	16	0	0	0	0	0	1	0	0	0	0	0	0	39

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	76	39	0	1	1	2	0	1	0	0	0	0	0	0	121
09:15	0	10	9	0	1	0	0	0	1	0	0	0	0	0	0	21
09:30	0	11	3	0	0	2	0	1	1	0	0	0	0	0	0	18
09:45	0	14	9	0	2	0	0	0	0	0	0	0	0	0	0	25
10:00	0	12	11	1	1	0	0	0	1	0	0	0	0	0	0	26
Hour Total	0	47	32	1	4	2	0	1	3	0	0	0	0	0	0	90
10:15	0	17	9	0	2	0	0	0	1	0	0	0	0	0	0	29
10:30	0	8	9	0	1	0	0	0	0	0	0	0	0	0	0	18
10:45	0	14	4	0	0	0	0	1	1	0	0	0	0	0	0	20
11:00	0	20	11	0	0	0	0	0	1	0	0	0	0	0	0	32
Hour Total	0	59	33	0	3	0	0	1	3	0	0	0	0	0	0	99
11:15	0	8	9	0	1	0	0	0	0	0	0	0	0	0	0	18
11:30	1	22	12	0	1	1	0	0	0	0	0	0	0	0	0	37
11:45	0	28	11	0	0	0	0	0	1	0	0	0	0	0	0	40
12:00	0	24	6	0	0	3	0	0	0	0	0	0	0	0	0	33
Hour Total	1	82	38	0	2	4	0	0	1	0	0	0	0	0	0	128
12:15	0	22	10	0	1	1	0	0	0	0	0	0	0	0	0	34
12:30	0	23	6	0	0	1	0	0	0	0	0	0	0	0	0	30
12:45	0	23	11	0	0	0	0	0	1	0	0	0	0	0	0	35
13:00	2	21	8	0	0	0	0	0	0	0	0	0	0	0	0	31
Hour Total	2	89	35	0	1	2	0	0	1	0	0	0	0	0	0	130
13:15	0	18	9	0	0	0	0	0	0	0	0	0	0	0	0	27
13:30	0	16	14	0	0	0	0	0	0	0	0	0	0	0	0	30
13:45	0	19	11	0	0	1	0	0	0	0	0	0	0	0	0	31
14:00	0	20	11	0	1	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	73	45	0	1	1	0	0	0	0	0	0	0	0	0	120
14:15	0	25	17	0	0	0	0	0	0	0	0	0	0	0	0	42
14:30	0	20	2	0	2	2	1	0	0	0	0	0	0	0	0	27
14:45	0	24	13	0	0	1	0	1	0	0	0	0	0	0	0	39
15:00	0	24	2	0	0	0	0	0	1	0	0	0	0	0	0	27
Hour Total	0	93	34	0	2	3	1	1	1	0	0	0	0	0	0	135
15:15	0	23	5	0	2	1	0	0	1	0	0	0	0	0	0	32
15:30	0	31	13	0	4	0	0	0	0	0	0	0	0	0	0	48
15:45	0	31	6	0	1	0	0	0	0	0	0	0	0	0	0	38
16:00	0	34	15	0	1	1	0	0	0	0	0	0	0	0	0	51
Hour Total	0	119	39	0	8	2	0	0	1	0	0	0	0	0	0	169
16:15	0	20	16	0	0	1	0	0	0	0	0	0	0	0	0	37
16:30	0	31	13	0	2	1	0	1	0	0	0	0	0	0	0	48
16:45	0	30	7	0	0	0	0	0	0	0	0	0	0	0	0	37
17:00	0	24	14	0	0	0	0	0	2	0	0	0	0	0	0	40
Hour Total	0	105	50	0	2	2	0	1	2	0	0	0	0	0	0	162

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Tue 5/10/2016

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	38	13	0	2	0	0	0	0	0	0	0	0	0	0	53
17:30	0	35	14	0	0	0	0	0	0	0	0	0	0	0	0	49
17:45	0	36	11	0	1	0	0	0	1	0	0	0	0	0	0	49
18:00	0	22	10	0	0	2	0	0	0	0	0	0	0	0	0	34
Hour Total	0	131	48	0	3	2	0	0	1	0	0	0	0	0	0	185
18:15	0	11	9	0	0	1	0	0	0	0	0	0	0	0	0	21
18:30	0	14	10	0	0	0	0	0	2	0	0	0	0	0	0	26
18:45	0	18	9	0	0	0	0	0	0	0	0	0	0	0	0	27
19:00	0	18	4	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	0	61	32	0	0	1	0	0	2	0	0	0	0	0	0	96
19:15	0	22	6	0	1	0	0	0	0	0	0	0	0	0	0	29
19:30	0	8	5	0	0	0	0	0	1	0	0	0	0	0	0	14
19:45	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	16
20:00	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	50	24	0	1	0	0	0	1	0	0	0	0	0	0	76
20:15	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
20:30	0	14	3	0	1	0	0	0	0	0	0	0	0	0	0	18
20:45	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
21:00	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	49	11	0	1	0	0	0	0	0	0	0	0	0	0	61
21:15	0	10	5	0	0	0	0	0	1	0	0	0	0	0	0	16
21:30	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
21:45	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	15
22:00	0	7	2	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	0	40	15	0	0	0	0	0	2	0	0	0	0	0	0	57
22:15	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
22:30	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
22:45	0	8	2	0	0	0	0	0	1	0	0	0	0	0	0	11
23:00	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	27	9	0	0	0	0	0	2	0	0	0	0	0	0	38
23:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
24:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	20	6	0	0	0	0	0	0	0	0	0	0	0	0	26
DAY TOTAL	6	1269	598	3	39	21	3	6	27	1	0	0	0	0	0	1973
PERCENTS	0.4%	64.4%	30.4%	0.2%	1.9%	1.0%	0.1%	0.3%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.9% Trucks & Buses 5.0%

AM Times	06:45	07:30	06:15	03:30	07:15	11:15	08:00	07:15	08:45	04:45		07:30
AM Peaks	2	88	51	1	7	4	2	2	3	1		144
PM Times	12:15	17:00	13:30		15:15	14:30	13:45	14:00	17:00			17:00
PM Peaks	2	133	53		8	4	1	1	3			191

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Wed 5/11/2016

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
00:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	8	4	0	1	0	0	0	0	0	0	0	0	0	0	13
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Hour Total	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
05:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
05:15	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
05:30	0	9	6	0	0	0	0	0	1	0	0	0	0	0	0	16
05:45	0	5	7	0	0	0	0	0	0	1	0	0	0	0	0	13
06:00	1	6	8	0	0	0	0	1	0	0	0	0	0	0	0	16
Hour Total	1	22	23	0	0	0	0	1	2	1	0	0	0	0	0	50
06:15	0	10	12	0	2	0	0	0	0	0	0	0	0	0	0	24
06:30	0	16	14	0	0	0	0	0	1	0	0	0	0	0	0	31
06:45	0	16	10	0	0	0	0	0	0	0	0	0	0	0	0	26
07:00	0	11	7	0	1	0	1	0	0	0	0	0	0	0	0	20
Hour Total	0	53	43	0	3	0	1	0	1	0	0	0	0	0	0	101
07:15	0	8	6	0	2	0	0	0	0	0	0	0	0	0	0	16
07:30	0	13	10	0	3	0	0	0	0	0	0	0	0	0	0	26
07:45	0	26	12	0	1	2	0	0	0	0	0	0	0	0	0	41
08:00	0	27	15	1	1	0	0	0	0	0	0	0	0	0	0	44
Hour Total	0	74	43	1	7	2	0	0	0	0	0	0	0	0	0	127
08:15	0	20	19	0	0	2	1	1	0	0	0	0	0	0	0	43
08:30	0	14	8	0	0	0	0	0	1	0	0	0	0	0	0	23
08:45	0	16	10	0	0	0	0	0	2	0	0	0	0	0	0	28
09:00	0	14	4	0	0	1	0	0	1	0	0	0	0	0	0	20

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	64	41	0	0	3	1	1	4	0	0	0	0	0	0	114
09:15	0	14	4	0	2	0	0	1	0	0	0	0	0	0	0	21
09:30	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	16
09:45	0	21	6	0	0	1	0	0	2	0	0	0	0	0	0	30
10:00	0	12	5	0	0	1	0	0	0	0	0	0	0	0	0	18
Hour Total	0	59	19	0	2	2	0	1	2	0	0	0	0	0	0	85
10:15	0	15	19	0	0	1	0	0	1	0	0	0	0	0	0	36
10:30	0	18	7	0	0	1	0	0	1	0	0	0	0	0	0	27
10:45	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	16
11:00	0	11	13	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	54	45	0	0	2	0	0	2	0	0	0	0	0	0	103
11:15	0	23	5	1	1	0	0	1	0	0	0	0	0	0	0	31
11:30	0	13	14	0	0	1	0	0	0	0	0	0	0	0	0	28
11:45	0	22	12	0	1	0	0	0	1	0	0	0	0	0	0	36
12:00	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
Hour Total	0	77	38	1	2	1	0	1	1	0	0	0	0	0	0	121
12:15	0	23	7	0	1	2	0	0	1	0	0	0	0	0	0	34
12:30	0	18	6	0	0	1	0	0	1	0	0	0	0	0	0	26
12:45	0	16	10	0	1	1	0	0	1	0	0	0	0	0	0	29
13:00	0	21	5	0	1	0	0	0	0	0	0	0	0	0	0	27
Hour Total	0	78	28	0	3	4	0	0	3	0	0	0	0	0	0	116
13:15	0	27	4	0	0	0	0	0	0	0	0	0	0	0	0	31
13:30	0	13	10	0	1	0	0	0	0	0	0	0	0	0	0	24
13:45	0	22	10	0	1	1	0	0	0	0	0	0	0	0	0	34
14:00	0	27	5	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	89	29	0	2	1	0	0	0	0	0	0	0	0	0	121
14:15	0	32	7	0	0	2	0	0	0	0	0	0	0	0	0	41
14:30	0	21	9	0	1	0	0	0	1	0	0	0	0	0	0	32
14:45	0	37	21	0	1	0	0	0	0	0	0	0	0	0	0	59
15:00	0	25	10	0	0	1	0	1	0	0	0	0	0	0	0	37
Hour Total	0	115	47	0	2	3	0	1	1	0	0	0	0	0	0	169
15:15	0	17	8	0	0	0	0	0	1	2	0	0	0	0	0	28
15:30	0	31	15	0	3	0	0	1	1	0	0	0	0	0	0	51
15:45	0	19	15	0	2	0	0	0	0	0	0	0	0	0	0	36
16:00	0	26	10	0	0	0	0	0	0	0	0	1	0	0	0	37
Hour Total	0	93	48	0	5	0	0	1	2	2	0	1	0	0	0	152
16:15	0	17	13	0	0	1	0	0	0	0	0	0	0	0	0	31
16:30	0	25	11	0	0	0	0	0	0	0	0	0	0	0	0	36
16:45	0	23	10	0	1	1	0	0	1	0	0	0	0	0	0	36
17:00	0	30	15	0	1	0	0	0	1	0	0	0	0	0	0	47
Hour Total	0	95	49	0	2	2	0	0	2	0	0	0	0	0	0	150

Station #: Site B-WBI
Site ID: 000000009375
Location: US 460, E of Front St. (WI)
Direction: WEST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	39	15	0	0	0	0	0	0	0	0	0	0	0	0	54
17:30	0	34	12	0	2	0	0	0	0	0	0	0	0	0	0	48
17:45	0	25	6	0	0	0	0	0	0	0	0	0	0	0	0	31
18:00	0	22	18	0	1	0	0	0	0	0	0	0	0	0	0	41
Hour Total	0	120	51	0	3	0	0	0	0	0	0	0	0	0	0	174
18:15	0	21	10	0	0	0	0	0	0	0	0	0	0	0	0	31
18:30	0	23	6	0	0	0	0	0	0	0	0	0	0	0	0	29
18:45	0	24	8	0	0	0	0	0	0	0	0	0	0	0	0	32
19:00	0	19	11	0	0	0	0	0	2	0	0	0	0	0	0	32
Hour Total	0	87	35	0	0	0	0	0	2	0	0	0	0	0	0	124
19:15	0	16	6	0	0	0	0	0	0	0	0	0	0	0	0	22
19:30	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
19:45	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
20:00	0	12	7	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	54	16	0	0	0	0	0	0	0	0	0	0	0	0	70
20:15	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
20:30	0	11	4	0	0	0	0	0	0	0	0	0	0	0	0	15
20:45	0	15	3	0	0	0	0	0	1	0	0	0	0	0	0	19
21:00	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	46	13	0	0	0	0	0	1	0	0	0	0	0	0	60
21:15	0	11	4	0	0	0	0	0	0	0	0	0	0	0	0	15
21:30	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
21:45	0	12	5	0	0	0	0	0	0	0	0	0	1	0	0	18
22:00	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	40	15	0	0	0	0	0	0	0	0	0	1	0	0	56
22:15	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
22:30	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	12
22:45	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
23:00	0	1	4	0	0	0	0	0	1	0	0	0	0	0	0	6
Hour Total	0	24	21	0	0	0	0	0	1	0	0	0	0	0	0	46
23:15	0	9	1	0	0	0	0	0	1	0	0	0	0	0	0	11
23:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
23:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	15	4	0	0	0	0	0	1	0	0	0	0	0	0	20
DAY TOTAL	1	1283	617	3	33	20	2	6	26	3	0	1	1	0	0	1996
PERCENTS	0.1%	64.3%	31.0%	0.2%	1.6%	1.0%	0.1%	0.3%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.2% Trucks & Buses 4.7%

AM Times	05:15	07:45	07:30	02:30	07:00	07:30	06:15	05:15	08:15	05:00					07:30
AM Peaks	1	87	56	1	7	4	1	1	4	1					154
PM Times	17:00	14:45	15:00	12:15	14:45	12:15	14:30	15:15	21:00						16:45
PM Peaks	128	54	5	4	2	3	2	1	1						185

GRAND TOTAL	7	1215	72	5	53	0	1	0								
	2552	6	41	12	4	1	0	3969								
PERCENTS	0.2%	64.3%	30.7%	0.2%	1.8%	1.0%	0.1%	0.3%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	8	1	0	0	1	0	0	0	0	0	0	0	0	0	10
00:30	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	21	10	0	0	1	0	0	0	0	0	0	0	0	0	32
01:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	3	2	0	0	0	0	0	0	1	0	0	0	0	0	6
01:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	4	2	0	0	0	0	0	1	0	0	0	0	0	0	7
Hour Total	0	13	5	0	0	0	0	0	1	1	0	0	0	0	0	20
02:15	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
02:30	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	11	8	0	0	0	0	0	1	0	0	0	0	0	0	20
03:15	0	2	1	0	0	0	0	0	2	0	0	0	0	0	0	5
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
04:00	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	7
Hour Total	0	13	2	0	0	0	0	0	4	0	0	0	0	0	0	19
04:15	0	6	1	0	0	0	0	0	0	1	0	0	0	0	0	8
04:30	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0	5
04:45	0	4	2	0	0	1	0	0	0	1	0	0	0	0	0	8
05:00	0	8	3	0	0	0	0	0	2	1	0	0	0	0	0	14
Hour Total	0	21	7	0	0	1	0	0	2	4	0	0	0	0	0	35
05:15	0	8	3	0	0	0	0	0	1	2	0	0	0	0	0	14
05:30	0	11	9	0	0	2	0	0	0	2	0	0	0	0	0	24
05:45	0	16	5	0	0	0	0	1	2	3	0	0	0	0	0	27
06:00	1	10	6	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	1	45	23	0	0	2	0	1	3	7	0	0	0	0	0	82
06:15	0	20	17	0	1	4	0	0	0	0	0	0	0	0	0	42
06:30	0	15	13	0	4	1	1	0	2	2	0	0	0	0	0	38
06:45	0	31	17	0	0	0	0	0	0	1	0	0	0	0	0	49
07:00	0	21	20	0	0	0	0	1	1	0	0	0	0	0	0	43
Hour Total	0	87	67	0	5	5	1	1	3	3	0	0	0	0	0	172
07:15	0	26	16	0	2	3	0	0	0	0	0	0	0	0	0	47
07:30	0	51	15	0	1	1	0	0	0	0	0	0	0	0	0	68
07:45	0	60	24	0	5	1	0	0	0	2	0	0	0	0	0	92
08:00	0	56	25	0	1	2	1	0	1	2	0	0	0	0	0	88
Hour Total	0	193	80	0	9	7	1	0	1	4	0	0	0	0	0	295
08:15	0	39	20	0	3	2	1	0	1	0	0	0	0	0	0	66
08:30	0	39	20	0	2	1	9	1	1	0	0	0	0	0	0	73
08:45	0	45	11	0	0	1	0	1	0	0	0	0	0	0	0	58
09:00	0	35	13	0	0	0	0	0	3	0	0	0	0	0	0	51

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	158	64	0	5	4	10	2	5	0	0	0	0	0	0	248
09:15	0	34	20	0	1	2	0	0	0	1	0	0	0	0	0	58
09:30	0	27	22	0	1	0	1	0	0	1	0	0	0	0	0	52
09:45	0	37	12	0	1	0	0	0	3	1	0	0	0	0	0	54
10:00	1	20	16	0	2	3	0	0	2	2	1	0	0	0	0	47
Hour Total	1	118	70	0	5	5	1	0	5	5	1	0	0	0	0	211
10:15	1	30	14	0	1	0	1	0	0	1	0	1	0	0	0	49
10:30	0	37	17	0	0	0	0	1	2	0	0	0	0	0	0	57
10:45	0	45	19	0	1	1	4	0	2	1	0	0	0	0	0	73
11:00	0	43	16	0	1	0	1	0	0	0	0	0	0	0	0	61
Hour Total	1	155	66	0	3	1	6	1	4	2	0	1	0	0	0	240
11:15	0	45	8	0	0	0	0	1	4	1	0	0	0	0	0	59
11:30	0	48	16	0	1	1	1	0	2	0	0	0	0	0	0	69
11:45	0	45	10	0	2	1	0	1	2	1	0	0	0	0	0	62
12:00	0	40	16	0	1	1	0	0	0	0	0	0	1	0	0	59
Hour Total	0	178	50	0	4	3	1	2	8	2	0	0	1	0	0	249
12:15	0	32	15	0	2	1	1	1	0	0	0	0	0	0	0	52
12:30	0	39	16	0	3	2	1	0	2	0	0	0	0	0	0	63
12:45	0	35	19	0	1	1	1	0	0	0	0	0	0	0	0	57
13:00	0	36	12	0	1	1	4	1	1	0	0	0	0	0	0	56
Hour Total	0	142	62	0	7	5	7	2	3	0	0	0	0	0	0	228
13:15	0	47	18	1	1	0	3	0	0	1	0	0	0	0	0	71
13:30	0	45	17	0	5	0	0	0	0	0	0	0	0	0	0	67
13:45	0	34	11	0	1	1	0	0	1	1	0	0	0	0	0	49
14:00	1	46	18	0	1	2	0	0	5	0	0	1	0	0	0	74
Hour Total	1	172	64	1	8	3	3	0	6	2	0	1	0	0	0	261
14:15	1	27	24	0	1	1	0	0	1	0	0	0	0	0	0	55
14:30	0	35	14	0	1	1	1	0	0	0	0	0	0	0	0	52
14:45	0	36	14	0	1	1	0	0	0	0	0	0	0	0	0	52
15:00	0	42	20	0	0	0	2	0	0	1	0	0	0	0	0	65
Hour Total	1	140	72	0	3	3	3	0	1	1	0	0	0	0	0	224
15:15	0	39	11	0	0	0	1	1	0	0	0	0	0	0	0	52
15:30	0	37	18	0	0	0	0	1	0	0	0	0	0	0	0	56
15:45	0	44	25	0	1	1	0	0	2	0	0	0	0	0	0	73
16:00	0	42	19	0	1	0	0	0	2	0	0	0	0	0	0	64
Hour Total	0	162	73	0	2	1	1	2	4	0	0	0	0	0	0	245
16:15	1	50	14	0	2	1	0	1	1	0	0	0	0	0	0	70
16:30	0	46	22	0	1	0	0	3	2	0	0	0	0	0	0	74
16:45	1	41	22	0	0	0	0	1	4	0	0	0	0	0	0	69
17:00	1	53	12	0	2	0	0	0	1	0	0	0	0	0	0	69
Hour Total	3	190	70	0	5	1	0	5	8	0	0	0	0	0	0	282

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	44	25	0	1	0	0	1	1	0	0	0	0	0	0	72
17:30	0	51	24	0	0	0	0	0	1	0	0	0	0	0	0	76
17:45	0	37	11	0	0	0	0	1	1	0	0	0	0	0	0	50
18:00	0	34	18	0	1	2	0	1	0	0	0	0	0	0	0	56
Hour Total	0	166	78	0	2	2	0	3	3	0	0	0	0	0	0	254
18:15	0	29	13	0	1	0	0	0	0	0	0	0	0	0	0	43
18:30	0	34	18	0	1	0	0	0	0	1	0	0	1	0	0	55
18:45	0	24	7	0	1	1	0	0	0	1	0	0	0	0	0	34
19:00	1	21	10	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	1	108	48	0	3	1	0	0	0	2	0	0	1	0	0	164
19:15	0	38	10	0	0	0	0	0	1	0	0	0	0	0	0	49
19:30	0	26	8	0	0	2	0	0	1	0	0	0	0	0	0	37
19:45	0	16	11	0	0	0	0	0	1	0	0	0	0	0	0	28
20:00	0	26	6	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	106	35	0	0	2	0	0	3	0	0	0	0	0	0	146
20:15	0	27	5	0	0	0	0	0	0	0	0	0	1	0	0	33
20:30	0	15	6	0	0	0	0	0	3	0	0	0	0	0	0	24
20:45	0	24	4	0	0	0	0	0	0	0	0	0	0	0	0	28
21:00	0	20	7	0	0	0	0	0	0	0	0	0	0	0	0	27
Hour Total	0	86	22	0	0	0	0	0	3	0	0	0	1	0	0	112
21:15	0	23	5	0	0	0	0	0	0	0	0	0	0	0	0	28
21:30	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
21:45	0	19	7	0	0	0	0	0	1	0	0	0	0	0	0	27
22:00	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	69	23	0	0	0	0	0	1	0	0	0	0	0	0	93
22:15	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	12
22:30	0	13	7	0	0	0	0	0	0	0	0	0	0	0	0	20
22:45	0	8	5	1	0	0	0	0	0	0	0	0	0	0	0	14
23:00	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	32	21	1	0	0	0	0	0	0	0	0	0	0	0	54
23:15	0	11	4	0	0	0	0	0	0	0	0	0	0	0	0	15
23:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	14
24:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	30	16	0	0	0	0	0	0	0	0	0	0	0	0	46
DAY TOTAL	9	2416	1036	2	61	47	34	19	69	33	1	2	3	0	0	3732
PERCENTS	0.3%	64.8%	27.8%	0.1%	1.7%	1.3%	0.9%	0.5%	1.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 92.7% Trucks & Buses 7.2%

AM Times	09:30	07:30	07:45		07:45	07:15	07:45	08:00	10:30	05:00	09:15	09:30	11:15			07:45
AM Peaks	2	206	89		11	7	11	2	8	8	1	1	1			319
PM Times	16:15	16:15	16:45	12:30	12:45	12:15	12:30	16:00	16:00	13:00		13:15	17:45			16:45
PM Peaks	3	190	83	1	8	5	9	5	9	2		1	1			286

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
00:45	0	3	2	0	0	0	0	0	1	0	0	0	0	0	0	6
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	22	8	0	0	0	0	0	1	0	0	0	0	0	0	31
01:15	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
01:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
01:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
02:00	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Hour Total	0	21	4	0	1	0	0	0	0	1	0	0	0	0	0	27
02:15	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	4
02:30	0	1	4	0	0	0	0	0	1	0	0	0	0	0	0	6
02:45	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
03:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	8	8	0	0	0	0	0	4	0	0	0	0	0	0	20
03:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	3	2	0	0	0	0	0	2	1	0	0	0	0	0	8
03:45	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	4
04:00	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	5
Hour Total	0	11	3	0	1	0	0	0	4	1	0	0	0	0	0	20
04:15	0	4	0	0	0	0	0	0	1	1	0	0	0	0	0	6
04:30	0	4	1	0	1	0	0	0	0	1	0	0	0	0	0	7
04:45	0	10	3	0	0	0	0	0	2	0	0	0	0	0	0	15
05:00	0	8	5	0	0	0	0	0	1	0	0	0	0	0	0	14
Hour Total	0	26	9	0	1	0	0	0	4	2	0	0	0	0	0	42
05:15	0	7	3	0	0	2	0	0	1	2	0	0	0	0	0	15
05:30	0	9	9	0	0	1	0	0	2	3	0	0	0	0	0	24
05:45	0	18	3	0	1	2	0	0	1	2	0	0	0	0	0	27
06:00	0	10	7	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	44	22	0	1	5	0	0	4	7	0	0	0	0	0	83
06:15	0	14	12	0	0	3	0	0	1	1	0	0	0	0	0	31
06:30	0	25	10	0	1	2	0	0	1	1	0	0	0	0	0	40
06:45	0	28	11	0	0	1	0	0	0	0	0	0	0	0	0	40
07:00	0	23	22	0	0	0	0	0	0	0	0	0	0	0	0	45
Hour Total	0	90	55	0	1	6	0	0	2	2	0	0	0	0	0	156
07:15	0	21	10	0	1	0	0	0	2	1	0	0	0	0	0	35
07:30	0	47	21	0	2	0	0	0	0	0	0	0	0	0	0	70
07:45	0	64	33	0	6	3	0	0	0	0	0	0	0	0	0	106
08:00	0	56	21	0	0	4	0	0	1	0	0	0	0	0	0	82
Hour Total	0	188	85	0	9	7	0	0	3	1	0	0	0	0	0	293
08:15	1	41	16	0	1	3	0	0	0	0	0	0	0	0	0	62
08:30	0	41	19	0	3	2	3	1	3	1	0	0	0	0	0	73
08:45	0	41	16	0	2	1	2	1	3	0	0	0	0	0	0	66
09:00	0	39	12	0	2	0	2	0	3	1	0	0	0	0	0	59

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	162	63	0	8	6	7	2	9	2	0	0	0	0	0	260
09:15	0	43	9	0	0	1	0	0	4	1	0	0	0	0	0	58
09:30	0	39	21	0	1	1	0	1	2	0	0	0	0	0	0	65
09:45	0	29	15	0	1	0	1	1	1	0	0	0	0	0	0	48
10:00	0	31	12	0	0	1	0	1	1	1	0	0	0	0	0	47
Hour Total	0	142	57	0	2	3	1	3	8	2	0	0	0	0	0	218
10:15	0	27	17	0	2	0	1	0	0	2	0	0	0	0	0	49
10:30	0	21	13	0	2	4	3	0	4	1	0	0	0	0	0	48
10:45	1	27	15	0	0	0	0	0	6	0	0	0	0	0	0	49
11:00	0	32	24	0	0	1	1	0	1	0	0	0	0	0	0	59
Hour Total	1	107	69	0	4	5	5	0	11	3	0	0	0	0	0	205
11:15	0	31	15	0	3	0	0	0	0	1	0	0	0	0	0	50
11:30	0	37	13	0	2	1	1	0	2	1	0	0	0	0	0	57
11:45	0	43	19	0	0	0	0	0	0	0	0	0	0	0	0	62
12:00	0	30	17	1	1	2	2	0	1	0	0	0	0	0	0	54
Hour Total	0	141	64	1	6	3	3	0	3	2	0	0	0	0	0	223
12:15	0	46	18	0	2	1	1	0	4	0	0	0	0	0	0	72
12:30	0	38	22	0	0	0	0	1	3	1	0	0	0	0	0	65
12:45	0	39	15	0	0	1	1	0	0	1	0	0	0	0	0	57
13:00	0	39	14	0	0	3	3	0	0	1	0	0	0	0	0	60
Hour Total	0	162	69	0	2	5	5	1	7	3	0	0	0	0	0	254
13:15	0	40	5	0	1	1	2	1	4	2	0	0	0	0	0	56
13:30	0	39	11	0	0	1	0	1	0	0	0	0	0	0	0	52
13:45	0	50	29	0	1	2	2	0	4	0	0	0	0	0	0	88
14:00	0	30	20	0	0	0	0	0	1	0	0	0	0	0	0	51
Hour Total	0	159	65	0	2	4	4	2	9	2	0	0	0	0	0	247
14:15	0	39	21	0	3	1	0	0	2	0	0	0	0	0	0	66
14:30	0	48	19	0	4	1	0	0	3	0	0	0	0	0	0	75
14:45	0	45	15	0	0	2	0	0	1	0	0	0	0	0	0	63
15:00	0	38	15	0	1	1	2	0	1	0	0	0	0	0	0	58
Hour Total	0	170	70	0	8	5	2	0	7	0	0	0	0	0	0	262
15:15	0	48	18	0	4	0	2	2	1	0	0	0	0	0	0	75
15:30	0	52	12	1	0	0	0	0	1	0	0	0	0	0	0	66
15:45	0	51	18	0	1	0	0	2	1	0	0	0	0	0	0	73
16:00	0	43	17	0	4	0	0	0	1	0	0	0	0	0	0	65
Hour Total	0	194	65	1	9	0	2	4	4	0	0	0	0	0	0	279
16:15	0	55	21	0	1	0	0	0	3	0	0	0	0	0	0	80
16:30	0	53	26	0	1	1	0	0	1	0	0	0	0	0	0	82
16:45	0	43	16	0	0	0	0	0	0	0	0	0	0	0	0	59
17:00	0	43	24	0	0	1	0	2	1	0	0	0	0	0	0	71
Hour Total	0	194	87	0	2	2	0	2	5	0	0	0	0	0	0	292

Station #: Site B-EBO
Site ID: 000000003808
Location: US 460, E of Front St. (EO)
Direction: EAST
Lane: 1

File: Outside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	50	27	0	0	0	0	1	1	1	0	0	0	0	0	80
17:30	0	47	25	0	1	0	0	0	1	1	0	0	0	0	0	75
17:45	0	37	28	0	0	2	0	1	2	0	0	0	0	0	0	70
18:00	0	37	23	0	0	1	0	0	0	0	0	0	0	0	0	61
Hour Total	0	171	103	0	1	3	0	2	4	2	0	0	0	0	0	286
18:15	0	43	21	0	1	1	0	0	1	1	0	0	0	0	0	68
18:30	0	30	14	0	1	0	0	0	0	1	0	0	0	0	0	46
18:45	0	47	14	0	0	0	0	0	0	0	0	0	0	0	0	61
19:00	0	37	12	0	0	0	0	0	0	0	0	0	0	0	0	49
Hour Total	0	157	61	0	2	1	0	0	1	2	0	0	0	0	0	224
19:15	0	21	12	0	0	1	0	0	0	0	0	0	0	0	0	34
19:30	0	22	15	0	0	0	0	0	0	0	0	0	0	0	0	37
19:45	1	15	9	0	0	0	0	0	0	0	0	0	0	0	0	25
20:00	0	13	9	0	0	1	0	0	0	0	0	0	0	0	0	23
Hour Total	1	71	45	0	0	2	0	0	0	0	0	0	0	0	0	119
20:15	0	17	10	0	1	0	0	0	0	0	0	0	0	0	0	28
20:30	0	32	9	0	0	0	0	0	0	0	0	0	0	0	0	41
20:45	0	20	5	0	1	0	0	0	0	0	0	0	0	0	0	26
21:00	0	25	4	0	0	0	0	0	1	0	0	0	0	0	0	30
Hour Total	0	94	28	0	2	0	0	0	1	0	0	0	0	0	0	125
21:15	0	22	7	0	0	0	0	0	1	0	0	0	0	0	0	30
21:30	0	17	10	0	0	0	0	0	0	0	0	0	0	0	0	27
21:45	0	21	8	0	0	0	0	0	1	0	0	0	0	0	0	30
22:00	0	22	6	0	0	0	0	0	0	0	0	0	0	0	0	28
Hour Total	0	82	31	0	0	0	0	0	2	0	0	0	0	0	0	115
22:15	0	9	4	0	0	0	0	0	1	0	0	0	0	0	0	14
22:30	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	15
22:45	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	15
23:00	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	41	13	0	0	0	0	0	1	0	0	0	0	0	0	55
23:15	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
23:30	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	15
23:45	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
24:00	0	3	1	0	0	0	0	0	2	0	0	0	0	0	0	6
Hour Total	0	20	14	0	0	0	0	0	2	0	0	0	0	0	0	36
DAY TOTAL	3	2477	1098	2	62	57	29	16	96	32	0	0	0	0	0	3872
PERCENTS	0.1%	64.0%	28.4%	0.1%	1.7%	1.4%	0.7%	0.4%	2.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 92.4% Trucks & Buses 7.5%

AM Times	07:30	07:30	07:30	11:15	07:45	07:45	08:15	09:15	08:30	05:00		07:45
AM Peaks	1	208	91	1	10	12	7	3	13	7		323
PM Times	19:00	15:45	17:00	14:45	14:30	13:00	13:00	15:00	13:45	12:30		15:45
PM Peaks	1	202	104	1	9	7	7	4	10	5		300

GRAND TOTAL	12	2134	123	63	165	1	3	0								
	4893	4	104	35	65	2	0	7604								
PERCENTS	0.2%	64.4%	28.1%	0.1%	1.7%	1.4%	0.8%	0.4%	2.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3
05:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	1	3	1	0	1	1	0	0	0	0	0	0	0	0	0	7
05:15	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
05:30	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	4
05:45	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
06:00	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	6
Hour Total	0	16	8	0	0	1	0	0	0	1	0	0	0	0	0	26
06:15	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
06:30	0	11	6	0	0	0	0	1	1	0	0	0	0	0	0	19
06:45	0	12	6	0	1	0	0	0	0	0	0	0	0	0	0	19
07:00	0	14	11	0	0	0	0	0	0	0	0	0	0	0	0	25
Hour Total	0	48	29	0	1	0	0	1	1	0	0	0	0	0	0	80
07:15	0	19	8	0	1	0	0	0	1	0	0	0	0	0	0	29
07:30	0	38	14	0	0	0	0	0	0	0	0	0	0	0	0	52
07:45	0	36	11	0	0	1	0	0	0	0	0	0	0	0	0	48
08:00	1	51	17	0	0	0	0	0	0	0	0	0	0	0	0	69
Hour Total	1	144	50	0	1	1	0	0	1	0	0	0	0	0	0	198
08:15	0	36	13	0	0	0	0	0	0	0	0	0	0	0	0	49
08:30	0	32	10	0	0	1	1	0	4	0	0	0	0	0	0	48
08:45	0	25	11	0	0	0	0	0	0	0	0	0	0	0	0	36
09:00	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	112	40	0	0	1	1	0	4	0	0	0	0	0	0	158
09:15	0	28	7	0	1	0	0	0	0	0	0	0	0	0	0	36
09:30	0	15	7	0	1	0	0	0	0	0	0	0	0	0	0	23
09:45	0	24	8	0	0	1	0	0	2	0	0	0	0	0	0	35
10:00	0	12	12	0	0	1	0	0	0	0	0	0	0	0	0	25
Hour Total	0	79	34	0	2	2	0	0	2	0	0	0	0	0	0	119
10:15	0	21	8	0	0	0	0	0	1	0	0	0	0	0	0	30
10:30	0	18	10	0	0	0	0	0	1	0	0	0	0	0	0	29
10:45	0	21	7	0	0	0	1	1	1	1	0	0	0	0	0	32
11:00	1	23	10	0	0	1	0	0	0	0	0	0	0	0	0	35
Hour Total	1	83	35	0	0	1	1	1	3	1	0	0	0	0	0	126
11:15	0	26	15	0	0	0	0	0	1	0	0	0	0	0	0	42
11:30	0	37	6	0	1	1	0	0	0	0	0	0	0	0	0	45
11:45	0	24	12	0	2	0	1	0	0	0	0	0	0	0	0	39
12:00	1	22	9	0	0	0	0	0	1	0	0	0	0	0	0	33
Hour Total	1	109	42	0	3	1	1	0	2	0	0	0	0	0	0	159
12:15	0	29	8	0	2	0	1	0	0	1	0	0	0	0	0	41
12:30	0	25	7	0	0	0	1	0	0	0	0	0	0	0	0	33
12:45	0	25	9	0	0	0	0	0	2	0	0	0	0	0	0	36
13:00	0	31	8	0	0	0	0	0	1	0	0	0	0	0	0	40
Hour Total	0	110	32	0	2	0	2	0	3	1	0	0	0	0	0	150
13:15	0	32	12	0	1	0	1	0	0	0	0	0	0	0	0	46
13:30	0	36	12	0	0	0	0	0	1	0	0	0	0	0	0	49
13:45	0	20	13	0	0	0	0	0	0	0	0	0	0	0	0	33
14:00	0	24	16	0	0	0	0	2	1	0	0	0	0	0	0	43
Hour Total	0	112	53	0	1	0	1	2	2	0	0	0	0	0	0	171
14:15	0	21	13	0	0	1	0	0	1	0	0	0	0	0	0	36
14:30	0	28	12	0	0	1	0	0	1	1	0	0	0	0	0	43
14:45	0	25	13	0	0	1	0	0	1	0	0	0	0	0	0	40
15:00	0	26	12	0	1	0	1	1	0	0	0	0	0	0	0	41
Hour Total	0	100	50	0	1	3	1	1	3	1	0	0	0	0	0	160
15:15	0	22	11	0	0	1	0	0	0	0	0	0	0	0	0	34
15:30	0	20	13	0	1	0	0	0	1	0	0	0	0	0	0	35
15:45	0	37	15	0	0	1	0	0	0	0	0	0	0	0	0	53
16:00	1	33	11	0	0	1	0	0	0	0	0	0	0	0	0	46
Hour Total	1	112	50	0	1	3	0	0	1	0	0	0	0	0	0	168
16:15	0	48	19	0	0	0	0	0	0	0	0	0	0	0	0	67
16:30	0	48	21	0	1	0	0	0	1	0	0	0	0	0	0	71
16:45	0	36	11	0	0	1	0	1	2	0	0	0	0	0	0	51
17:00	1	30	18	0	0	0	0	0	1	1	0	0	0	0	0	51
Hour Total	1	162	69	0	1	1	0	1	4	1	0	0	0	0	0	240

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	47	16	0	0	0	0	1	0	0	1	0	0	0	0	65
17:30	0	34	14	0	0	0	0	0	1	0	0	0	0	0	0	49
17:45	0	33	11	0	0	1	0	0	0	0	0	0	0	0	0	45
18:00	0	22	12	0	0	0	0	0	0	0	0	0	0	0	0	34
Hour Total	0	136	53	0	0	1	0	1	1	0	1	0	0	0	0	193
18:15	0	24	4	0	0	0	0	0	1	0	0	0	0	0	0	29
18:30	1	25	16	0	0	0	0	1	0	0	0	0	0	0	0	43
18:45	0	14	8	0	0	0	0	0	0	0	0	0	0	0	0	22
19:00	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	1	77	29	0	0	0	0	1	1	0	0	0	0	0	0	109
19:15	0	23	3	0	0	0	0	0	0	1	0	0	0	0	0	27
19:30	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	12
19:45	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	8
20:00	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	45	12	0	0	0	0	0	0	1	0	0	0	0	0	58
20:15	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
20:30	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	10
20:45	0	16	1	0	0	0	0	0	0	0	0	0	0	0	0	17
21:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	36	11	0	0	0	0	0	0	0	0	0	0	0	0	47
21:15	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
21:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
21:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
22:00	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	19	3	0	0	0	0	0	0	0	0	0	0	0	0	22
22:15	0	2	2	0	0	1	0	0	0	0	0	0	0	0	0	5
22:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
22:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	10	7	0	0	1	0	0	0	0	0	0	0	0	0	18
23:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
Hour Total	0	4	2	0	0	1	0	0	0	0	0	0	0	0	0	7
DAY TOTAL	7	1522	611	0	14	18	7	8	29	6	1	0	0	0	0	2223
PERCENTS	0.4%	68.5%	27.5%	0.0%	0.7%	0.8%	0.3%	0.3%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.2% Trucks & Buses 3.7%

AM Times	04:15	07:30	07:30	11:00	07:45	07:45	05:45	07:45	04:45							07:30
AM Peaks	1	161	55	3	2	1	1	4	1							218
PM Times	15:15	15:45	16:15	12:15	14:00	12:15	13:15	12:45	12:15	16:30						16:15
PM Peaks	1	166	69	2	3	2	2	4	1	1						240

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	5	2	0	1	0	0	0	0	0	0	0	0	0	0	8
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Hour Total	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
05:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	3	2	0	0	0	0	0	2	0	0	0	0	0	0	7
05:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
05:45	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
06:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	11	10	0	0	0	0	0	0	0	0	0	0	0	0	21
06:15	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
06:30	0	13	5	0	0	1	0	0	0	0	0	0	0	0	0	19
06:45	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
07:00	0	13	9	0	1	0	0	0	0	0	0	0	0	0	0	23
Hour Total	0	38	21	0	1	1	0	0	0	0	0	0	0	0	0	61
07:15	0	7	8	0	0	1	0	0	0	0	0	0	0	0	0	16
07:30	0	21	11	0	0	0	0	0	0	0	0	0	0	0	0	32
07:45	0	34	21	0	0	1	0	0	0	0	0	0	0	0	0	56
08:00	0	43	11	0	0	0	2	0	0	0	0	0	0	0	0	56
Hour Total	0	105	51	0	0	2	2	0	0	0	0	0	0	0	0	160
08:15	0	37	13	0	0	0	0	0	0	0	0	0	0	0	0	50
08:30	0	41	10	0	2	0	1	0	0	0	0	0	0	0	0	54
08:45	0	35	14	0	0	0	0	0	0	0	0	0	0	0	0	49
09:00	0	29	6	0	0	0	0	0	0	0	0	0	0	0	0	35

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	142	43	0	2	0	1	0	0	0	0	0	0	0	0	188
09:15	0	30	7	0	0	0	0	0	1	0	0	0	0	0	0	38
09:30	0	17	10	0	0	1	0	0	1	0	0	0	0	0	0	29
09:45	0	22	8	0	0	0	0	0	0	0	0	0	0	0	0	30
10:00	0	30	12	0	1	0	0	0	0	0	0	0	0	0	0	43
Hour Total	0	99	37	0	1	1	0	0	2	0	0	0	0	0	0	140
10:15	0	22	8	0	0	0	0	0	0	0	0	0	0	0	0	30
10:30	0	20	6	0	0	0	0	0	1	1	0	0	0	0	0	28
10:45	0	14	12	1	0	0	1	0	0	0	0	0	0	0	0	28
11:00	0	22	5	0	0	2	0	0	1	0	0	0	0	0	0	30
Hour Total	0	78	31	1	0	2	1	0	2	1	0	0	0	0	0	116
11:15	0	27	11	0	0	0	0	0	0	1	0	0	0	0	0	39
11:30	0	16	9	0	0	0	0	0	0	0	0	0	0	0	0	25
11:45	1	29	9	0	0	0	0	0	0	0	0	0	0	0	0	39
12:00	0	20	13	0	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	1	92	42	0	0	0	0	0	0	1	0	0	0	0	0	136
12:15	0	29	12	0	0	1	1	0	0	1	0	0	0	0	0	44
12:30	0	36	19	0	2	0	0	0	1	0	0	0	0	0	0	58
12:45	0	23	9	0	0	0	0	0	0	1	0	0	0	0	0	33
13:00	0	24	11	0	0	0	2	0	0	0	0	0	0	0	0	37
Hour Total	0	112	51	0	2	1	3	0	1	2	0	0	0	0	0	172
13:15	0	26	12	0	0	0	0	0	0	0	0	0	0	0	0	38
13:30	0	19	10	0	0	0	0	0	0	0	0	0	0	0	0	29
13:45	0	31	11	0	0	1	0	0	2	0	0	0	0	0	0	45
14:00	0	19	7	0	1	0	0	0	0	0	0	0	0	0	0	27
Hour Total	0	95	40	0	1	1	0	0	2	0	0	0	0	0	0	139
14:15	0	29	17	0	0	1	0	0	1	0	0	0	0	0	0	48
14:30	0	41	9	0	0	0	0	0	0	0	0	0	0	0	0	50
14:45	0	23	7	0	0	0	0	0	0	0	0	0	0	0	0	30
15:00	0	29	12	0	0	0	0	0	0	0	0	0	0	0	0	41
Hour Total	0	122	45	0	0	1	0	0	1	0	0	0	0	0	0	169
15:15	0	29	15	0	0	0	3	1	0	0	0	0	0	0	0	48
15:30	0	27	20	0	2	0	0	1	0	0	0	0	0	0	0	50
15:45	0	29	16	0	0	0	0	0	0	0	0	0	0	0	0	45
16:00	0	32	16	0	0	0	0	0	0	0	0	1	0	0	0	49
Hour Total	0	117	67	0	2	0	3	2	0	0	0	1	0	0	0	192
16:15	0	39	19	0	0	0	0	0	1	0	0	0	0	0	0	59
16:30	0	36	16	0	0	0	0	0	1	0	0	0	0	0	0	53
16:45	0	35	12	0	0	0	0	0	1	0	0	0	0	0	0	48
17:00	0	30	13	0	0	0	0	0	0	0	0	0	0	0	0	43
Hour Total	0	140	60	0	0	0	0	0	3	0	0	0	0	0	0	203

Station #: Site B-EBI
Site ID: 000000003610
Location: US 460, E of Front St. (EI)
Direction: EAST
Lane: 1

File: Inside.prn
City: 16-132 RS Max
County: 37.09548, -81.81226

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	45	20	0	2	0	0	0	0	0	0	0	0	0	0	67
17:30	0	31	18	0	0	0	0	0	1	0	0	0	0	0	0	50
17:45	0	31	17	0	0	0	0	1	0	0	0	0	0	0	0	49
18:00	0	31	7	0	0	0	0	0	1	0	0	0	0	0	0	39
Hour Total	0	138	62	0	2	0	0	1	2	0	0	0	0	0	0	205
18:15	0	21	15	0	0	0	0	0	0	1	0	0	0	0	0	37
18:30	1	17	7	0	0	0	0	0	0	0	0	0	0	0	0	25
18:45	0	18	9	0	0	0	0	0	1	0	0	0	0	0	0	28
19:00	0	15	6	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	1	71	37	0	0	0	0	0	1	1	0	0	0	0	0	111
19:15	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
19:30	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	14
19:45	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
20:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	41	11	0	0	0	0	0	0	0	0	0	0	0	0	52
20:15	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
20:30	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	21
20:45	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
21:00	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	50	14	0	0	0	0	0	0	0	0	0	0	0	0	64
21:15	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
21:30	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
21:45	1	11	5	0	0	0	0	0	0	0	0	0	0	0	0	17
22:00	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	4
Hour Total	1	31	14	0	1	0	0	0	0	0	0	0	0	0	0	47
22:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
22:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
22:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
23:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
23:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
DAY TOTAL	3	1506	647	1	13	9	10	3	17	6	0	1	0	0	0	2216
PERCENTS	0.2%	68.0%	29.2%	0.1%	0.6%	0.5%	0.4%	0.1%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.2% Trucks & Buses 2.7%

AM Times	11:00	08:00	07:30	10:00	07:45	06:30	07:45	04:00	10:30					07:45
AM Peaks	1	156	56	1	2	2	3	2	2					216
PM Times	17:45	16:30	15:30	12:15	13:30	12:15	14:45	13:30	12:15	15:15				16:30
PM Peaks	1	146	71	2	2	3	2	3	2	1				211

GRAND TOTAL	10	3028	1258	1	27	27	17	11	46	12	1	1	0	0	0	4439
PERCENTS	0.3%	68.3%	28.4%	0.1%	0.6%	0.6%	0.3%	0.2%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	17	6	0	0	0	0	0	0	0	0	0	0	0	0	23
01:15	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	7
01:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	16	3	0	0	0	0	0	1	0	0	0	0	0	0	20
02:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
02:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	16	1	0	0	0	0	0	1	0	0	0	0	0	0	18
03:15	0	2	3	0	0	0	0	0	1	0	0	0	0	0	0	6
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	4
04:00	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	8	3	0	0	0	0	0	4	0	0	0	0	0	0	15
04:15	0	3	2	0	0	0	0	0	0	1	0	0	0	0	0	6
04:30	0	3	4	0	1	0	0	0	0	0	0	0	0	0	0	8
04:45	0	2	4	1	0	1	0	0	0	0	0	0	0	0	0	8
05:00	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	16	14	1	1	1	0	0	0	1	0	0	0	0	0	34
05:15	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
05:30	0	14	7	0	0	2	0	0	0	2	0	0	0	0	0	25
05:45	0	11	5	0	0	0	0	0	0	3	0	0	0	0	0	19
06:00	0	15	9	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	45	23	0	0	2	0	0	0	5	0	0	0	0	0	75
06:15	0	31	16	0	0	1	0	0	1	0	0	0	0	0	0	49
06:30	0	19	27	0	0	1	0	0	1	0	0	0	0	0	0	48
06:45	1	32	27	0	0	2	0	0	0	0	0	0	0	0	0	62
07:00	0	23	16	0	2	0	0	1	1	0	0	0	0	0	0	43
Hour Total	1	105	86	0	2	4	0	1	3	0	0	0	0	0	0	202
07:15	0	24	19	0	2	0	0	0	0	0	0	0	0	0	0	45
07:30	1	56	22	0	0	1	0	0	2	0	0	0	0	0	0	82
07:45	0	77	23	0	0	1	0	0	0	0	0	0	0	0	0	101
08:00	0	83	34	2	1	3	0	0	1	1	0	0	0	0	0	125
Hour Total	1	240	98	2	3	5	0	0	3	1	0	0	0	0	0	353
08:15	0	61	32	0	2	2	1	0	1	0	0	0	0	0	0	99
08:30	0	67	31	0	1	0	1	0	0	0	0	0	0	0	0	100
08:45	0	64	24	0	1	1	0	1	1	0	0	0	0	0	0	92
09:00	0	49	28	0	0	1	1	0	0	0	0	0	0	0	0	79

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	241	115	0	4	4	3	1	2	0	0	0	0	0	0	370
09:15	0	59	19	0	0	3	1	0	0	0	0	0	0	0	0	82
09:30	0	42	21	0	0	0	0	0	0	0	1	0	0	0	0	64
09:45	0	67	14	0	2	0	0	0	3	0	0	0	0	0	0	86
10:00	0	61	29	0	4	2	0	0	1	0	0	0	0	0	0	97
Hour Total	0	229	83	0	6	5	1	0	4	0	1	0	0	0	0	329
10:15	1	56	20	0	0	0	0	0	1	1	0	0	0	0	0	79
10:30	0	64	28	0	0	0	0	3	1	0	0	0	0	0	0	96
10:45	0	94	30	0	1	0	0	0	1	0	0	0	0	0	0	126
11:00	0	79	39	0	1	0	0	1	0	0	0	0	0	0	0	120
Hour Total	1	293	117	0	2	0	0	4	3	1	0	0	0	0	0	421
11:15	0	79	23	0	0	0	0	2	1	0	0	0	0	0	0	105
11:30	0	89	23	0	0	0	0	2	2	0	0	0	0	0	0	116
11:45	0	100	26	0	2	0	0	0	0	0	0	0	0	0	0	128
12:00	0	77	22	0	0	2	0	0	0	0	0	0	0	0	0	101
Hour Total	0	345	94	0	2	2	0	4	3	0	0	0	0	0	0	450
12:15	0	72	30	0	1	0	0	1	0	0	1	0	0	0	0	105
12:30	0	83	29	1	3	2	0	0	1	0	0	0	0	0	0	119
12:45	0	78	19	0	0	0	0	0	0	0	0	0	0	0	0	97
13:00	1	87	36	0	2	0	0	0	0	0	0	0	0	0	0	126
Hour Total	1	320	114	1	6	2	0	1	1	0	1	0	0	0	0	447
13:15	0	109	33	0	2	0	0	1	1	1	0	0	0	0	0	147
13:30	0	97	31	0	0	0	0	0	1	0	0	0	0	0	0	129
13:45	0	86	24	0	1	1	0	0	1	0	1	0	0	0	0	114
14:00	2	88	25	0	2	1	0	1	2	0	0	0	0	0	0	121
Hour Total	2	380	113	0	5	2	0	2	5	1	1	0	0	0	0	511
14:15	0	59	38	0	0	0	0	0	0	0	0	0	0	0	0	97
14:30	0	89	25	0	0	0	0	0	0	0	1	0	0	0	0	115
14:45	0	104	33	0	1	1	0	0	1	0	0	0	0	0	0	140
15:00	0	102	29	0	0	0	0	0	0	0	0	0	0	0	0	131
Hour Total	0	354	125	0	1	1	0	0	1	0	1	0	0	0	0	483
15:15	0	75	30	0	0	0	0	0	0	0	0	0	0	0	0	105
15:30	0	86	25	0	0	0	0	0	0	0	0	1	0	0	0	112
15:45	0	103	38	0	1	1	0	0	2	0	0	0	0	0	0	145
16:00	1	85	31	0	0	0	0	1	0	0	0	0	1	0	0	119
Hour Total	1	349	124	0	1	1	0	1	2	0	0	1	1	0	0	481
16:15	1	93	29	0	0	1	0	0	0	0	0	0	0	0	0	124
16:30	0	90	32	0	0	1	0	1	1	0	0	0	0	0	0	125
16:45	1	109	35	0	0	2	0	0	1	0	0	1	0	0	0	149
17:00	1	124	41	0	1	0	0	2	1	0	0	0	0	0	0	170
Hour Total	3	416	137	0	1	4	0	3	3	0	0	1	0	0	0	568

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	111	27	0	0	0	0	0	0	0	0	0	0	0	0	139
17:30	0	80	28	0	0	0	0	0	0	0	0	0	0	0	0	108
17:45	2	87	23	0	0	0	0	0	0	0	0	0	0	0	0	112
18:00	0	85	26	0	0	0	0	0	0	0	0	0	0	0	0	111
Hour Total	3	363	104	0	0	0	0	0	0	0	0	0	0	0	0	470
18:15	0	64	21	0	0	0	0	0	0	0	0	0	0	0	0	85
18:30	0	76	25	0	0	1	0	0	1	0	0	0	1	0	0	104
18:45	0	68	23	0	0	0	0	0	0	1	0	0	0	0	0	92
19:00	1	55	17	0	0	0	0	0	1	0	0	0	0	0	0	74
Hour Total	1	263	86	0	0	1	0	0	2	1	0	0	1	0	0	355
19:15	0	68	22	0	0	0	0	0	0	0	0	0	0	0	0	90
19:30	0	67	22	0	0	0	0	0	0	0	0	0	0	0	0	89
19:45	1	69	17	0	1	0	0	2	0	0	0	0	0	0	0	90
20:00	0	66	18	0	0	0	0	0	0	0	0	0	0	0	0	84
Hour Total	1	270	79	0	1	0	0	2	0	0	0	0	0	0	0	353
20:15	0	82	12	0	0	0	0	0	1	0	0	0	0	0	0	95
20:30	1	56	10	0	0	0	0	0	1	0	0	0	0	0	0	68
20:45	0	78	11	0	0	0	0	0	0	0	0	0	0	0	0	89
21:00	1	52	19	0	0	0	0	0	1	0	0	0	0	0	0	73
Hour Total	2	268	52	0	0	0	0	0	3	0	0	0	0	0	0	325
21:15	0	66	15	0	0	0	0	0	0	0	0	0	0	0	0	81
21:30	0	52	6	0	0	0	0	0	0	0	0	0	0	0	0	58
21:45	0	38	10	0	0	0	0	0	1	0	0	0	0	0	0	49
22:00	0	24	11	0	0	0	0	0	0	0	0	0	0	0	0	35
Hour Total	0	180	42	0	0	0	0	0	1	0	0	0	0	0	0	223
22:15	0	30	9	0	0	0	0	0	0	0	0	0	0	0	0	39
22:30	0	33	15	0	0	0	0	0	0	0	0	0	0	0	0	48
22:45	1	18	5	0	0	0	0	0	0	0	0	0	0	0	0	24
23:00	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	1	94	33	0	0	0	0	0	0	0	0	0	0	0	0	128
23:15	0	18	7	0	0	0	0	0	1	0	0	0	0	0	0	26
23:30	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	21
23:45	0	10	9	0	0	0	0	0	0	0	0	0	0	0	0	19
24:00	1	10	2	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	1	57	20	0	0	0	0	0	1	0	0	0	0	0	0	79
DAY TOTAL	19	4885	1672	4	35	34	4	19	43	10	4	2	2	0	0	6733
PERCENTS	0.3%	72.6%	24.9%	0.1%	0.6%	0.6%	0.0%	0.2%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.6% Trucks & Buses 2.3%

AM Times	06:45	11:00	08:00	07:15	09:15	07:30	08:15	10:30	09:45	05:00	08:45		11:00
AM Peaks	2	347	121	2	6	7	3	6	6	5	1		469
PM Times	17:00	16:30	16:15	12:15	12:30	16:00	16:15	13:15	12:30	13:45	14:45	15:15	16:30
PM Peaks	4	434	137	1	7	4	3	5	1	2	1	1	583

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
00:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	22	5	0	0	0	0	0	0	0	0	0	0	0	0	27
01:15	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	5
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	13	3	0	1	0	0	0	0	0	0	0	0	0	0	17
02:15	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3
02:30	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	6	3	0	0	0	0	0	2	0	0	0	0	0	0	11
03:15	0	2	1	0	1	0	0	1	0	0	0	0	0	0	0	5
03:30	0	0	1	1	0	0	0	0	3	0	0	0	0	0	0	5
03:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	7	2	1	1	0	0	1	4	0	0	0	0	0	0	16
04:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
04:30	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
04:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
05:00	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	24	9	0	0	0	0	0	0	0	0	0	0	0	0	33
05:15	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	14
05:30	0	10	5	0	0	0	0	0	1	2	0	0	0	0	0	18
05:45	0	23	6	0	1	0	2	0	2	1	0	0	0	0	0	35
06:00	1	12	9	0	0	1	0	0	0	2	0	0	0	0	0	25
Hour Total	1	55	24	0	1	1	2	0	3	5	0	0	0	0	0	92
06:15	0	24	18	0	0	1	0	0	1	0	0	0	0	0	0	44
06:30	0	25	24	0	2	1	0	0	0	0	0	0	0	0	0	52
06:45	0	31	19	0	0	2	0	0	0	0	0	0	0	0	0	52
07:00	0	25	25	0	2	0	0	0	0	0	0	0	0	0	0	52
Hour Total	0	105	86	0	4	4	0	0	1	0	0	0	0	0	0	200
07:15	1	20	18	0	2	1	0	0	0	0	0	0	0	0	0	42
07:30	0	49	17	0	0	0	0	2	1	1	0	0	0	0	0	70
07:45	2	93	37	0	0	2	0	0	0	0	0	0	0	0	0	134
08:00	0	76	31	0	1	0	0	0	0	0	2	0	0	0	0	110
Hour Total	3	238	103	0	3	3	0	2	1	1	2	0	0	0	0	356
08:15	0	68	35	0	1	4	1	0	0	1	1	0	0	0	0	111
08:30	0	68	31	0	2	2	0	2	0	0	0	0	0	0	0	105
08:45	0	49	38	0	3	1	1	1	1	0	0	0	0	0	0	94
09:00	1	59	19	0	0	0	0	0	1	0	0	0	0	0	0	80

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	244	123	0	6	7	2	3	2	1	1	0	0	0	0	390
09:15	0	65	30	0	2	1	0	1	1	0	0	0	0	0	0	100
09:30	0	57	29	0	0	0	0	0	1	0	0	0	0	0	0	87
09:45	0	50	23	0	1	0	0	0	1	0	0	0	0	0	0	75
10:00	1	67	17	0	0	0	0	1	3	0	0	0	0	0	0	89
Hour Total	1	239	99	0	3	1	0	2	6	0	0	0	0	0	0	351
10:15	0	58	15	0	1	0	0	0	0	0	0	0	0	0	0	74
10:30	0	57	22	0	0	1	0	0	2	0	0	0	0	0	0	82
10:45	0	64	26	0	0	0	0	0	1	0	0	0	0	0	0	91
11:00	0	70	34	0	1	1	0	0	0	0	0	0	0	0	0	106
Hour Total	0	249	97	0	2	2	0	0	3	0	0	0	0	0	0	353
11:15	0	76	30	0	0	0	0	2	0	0	0	0	0	0	0	108
11:30	0	79	24	0	3	0	1	0	2	0	0	0	0	0	0	109
11:45	0	94	24	0	1	0	0	0	1	0	0	0	0	0	0	120
12:00	0	78	25	0	0	0	0	1	1	0	0	0	0	0	0	105
Hour Total	0	327	103	0	4	0	1	3	4	0	0	0	0	0	0	442
12:15	0	98	28	0	1	0	0	0	1	0	0	1	0	0	0	129
12:30	0	82	29	0	0	1	0	1	0	0	0	0	0	0	0	113
12:45	1	84	31	0	0	2	0	1	1	0	0	0	0	0	0	120
13:00	0	97	27	0	0	0	0	1	0	0	0	0	0	0	0	125
Hour Total	1	361	115	0	1	3	0	3	2	0	0	1	0	0	0	487
13:15	0	86	18	0	1	1	0	1	1	1	0	0	0	0	0	109
13:30	1	81	33	0	2	0	0	1	1	1	0	0	0	0	0	120
13:45	0	77	44	0	1	0	0	1	2	0	0	0	0	0	0	125
14:00	0	79	25	0	0	0	0	0	0	0	0	0	0	0	0	104
Hour Total	1	323	120	0	4	1	0	3	4	2	0	0	0	0	0	458
14:15	0	82	24	1	0	0	0	0	2	0	0	0	0	0	0	109
14:30	0	83	28	0	2	1	0	0	1	0	0	0	0	0	0	115
14:45	0	120	31	0	0	0	0	0	0	0	0	0	0	0	0	151
15:00	1	87	22	0	1	0	0	0	0	0	0	0	0	0	0	111
Hour Total	1	372	105	1	3	1	0	0	3	0	0	0	0	0	0	486
15:15	0	87	23	0	1	0	1	0	1	0	0	0	0	0	0	113
15:30	0	105	28	0	1	0	0	0	0	1	0	0	0	0	0	135
15:45	0	115	23	0	2	0	0	0	1	0	0	0	0	0	0	141
16:00	0	114	23	0	2	0	0	0	1	0	0	0	0	0	0	140
Hour Total	0	421	97	0	6	0	1	0	3	1	0	0	0	0	0	529
16:15	0	97	28	0	1	0	0	0	2	0	0	0	0	0	0	128
16:30	1	87	35	0	1	0	0	0	1	0	0	0	0	0	0	125
16:45	0	114	42	0	0	2	0	0	1	0	0	0	0	0	0	159
17:00	0	91	29	0	0	0	0	0	1	0	0	0	0	0	0	121
Hour Total	1	389	134	0	2	2	0	0	5	0	0	0	0	0	0	533

Station #: Site C-WB
Site ID: 000000003556
Location: Front St. E of US 460, E of Bridge
Direction: WEST
Lane: 1

File: Bridge_WB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	99	36	0	0	0	0	0	0	0	0	0	0	0	0	136
17:30	0	113	28	0	1	0	0	0	0	0	0	0	0	0	0	142
17:45	0	91	31	0	1	0	0	0	1	0	0	0	1	0	0	125
18:00	0	93	29	0	0	0	0	0	0	0	0	0	0	0	0	122
Hour Total	1	396	124	0	2	0	0	0	1	0	0	0	1	0	0	525
18:15	0	84	28	0	0	1	0	0	0	0	0	0	0	0	0	113
18:30	0	57	22	0	0	0	0	0	0	0	0	0	0	0	0	79
18:45	1	90	17	0	0	0	0	0	0	0	0	0	0	0	0	108
19:00	0	85	24	0	0	0	0	0	1	0	0	0	0	0	0	110
Hour Total	1	316	91	0	0	1	0	0	1	0	0	0	0	0	0	410
19:15	0	77	16	0	0	0	0	0	1	0	0	0	0	0	0	94
19:30	0	53	21	0	0	0	0	0	0	0	0	0	0	0	0	74
19:45	1	62	21	0	0	0	0	0	0	0	0	0	0	0	0	84
20:00	1	66	16	0	0	0	0	0	0	0	0	0	0	0	0	83
Hour Total	2	258	74	0	0	0	0	0	1	0	0	0	0	0	0	335
20:15	0	44	11	0	1	0	0	0	0	0	0	0	0	0	0	56
20:30	1	54	17	0	1	0	0	0	0	0	0	0	0	0	0	73
20:45	0	48	8	0	1	0	0	0	0	0	0	0	0	0	0	57
21:00	0	41	9	0	1	0	0	0	1	0	0	0	0	0	0	52
Hour Total	1	187	45	0	4	0	0	0	1	0	0	0	0	0	0	238
21:15	0	46	15	0	0	0	0	0	0	0	0	0	0	0	0	61
21:30	0	43	14	0	0	0	0	0	0	0	0	0	0	0	0	57
21:45	1	31	11	0	1	0	0	1	1	0	0	0	0	0	0	46
22:00	0	42	5	0	0	0	0	0	0	0	0	0	0	0	0	47
Hour Total	1	162	45	0	1	0	0	1	1	0	0	0	0	0	0	211
22:15	0	26	8	0	0	0	0	0	0	1	0	0	0	0	0	35
22:30	0	32	13	0	0	0	0	0	0	0	0	0	0	0	0	45
22:45	0	29	6	0	0	0	0	0	0	0	0	0	0	0	0	35
23:00	1	20	9	0	0	0	0	0	0	0	0	0	0	0	0	30
Hour Total	1	107	36	0	0	0	0	0	0	1	0	0	0	0	0	145
23:15	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	16
23:30	0	13	5	0	0	0	0	0	0	0	0	0	0	0	0	18
23:45	0	11	7	0	0	0	0	0	0	0	0	0	0	0	0	18
24:00	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	44	23	0	0	0	0	0	0	0	0	0	0	0	0	67
DAY TOTAL	17	4865	1666	2	48	26	6	18	48	11	3	1	1	0	0	6712
PERCENTS	0.3%	72.5%	24.9%	0.1%	0.8%	0.4%	0.0%	0.2%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.5% Trucks & Buses 2.4%

AM Times	07:00	11:15	08:00	02:45	08:00	07:45	05:00	08:30	09:15	05:15	07:30		07:45
AM Peaks	3	327	135	1	7	8	2	4	6	5	3		460
PM Times	19:45	15:30	16:30	13:30	15:15	12:30	14:30	12:30	13:30	12:45	12:15	17:00	16:45
PM Peaks	3	431	142	1	6	4	1	4	5	2	1	1	558

GRAND TOTAL	36	9750	3338	6	83	60	10	37	91	21	7	3	3	0	0	13445
PERCENTS	0.3%	72.6%	24.9%	0.1%	0.7%	0.5%	0.0%	0.2%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
00:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	20	7	0	0	0	0	0	0	0	0	0	0	0	0	27
01:15	0	6	1	0	0	0	0	0	1	0	0	0	0	0	0	8
01:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	11	4	0	0	0	0	0	1	0	0	0	0	0	0	16
02:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	13	3	0	0	0	0	0	1	0	0	0	0	0	0	17
03:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
03:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
04:00	0	4	1	0	0	0	0	0	1	0	0	0	1	0	0	7
Hour Total	0	8	3	0	1	0	0	0	2	0	0	0	1	0	0	15
04:15	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	7
04:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:45	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	12	8	1	0	1	0	0	0	0	0	0	0	0	0	22
05:15	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
05:30	0	7	8	0	0	1	0	0	0	2	0	0	0	0	0	18
05:45	0	16	10	0	1	0	0	0	1	0	0	0	0	0	0	28
06:00	0	12	10	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	0	46	30	0	1	1	0	0	1	2	0	0	0	0	0	81
06:15	0	18	16	0	0	0	0	0	0	0	0	0	0	0	0	34
06:30	0	15	14	0	0	0	0	0	0	0	0	0	0	0	0	29
06:45	1	20	18	0	0	0	0	0	0	1	0	0	0	0	0	40
07:00	0	23	20	0	4	0	0	0	0	0	0	0	0	0	0	47
Hour Total	1	76	68	0	4	0	0	0	0	1	0	0	0	0	0	150
07:15	0	28	20	0	0	0	0	0	0	0	0	0	0	0	0	48
07:30	0	48	17	0	1	0	0	0	0	0	0	0	0	0	0	66
07:45	0	46	21	1	1	4	0	0	1	0	0	0	0	0	0	74
08:00	1	69	34	0	7	0	1	1	0	0	0	0	0	0	0	113
Hour Total	1	191	92	1	9	4	1	1	1	0	0	0	0	0	0	301
08:15	0	57	29	0	2	1	2	0	0	0	0	0	0	0	0	91
08:30	0	72	26	0	0	0	0	0	0	0	0	0	0	0	0	98
08:45	0	74	32	0	0	2	0	1	0	0	0	0	0	0	0	109
09:00	0	74	27	0	2	0	0	0	0	0	0	0	0	0	0	103

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	277	114	0	4	3	2	1	0	0	0	0	0	0	0	401
09:15	1	56	18	0	1	0	1	1	0	0	0	0	0	0	0	78
09:30	0	60	17	0	1	0	0	0	3	0	0	0	0	0	0	81
09:45	0	59	35	0	2	0	0	0	1	1	0	0	0	0	0	98
10:00	0	59	23	0	1	1	0	0	2	0	0	1	0	0	0	87
Hour Total	1	234	93	0	5	1	1	1	6	1	0	1	0	0	0	344
10:15	0	63	26	0	0	0	0	0	0	0	0	0	0	0	0	89
10:30	1	55	28	0	1	0	0	0	1	0	0	0	0	0	0	86
10:45	0	72	36	0	0	0	0	2	0	0	0	0	0	0	0	110
11:00	0	65	29	0	2	1	0	1	2	0	0	1	0	0	0	101
Hour Total	1	255	119	0	3	1	0	3	3	0	0	1	0	0	0	386
11:15	0	56	22	0	2	0	1	0	0	0	0	0	0	0	0	81
11:30	0	74	24	0	0	0	0	0	1	0	0	0	0	0	0	99
11:45	0	87	34	0	1	0	0	0	0	0	0	0	0	0	0	122
12:00	0	66	27	0	1	2	0	0	0	0	0	0	0	0	0	96
Hour Total	0	283	107	0	4	2	1	0	1	0	0	0	0	0	0	398
12:15	0	81	28	0	1	1	0	0	2	0	0	0	0	0	0	113
12:30	0	91	26	0	0	0	0	0	0	0	1	0	0	0	0	118
12:45	0	89	34	0	0	1	0	1	1	0	0	0	0	0	0	126
13:00	2	83	31	0	1	0	2	0	0	0	0	0	0	0	0	119
Hour Total	2	344	119	0	2	2	2	1	3	0	1	0	0	0	0	476
13:15	0	71	32	0	1	1	0	0	0	0	0	0	0	0	0	105
13:30	0	78	32	0	0	1	0	0	0	0	0	0	0	0	0	111
13:45	1	63	24	0	1	0	0	0	0	0	0	0	0	0	0	89
14:00	0	67	29	0	2	1	0	0	0	0	0	0	0	0	0	99
Hour Total	1	279	117	0	4	3	0	0	0	0	0	0	0	0	0	404
14:15	0	78	20	0	1	1	0	0	0	0	0	0	0	0	0	100
14:30	0	77	18	0	0	1	0	0	2	0	0	0	1	0	0	99
14:45	0	76	26	0	1	2	0	2	0	0	0	0	0	0	0	107
15:00	1	60	25	0	2	0	0	0	2	0	0	0	0	0	0	90
Hour Total	1	291	89	0	4	4	0	2	4	0	0	0	1	0	0	396
15:15	0	68	20	0	1	2	0	0	1	0	0	0	0	0	0	92
15:30	0	74	28	0	1	1	0	0	1	0	0	0	0	0	0	105
15:45	1	76	25	0	0	0	0	0	0	0	0	0	1	0	0	103
16:00	0	85	41	0	1	1	0	1	0	0	0	0	0	0	0	129
Hour Total	1	303	114	0	3	4	0	1	2	0	0	0	1	0	0	429
16:15	0	67	30	0	1	1	0	0	0	0	0	0	0	0	0	99
16:30	0	92	37	0	1	0	0	1	1	1	0	1	0	0	0	134
16:45	0	82	25	0	1	0	0	0	1	0	0	0	0	0	0	109
17:00	0	105	33	0	1	0	0	0	1	0	0	0	0	0	0	140
Hour Total	0	346	125	0	4	1	0	1	3	1	0	1	0	0	0	482

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Tue 5/10/2016

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	105	41	0	1	1	0	0	0	0	0	0	0	0	0	149
17:30	0	83	28	0	0	0	0	0	2	0	1	0	0	0	0	114
17:45	2	99	27	0	0	0	0	0	0	0	0	0	0	0	0	128
18:00	0	81	29	0	0	1	0	0	0	0	0	0	0	0	0	111
Hour Total	3	368	125	0	1	2	0	0	2	0	1	0	0	0	0	502
18:15	0	70	23	0	0	0	0	0	0	0	0	0	2	0	0	95
18:30	0	74	30	0	0	0	0	0	1	1	0	0	0	0	0	106
18:45	0	71	34	0	0	0	0	0	0	0	0	0	0	0	0	105
19:00	0	69	18	0	0	0	0	0	0	0	0	0	1	0	0	88
Hour Total	0	284	105	0	0	0	0	0	1	1	0	0	3	0	0	394
19:15	0	65	21	0	0	0	0	0	0	0	0	0	0	0	0	86
19:30	0	53	15	0	0	0	0	0	0	0	0	0	0	0	0	68
19:45	1	44	15	0	0	0	0	0	0	0	0	0	0	0	0	60
20:00	0	49	10	0	0	1	0	0	0	0	0	0	0	0	0	60
Hour Total	1	211	61	0	0	1	0	0	0	0	0	0	0	0	0	274
20:15	1	40	13	0	0	0	0	0	1	0	0	0	0	0	0	55
20:30	0	57	11	0	0	0	0	0	0	0	0	0	0	0	0	68
20:45	0	36	13	0	0	0	0	0	0	0	0	0	0	0	0	49
21:00	0	44	15	0	0	0	0	0	0	0	0	0	0	0	0	59
Hour Total	1	177	52	0	0	0	0	0	1	0	0	0	0	0	0	231
21:15	1	46	10	0	1	0	0	0	1	0	0	0	0	0	0	59
21:30	0	32	8	0	1	0	0	0	0	0	0	0	0	0	0	41
21:45	0	18	12	0	0	0	0	0	0	0	0	0	0	0	0	30
22:00	0	18	6	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	1	114	36	0	2	0	0	0	1	0	0	0	0	0	0	154
22:15	0	19	13	0	0	0	0	1	0	0	0	0	0	0	0	33
22:30	0	26	9	0	0	0	0	0	0	0	0	0	0	0	0	35
22:45	0	12	3	0	0	0	0	0	1	0	0	0	0	0	0	16
23:00	0	18	7	0	0	0	0	0	1	0	0	0	0	0	0	26
Hour Total	0	75	32	0	0	0	0	1	2	0	0	0	0	0	0	110
23:15	0	25	3	0	0	0	0	0	0	0	0	0	0	0	0	28
23:30	0	16	6	0	1	0	0	0	0	0	0	0	0	0	0	23
23:45	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	54	13	0	1	0	0	0	0	0	0	0	0	0	0	68
DAY TOTAL	15	4272	1636	2	52	30	7	12	35	6	2	3	6	0	0	6078
PERCENTS	0.3%	70.3%	27.0%	0.1%	0.9%	0.5%	0.2%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.4% Trucks & Buses 2.5%

AM Times	06:00	11:15	08:00	03:30	07:30	07:30	07:30	10:15	09:15	04:45		09:15	03:15			08:00
AM Peaks	1	283	121	1	11	5	3	3	6	2		1	1			411
PM Times	13:00	17:00	16:30		14:45	14:00	12:15	14:00	14:30	15:45	12:15	15:45	18:15			16:30
PM Peaks	3	392	136		5	5	2	2	5	1	1	1	3			532

Peggy Malone & Associates
CLASSIFICATION SUMMARY
Wed 5/11/2016

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
00:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	25	7	0	0	0	0	0	0	0	0	0	0	0	0	32
01:15	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	5
01:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	3
Hour Total	0	7	6	0	1	0	0	1	1	0	0	0	0	0	0	16
02:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	8	2	0	0	0	0	0	1	0	0	0	0	0	0	11
03:15	0	3	3	1	1	0	0	0	2	0	0	0	0	0	0	10
03:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	6	4	1	1	0	0	0	5	0	0	0	0	0	0	17
04:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
05:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	24
05:15	0	2	3	0	0	0	0	0	1	1	0	0	0	0	0	7
05:30	0	11	4	0	0	2	0	0	0	2	0	0	0	0	0	19
05:45	0	14	8	0	0	0	0	0	0	1	0	0	0	0	0	23
06:00	0	21	17	0	0	0	0	0	0	0	0	0	0	0	0	38
Hour Total	0	48	32	0	0	2	0	0	1	4	0	0	0	0	0	87
06:15	0	16	16	1	1	1	0	0	0	0	0	0	0	0	0	35
06:30	0	27	15	0	0	0	0	0	0	0	0	0	0	0	0	42
06:45	0	21	12	0	0	0	0	0	0	0	0	0	0	0	0	33
07:00	0	27	20	0	0	0	0	0	0	0	0	0	0	0	0	47
Hour Total	0	91	63	1	1	1	0	0	0	0	0	0	0	0	0	157
07:15	0	29	21	0	2	0	0	1	0	0	0	0	0	0	0	53
07:30	0	38	16	0	5	0	0	0	0	0	0	0	0	0	0	59
07:45	0	55	20	0	4	2	0	1	0	0	1	0	0	0	0	83
08:00	1	72	44	1	1	0	0	1	1	1	0	0	0	0	0	122
Hour Total	1	194	101	1	12	2	0	3	1	1	1	0	0	0	0	317
08:15	0	51	29	0	1	2	0	1	0	0	1	0	0	0	0	85
08:30	0	61	33	0	2	1	0	0	2	0	0	0	0	0	0	99
08:45	0	71	28	0	2	0	0	0	0	0	0	0	0	0	0	101
09:00	0	59	30	0	0	0	0	0	1	0	0	0	0	0	0	90

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	242	120	0	5	3	0	1	3	0	1	0	0	0	0	375
09:15	0	59	37	0	1	1	0	2	0	0	0	0	0	0	0	100
09:30	0	62	26	0	0	0	0	0	0	0	0	0	1	0	0	89
09:45	0	63	22	0	1	0	0	1	0	0	0	0	0	0	0	87
10:00	0	78	26	0	1	0	0	0	0	0	0	0	1	0	0	106
Hour Total	0	262	111	0	3	1	0	3	0	0	0	0	2	0	0	382
10:15	1	48	25	0	1	0	0	0	0	0	0	0	0	0	0	75
10:30	0	68	20	0	1	0	0	0	0	0	0	0	0	0	0	89
10:45	0	61	27	0	0	0	0	0	1	0	0	0	0	0	0	89
11:00	0	53	37	0	0	0	0	0	0	0	0	1	0	0	0	91
Hour Total	1	230	109	0	2	0	0	0	1	0	0	1	0	0	0	344
11:15	0	82	14	0	3	0	1	2	0	0	0	0	0	0	0	102
11:30	0	66	36	1	0	0	0	0	0	0	0	0	0	0	0	103
11:45	0	71	27	0	1	0	0	1	0	0	0	0	0	0	0	100
12:00	0	73	37	0	1	0	0	0	0	0	0	0	0	0	0	111
Hour Total	0	292	114	1	5	0	1	3	0	0	0	0	0	0	0	416
12:15	0	101	27	0	0	1	0	0	1	0	0	0	0	0	0	130
12:30	0	90	33	0	0	0	0	0	0	0	0	0	0	0	0	123
12:45	0	79	25	0	0	0	0	0	2	0	0	0	1	0	0	107
13:00	0	92	37	0	1	1	0	0	0	0	0	0	1	0	0	132
Hour Total	0	362	122	0	1	2	0	0	3	0	0	0	2	0	0	492
13:15	0	64	25	0	1	0	0	0	2	0	0	1	0	0	0	93
13:30	0	61	36	0	1	0	0	1	2	0	0	0	0	0	0	101
13:45	0	69	24	0	2	0	0	0	0	0	0	0	0	0	0	95
14:00	0	73	21	0	0	0	0	0	0	0	0	0	0	0	0	94
Hour Total	0	267	106	0	4	0	0	1	4	0	0	1	0	0	0	383
14:15	0	80	26	0	0	1	0	0	0	0	0	0	0	0	0	107
14:30	0	73	31	0	0	0	0	0	0	1	0	0	1	0	0	106
14:45	0	82	28	0	2	1	0	0	0	1	0	1	0	0	0	115
15:00	0	89	22	0	4	1	0	1	0	1	0	1	0	0	0	119
Hour Total	0	324	107	0	6	3	0	1	0	3	0	2	1	0	0	447
15:15	0	69	40	0	1	0	1	0	1	2	0	0	0	0	0	114
15:30	0	77	32	0	1	0	0	0	1	0	0	0	0	0	0	111
15:45	0	83	30	1	1	0	0	0	0	0	0	0	0	0	0	115
16:00	0	81	29	0	3	0	0	1	0	1	0	0	0	0	0	115
Hour Total	0	310	131	1	6	0	1	1	2	3	0	0	0	0	0	455
16:15	1	93	36	1	1	1	0	0	1	0	0	0	0	0	0	134
16:30	0	88	38	0	0	0	0	0	0	0	0	0	0	0	0	126
16:45	0	76	29	0	0	0	0	0	2	0	0	0	0	0	0	107
17:00	0	92	27	0	2	0	0	0	0	0	0	0	0	0	0	121
Hour Total	1	349	130	1	3	1	0	0	3	0	0	0	0	0	0	488

Station #: Site C-EB
Site ID: 000000009374
Location: Front St. E of US 460, E of Bridge
Direction: EAST
Lane: 1

File: Bridge_EB.prn
City: 16-132 RS Min
County: 37.09401, -81.81203

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	105	27	0	1	0	0	1	0	0	0	0	0	0	0	134
17:30	0	73	34	0	2	1	0	0	0	0	0	0	0	0	0	110
17:45	0	82	31	0	0	0	0	0	0	0	1	0	0	0	0	114
18:00	0	75	28	0	1	1	0	0	0	0	0	0	0	0	0	105
Hour Total	0	335	120	0	4	2	0	1	0	0	1	0	0	0	0	463
18:15	0	57	26	0	0	1	0	0	0	0	0	0	0	0	0	84
18:30	0	58	21	0	0	0	0	0	0	0	0	0	0	0	0	79
18:45	0	72	19	0	0	0	0	1	0	0	0	0	0	0	0	92
19:00	0	52	21	0	0	0	0	0	2	0	0	0	0	0	0	75
Hour Total	0	239	87	0	0	1	0	1	2	0	0	0	0	0	0	330
19:15	0	65	17	0	0	0	0	0	0	0	0	0	0	0	0	82
19:30	0	71	16	0	0	0	0	0	0	0	0	0	0	0	0	87
19:45	0	40	20	0	0	0	0	0	0	0	0	0	0	0	0	60
20:00	1	44	16	0	1	0	0	0	0	0	0	0	0	0	0	62
Hour Total	1	220	69	0	1	0	0	0	0	0	0	0	0	0	0	291
20:15	1	53	17	0	0	0	0	0	0	0	0	0	0	0	0	71
20:30	0	45	10	0	0	0	0	1	1	0	0	0	0	0	0	57
20:45	0	59	10	0	0	0	0	0	1	0	0	0	0	0	0	70
21:00	0	43	17	0	1	0	0	0	0	0	0	0	0	0	0	61
Hour Total	1	200	54	0	1	0	0	1	2	0	0	0	0	0	0	259
21:15	0	40	10	0	0	0	0	0	0	0	0	0	0	0	0	50
21:30	0	52	9	0	0	0	0	0	0	0	0	0	0	0	0	61
21:45	1	31	15	1	0	0	0	0	0	1	0	1	0	0	0	50
22:00	0	21	6	0	0	0	0	0	0	0	0	0	0	0	0	27
Hour Total	1	144	40	1	0	0	0	0	0	1	0	1	0	0	0	188
22:15	0	26	6	0	0	0	0	0	0	0	0	0	0	0	0	32
22:30	1	13	11	0	0	0	0	0	0	0	0	0	0	0	0	25
22:45	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	20
23:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	1	68	26	0	0	0	0	0	0	0	0	0	0	0	0	95
23:15	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	17
23:30	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	14
23:45	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
24:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	43	15	0	0	0	0	0	0	0	0	0	0	0	0	58
DAY TOTAL	7	4282	1684	7	56	18	2	17	29	12	3	5	5	0	0	6127
PERCENTS	0.2%	69.9%	27.5%	0.2%	1.0%	0.3%	0.1%	0.3%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.4% Trucks & Buses 2.5%

AM Times	07:15	11:15	08:00	02:30	07:15	07:45	10:30	07:15	03:15	05:00	07:30	10:15	09:15	11:15
AM Peaks	1	292	134	1	12	5	1	3	5	4	2	1	2	416
PM Times	19:30	12:15	15:45	15:30	14:45	14:15	14:30	12:45	12:45	14:30	17:00	14:15	12:15	12:15
PM Peaks	2	362	133	2	8	3	1	1	6	5	1	2	2	492

GRAND TOTAL	22	3320	108	9	64	5	11	0						
	8554	9	48	29	18	8	0	12205						
PERCENTS	0.2%	70.1%	27.3%	0.1%	0.9%	0.4%	0.1%	0.3%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

APPENDIX A-3: PEAK HOUR SUMMARY

US 460 Corridor Improvement Study

Comparison of Individual Intersection and Arterial Peak Hours to Overall Study Area Peak Hour

			AM				PM			
			Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H
ID	Description	Count Date	Observed Peak Hour (Start)	Volume Observed in Column A	Volume from 7:45 AM-8:45 AM	% of Column C to Column B	Observed Peak Hour (Start)	Volume Observed in Column E	Volume from 4:15 PM-5:15 PM	% of Column G to Column F
INTERSECTIONS										
1	US 460 at Route 67	5/10/2016	07:45 AM	1,050	1,050	100.0%	04:45 PM	1,222	1,206	98.7%
2	US 460 at Acme Road	5/10/2016	07:45 AM	1,058	1,058	100.0%	04:45 PM	1,295	1,274	98.4%
3	US 460 at Clearview Road	5/10/2016	07:45 AM	1,063	1,063	100.0%	04:45 PM	1,288	1,265	98.2%
4	US 460 at Baker Hollow Road	5/10/2016	07:45 AM	1,075	1,075	100.0%	04:45 PM	1,287	1,282	99.6%
5	US 460 at Patteson Street	5/10/2016	07:45 AM	1,076	1,076	100.0%	04:15 PM	1,282	1,282	100.0%
6	US 460 at Hillcreek Road	5/10/2016	07:45 AM	1,102	1,102	100.0%	04:45 PM	1,341	1,330	99.2%
7	US 460 at Clinch Valley Medical Center Exit	5/10/2016	07:45 AM	1,154	1,154	100.0%	04:45 PM	1,546	1,535	99.3%
8	US 460 at Clinch Valley Medical Center Entrance	5/11/2016	07:30 AM	1,208	1,202	99.5%	04:15 PM	1,328	1,328	100.0%
9	US 460 at Lake Park Drive	5/11/2016	07:45 AM	1,313	1,313	100.0%	04:15 PM	1,639	1,639	100.0%
10	US 460 at Front Street	5/11/2016	07:30 AM	1,493	1,464	98.1%	04:15 PM	1,771	1,771	100.0%
11	Front Street at 2nd Street/Kents Ridge Road	5/11/2016	07:30 AM	1,009	1,002	99.3%	04:15 PM	1,442	1,442	100.0%
12	Front Street at Rockbridge Avenue	5/11/2016	07:45 AM	481	481	100.0%	04:45 PM	611	582	95.3%
	INTERSECTION TOTALS			*13,082*	*13,040*	*99.7%*		*16,052*	*15,936*	*99.3%*
ARTERIALS										
A	US 460 (west of Route 67)	5/10/2016 - 5/11/2016	7:45 AM	580	580	100.0%	4:00 PM	703	687	97.7%
B	US 460 (east of Front Street)	5/10/2016 - 5/11/2016	7:30 AM	897	843	94.0%	4:15 PM	933	933	100.0%
C	Front Street (east of US 460)	5/10/2016 - 5/11/2016	7:45 AM	827	827	100.0%	4:15 PM	1,072	1,072	100.0%
	ARTERIAL TOTALS			*2,304*	*2,250*	*97.7%*		*2,708*	*2,692*	*99.4%*
	COMBINED (INTERSECTION & ARTERIAL) TOTALS			*15,386*	*15,290*	*99.4%*		*18,760*	*18,628*	*99.3%*

APPENDIX A-4: PEAK HOUR FACTOR & HEAVY VEHICLE PERCENTAGE SUMMARY

US 460 Corridor Improvement Study

Peak Hour Factor and Heavy Vehicle Percentage Summary

ID	Description	Peak	Intersection Peak Hour Factor	Heavy Vehicle Percentage (By Movement)											
				Southbound			Westbound			Northbound			Eastbound		
				L	T	R	L	T	R	L	T	R	L	T	R
1	US 460 at Route 67	AM	0.88	--	--	--	5%	9%	--	27%	--	3%	--	6%	0%
		PM	0.93	--	--	--	2%	3%	--	0%	--	4%	--	6%	0%
2	US 460 at Acme Road	AM	0.90	0%	--	7%	--	7%	17%	--	--	--	0%	5%	--
		PM	0.93	3%	--	0%	--	3%	0%	--	--	--	0%	5%	--
3	US 460 at Clearview Road	AM	0.88	0%	--	0%	--	6%	0%	--	--	--	0%	5%	--
		PM	0.91	0%	--	0%	--	2%	0%	--	--	--	50%	5%	--
4	US 460 at Baker Hollow Road	AM	0.89	0%	--	0%	--	6%	0%	--	--	--	0%	5%	--
		PM	0.92	0%	--	0%	--	3%	0%	--	--	--	0%	5%	--
5	US 460 at Patteson Street	AM	0.89	0%	--	0%	--	7%	33%	--	--	--	25%	5%	--
		PM	0.93	0%	--	11%	--	2%	0%	--	--	--	17%	5%	--
6	US 460 at Hillcreek Road	AM	0.89	0%	--	0%	--	6%	0%	--	--	--	0%	5%	--
		PM	0.93	4%	--	0%	--	2%	4%	--	--	--	0%	5%	--
7	US 460 at Clinch Valley Medical Center Exit	AM	0.92	4%	0%	9%	15%	6%	--	0%	--	10%	--	5%	0%
		PM	0.94	3%	0%	2%	0%	3%	--	0%	--	3%	--	5%	3%
8	US 460 at Clinch Valley Medical Center Entrance	AM	0.92	--	--	--	--	7%	3%	--	--	--	0%	5%	--
		PM	0.92	--	--	--	--	2%	6%	--	--	--	0%	2%	--
9	US 460 at Lake Park Drive	AM	0.94	0%	0%	14%	4%	6%	12%	0%	0%	3%	0%	5%	100%
		PM	0.91	0%	0%	10%	2%	3%	0%	20%	0%	1%	0%	3%	0%
10	US 460 at Front Street	AM	0.89	--	--	--	9%	7%	--	5%	--	8%	--	8%	3%
		PM	0.89	--	--	--	4%	4%	--	1%	--	3%	--	4%	1%
11	Front Street at 2nd Street/Kents Ridge Road	AM	0.92	0%	11%	4%	--	--	--	--	--	5%	--	2%	4%
		PM	0.94	0%	1%	1%	--	--	--	--	--	1%	--	2%	2%
12	Front Street at Rockbridge Avenue	AM	0.89	--	--	--	--	--	--	--	--	--	6%	2%	--
		PM	0.93	--	--	--	--	--	--	--	--	--	0%	2%	--

APPENDIX A-5: VOLUME BALANCING SUMMARY

VOLUME BALANCING SUMMARY

Methodology

Turning movement counts used in the US 460 Corridor Improvement Study were collected on Tuesday, May 10, 2016 and Wednesday, May 11, 2016. The peak hour traffic volumes were balanced to account for variations between the study area intersections.

The methodology for balancing the peak hour traffic volumes involved an iterative process of adjusting intersection volumes until the volumes were within a reasonable tolerance. The goals of the volume balancing are highlighted below:

- Keep the volume change for all movements within ±10%.
- Prioritize volume balancing along US 460. Adjust side street volumes if needed.
- If significant driveways are present between intersections, maintain volume imbalance. Driveways were considered significant if the volume imbalance between adjacent intersections was greater than 10% of the total volume and adjacent intersections were counted on the same day.

Summary

Traffic volumes were balanced between all study area intersections except for the following locations where volume imbalances were maintained due to the presence of significant driveways:

- Westbound US 460 between Clearview Road and Acme Road
  - A right-in, right-out driveway is present on westbound US 460 between Clearview Road and Acme Road that provides access to a gas station, US Post Office, and small restaurant.
- Eastbound and westbound Front Street between US 460 and 2nd Street/Kents Ridge Road
  - Ten commercial driveways are present on Front Street between US 460 and 2nd Street/Kents Ridge Road that provide access to fast-food restaurants, a gas station, and a shopping center.

Table 1 and Table 2 summarize the raw count volumes and final balanced and volumes for the AM and PM peak hours, respectively. The tables also summarize the volume adjustment and percent difference between the balanced and raw volumes for all movements. The peak hour volumes were balanced within ±5% of the raw traffic count volumes for all movements in the AM peak hour and within ±4% of raw traffic count volumes for all movements in the PM peak hour.

Table 1 – Existing AM Peak Hour Balancing Summary

ID No.	Intersection	Count Date	Movement	Street	Existing Volume (AM Peak Hour)											
					Count Volume* (veh)			Volume Adjustment			% Difference			Balanced Volume		
					L	T	R	L	T	R	L	T	R	L	T	R
INTERSECTIONS																
1	US 460 at Route 67	5/10/2016	SB													
			WB	US 460	153	207		4	5		2.6%	2.4%		157	212	
			NB	VA 67	15		315			-1	0.0%		-0.3%	15		314
			EB	US 460		354	6		-2			-0.6%	0.0%		352	6
2	US 460 at Acme Road	5/10/2016	SB	Acme Road	25		14				0.0%		0.0%	25		14
			WB	US 460		339	6		16			4.7%	0.0%		355	6
			NB													
			EB	US 460	13	660			-7		0.0%	-1.1%		13	653	
3	US 460 at Clearview Road	5/10/2016	SB	Clearview Road	5		5				0.0%		0.0%	5		5
			WB	US 460		365	5		16			4.4%	0.0%		381	5
			NB													
			EB	US 460	13	680			-15		0.0%	-2.2%		13	665	
4	US 460 at Baker Hollow Road	5/10/2016	SB	Baker Hollow Road	13		5				0.0%		0.0%	13		5
			WB	US 460		368	5		13			3.5%	0.0%		381	5
			NB													
			EB	US 460	5	686			-21		0.0%	-3.1%		5	665	
5	US 460 at Patteson Road	5/10/2016	SB	Patteson Street	5		5				0.0%		0.0%	5		5
			WB	US 460		363	5		18			5.0%	0.0%		381	5
			NB													
			EB	US 460	5	699			-26		0.0%	-3.7%		5	673	
6	US 460 at Hillcreek Road	5/10/2016	SB	Hillcreek Road	22		5				0.0%		0.0%	22		5
			WB	US 460		366	11		15			4.1%	0.0%		381	11
			NB													
			EB	US 460	5	697			-24		0.0%	-3.4%		5	673	
7	US 460 at Clinch Valley Medical Center Exit	5/10/2016	SB	Medical Center Exit	25	5	11				0.0%	0.0%	0.0%	25	5	11
			WB	US 460	13	363			8		0.0%	2.2%		13	371	
			NB	Railroad Crossing	10		10				0.0%		0.0%	10		10
			EB	US 460		684	35		-25	1		-3.7%	2.9%		659	36
8	US 460 at Clinch Valley Medical Center Entrance	5/11/2016	SB													
			WB	US 460		396	140		-12	4		-3.0%	2.9%		384	144
			NB													
			EB	US 460	51	614		2	27		3.9%	4.4%		53	641	
9	US 460 at Lake Park Drive	5/11/2016	SB	Lake Park Drive	44	5	7				0.0%	0.0%	0.0%	44	5	7
			WB	US 460	48	532	25		-16		0.0%	-3.0%	0.0%	48	516	25
			NB	Railroad Crossing	5	5	30				0.0%	0.0%	0.0%	5	5	30
			EB	US 460	8	610	5		18		0.0%	3.0%	0.0%	8	628	5
10	US 460 at Front Street	5/11/2016	SB	US 460	64		291				0.0%		0.0%	64		291
			WB	Front Street		298	121					0.0%	0.0%		298	121
			NB													
			EB	US 460	344	346		5	7		1.5%	2.0%		349	353	
11	Front Street at 2nd Street/Kents Ridge Road	5/11/2016	SB	2nd Street	16	46	367				0.0%	0.0%	0.0%	16	46	367
			WB													
			NB	Kents Ridge Road			213						0.0%			213
			EB	Front Street		254	106		5	2		2.0%	1.9%		259	108
12	Front Street at Rockbridge Avenue	5/11/2016	SB													
			WB													
			NB													
			EB	Front Street	129	352		2	5		1.6%	1.4%		131	357	

*Existing volume set to a minimum of five vehicles per hour for all allowable movements

Table 2 – Existing PM Peak Hour Balancing Summary

ID No.	Intersection	Count Date	Movement	Street	Existing Volume (PM Peak Hour)											
					Count Volume* (veh)			Volume Adjustment			% Difference			Balanced Volume		
					L	T	R	L	T	R	L	T	R	L	T	R
INTERSECTIONS																
1	US 460 at Route 67	5/10/2016	SB													
			WB	US 460	312	344		-3	-4		-1.0%	-1.2%		309	340	
			NB	VA 67	9		227			7	0.0%		3.1%	9		234
			EB	US 460		309	5		10			3.2%	0.0%		319	5
2	US 460 at Acme Road	5/10/2016	SB	Acme Road	38		45				0.0%		0.0%	38		45
			WB	US 460		615	6		-11			-1.8%	0.0%		604	6
			NB													
			EB	US 460	16	554			-17		0.0%	-3.1%		16	537	
3	US 460 at Clearview Road	5/10/2016	SB	Clearview Road	5		5				0.0%		0.0%	5		5
			WB	US 460		674	5		-11			-1.6%	0.0%		663	5
			NB													
			EB	US 460	5	584			-14		0.0%	-2.4%		5	570	
4	US 460 at Baker Hollow Road	5/10/2016	SB	Baker Hollow Road	11		5				0.0%		0.0%	11		5
			WB	US 460		669	14		-6			-0.9%	0.0%		663	14
			NB													
			EB	US 460	9	577			-11		0.0%	-1.9%		9	566	
5	US 460 at Patteson Road	5/10/2016	SB	Patteson Street	6		9				0.0%		0.0%	6		9
			WB	US 460		670	9		-2			-0.3%	0.0%		668	9
			NB													
			EB	US 460	6	582			-11		0.0%	-1.9%		6	571	
6	US 460 at Hillcreek Road	5/10/2016	SB	Hillcreek Road	25		5				0.0%		0.0%	25		5
			WB	US 460		683	28		-11			-1.6%	0.0%		672	28
			NB													
			EB	US 460	5	589			-17		0.0%	-2.9%		5	572	
7	US 460 at Clinch Valley Medical Center Exit	5/10/2016	SB	Medical Center Exit	114	9	45				0.0%	0.0%	0.0%	114	9	45
			WB	US 460	49	581			-14		0.0%	-2.4%		49	567	
			NB	Railroad Crossing	88		40				0.0%		0.0%	88		40
			EB	US 460		551	58		-12			-2.2%	0.0%		539	58
8	US 460 at Clinch Valley Medical Center Entrance	5/11/2016	SB													
			WB	US 460		602	36		14			2.3%	0.0%		616	36
			NB													
			EB	US 460	17	673			3		0.0%	0.4%		17	676	
9	US 460 at Lake Park Drive	5/11/2016	SB	Lake Park Drive	53	5	10				0.0%	0.0%	0.0%	53	5	10
			WB	US 460	101	629	59		8		0.0%	1.3%	0.0%	101	637	59
			NB	Railroad Crossing	5	5	119				0.0%	0.0%	0.0%	5	5	119
			EB	US 460	9	646	5		16		0.0%	2.5%	0.0%	9	662	5
10	US 460 at Front Street	5/11/2016	SB	US 460	51		356			5	0.0%		1.4%	51		361
			WB	Front Street		436	97					0.0%	0.0%		436	97
			NB													
			EB	US 460	394	436		4			1.0%	0.0%		398	436	
11	Front Street at 2nd Street/Kents Ridge Road	5/11/2016	SB	2nd Street	31	111	504				0.0%	0.0%	0.0%	31	111	504
			WB													
			NB	Kents Ridge Road			308						0.0%			308
			EB	Front Street		250	238					0.0%	0.0%		250	238
12	Front Street at Rockbridge Avenue	5/11/2016	SB													
			WB													
			NB													
			EB	Front Street	170	412		2	5		1.2%	1.2%		172	417	

*Existing volume set to a minimum of five vehicles per hour for all allowable movements

APPENDIX A-6: CRASH ANALYSIS

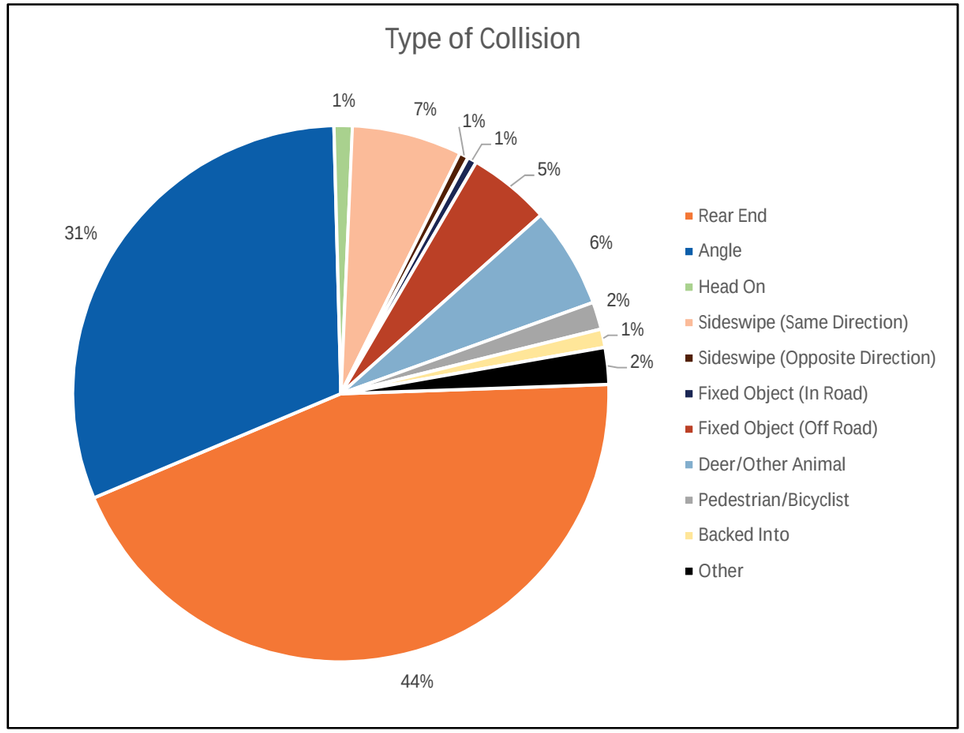
US 460 Corridor Improvement Study
Summary of Corridor Crash Data: All Crashes - MP 12.00 - MP 13.78
Crash Dates: January 1, 2011 - December 31, 2015

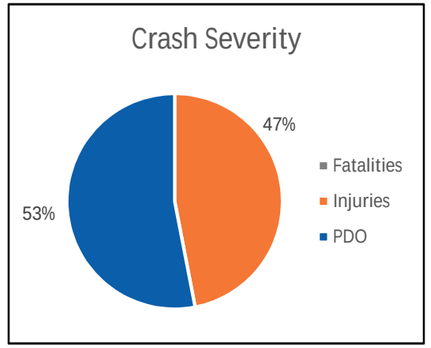
Total Comparison

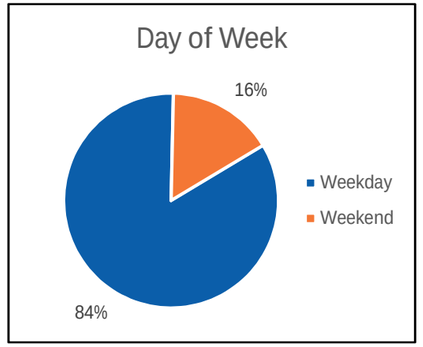
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION											TOTAL
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other	
2011	0	22	26	42	6	9	15	24	36	4	8	38	0	8	2	22	16	1	2	0	0	3	2	1	0	1	48
2012	0	29	21	42	8	6	19	25	45	0	5	43	2	4	1	25	13	1	2	1	0	1	5	0	2	0	50
2013	0	16	16	29	3	8	13	11	27	1	4	29	0	3	0	18	9	0	2	0	0	2	1	0	0	1	32
2014	0	11	13	20	4	2	9	13	15	2	7	20	1	2	1	7	11	0	3	0	1	0	0	1	0	0	24
2015	0	7	20	19	8	6	6	15	19	0	8	19	0	7	1	8	7	0	3	0	0	3	3	1	0	2	27
TOTAL	0	85	96	152	29	31	62	88	142	7	32	149	3	24	5	80	56	2	12	1	1	9	11	3	2	4	181

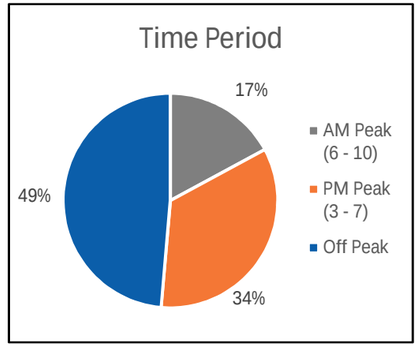
Percentage Comparison

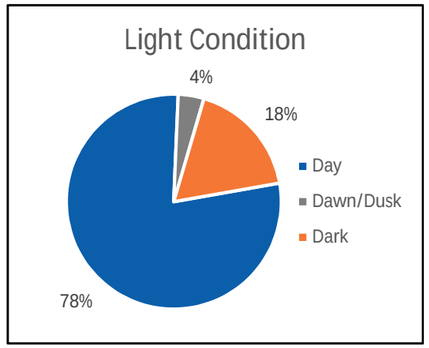
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION									
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other
2011	0%	46%	54%	88%	13%	19%	31%	50%	75%	8%	17%	79%	0%	17%	4%	46%	33%	2%	4%	0%	0%	6%	4%	2%	0%	2%
2012	0%	58%	42%	84%	16%	12%	38%	50%	90%	0%	10%	86%	4%	8%	2%	50%	26%	2%	4%	2%	0%	2%	10%	0%	4%	0%
2013	0%	50%	50%	91%	9%	25%	41%	34%	84%	3%	13%	91%	0%	9%	0%	56%	28%	0%	6%	0%	0%	6%	3%	0%	0%	3%
2014	0%	46%	54%	83%	17%	8%	38%	54%	63%	8%	29%	83%	4%	8%	4%	29%	46%	0%	13%	0%	4%	0%	0%	4%	0%	0%
2015	0%	26%	74%	70%	30%	22%	22%	56%	70%	0%	30%	70%	0%	26%	4%	30%	26%	0%	11%	0%	0%	11%	11%	4%	0%	7%
TOTAL	0%	47%	53%	84%	16%	17%	34%	49%	78%	4%	18%	82%	2%	13%	3%	44%	31%	1%	7%	1%	1%	5%	6%	2%	1%	2%

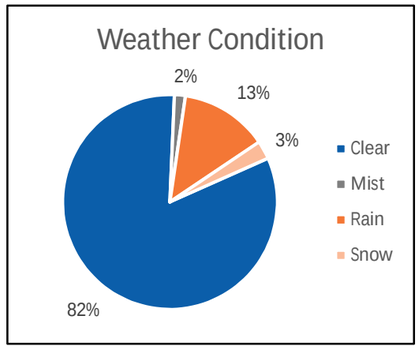












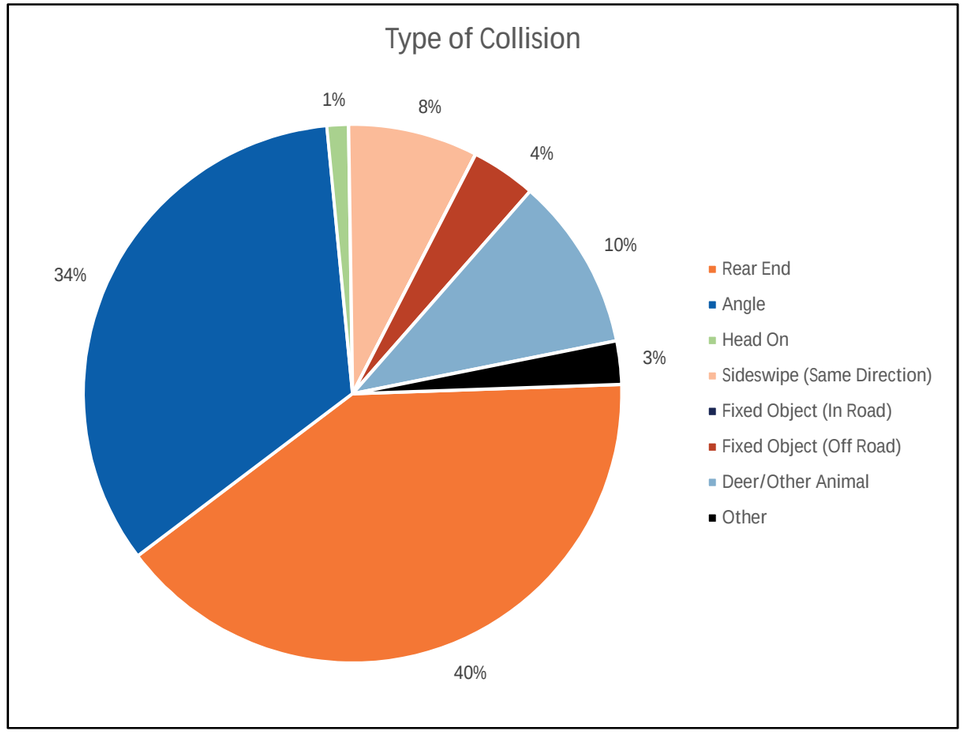
US 460 Corridor Improvement Study
Summary of Corridor Crash Data: Eastbound US 460 - MP 12.00 to MP 13.43
Crash Dates: January 1, 2011 - December 31, 2015

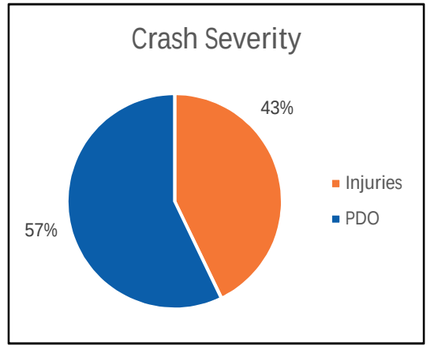
Total Comparison

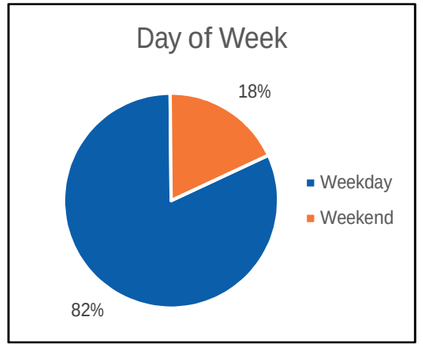
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION											TOTAL
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other	
2011	0	8	12	16	4	6	5	9	13	2	5	13	0	6	1	7	6	0	2	0	0	2	2	0	0	1	20
2012	0	11	8	16	3	1	6	12	18	0	1	17	1	0	1	9	4	1	2	0	0	0	3	0	0	0	19
2013	0	9	8	15	2	4	7	6	15	1	1	14	0	3	0	8	6	0	2	0	0	0	1	0	0	1	17
2014	0	3	7	8	2	1	3	6	7	0	3	8	0	1	1	3	6	0	0	0	0	0	0	0	0	0	10
2015	0	2	9	8	3	3	3	5	8	0	3	9	0	2	0	4	4	0	0	0	0	1	2	0	0	0	11
TOTAL	0	33	44	63	14	15	24	38	61	3	13	61	1	12	3	31	26	1	6	0	0	3	8	0	0	2	77

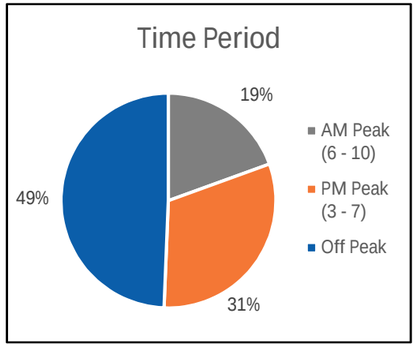
Percentage Comparison

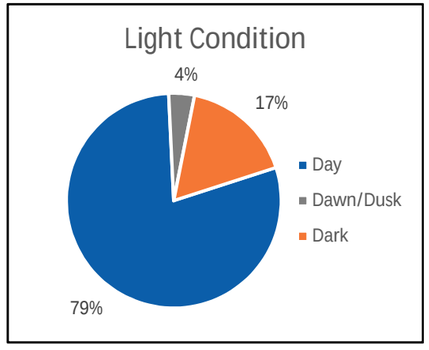
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION										
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other
2011	0%	40%	60%	80%	20%	30%	25%	45%	65%	10%	25%	65%	0%	30%	5%	35%	30%	0%	10%	0%	0%	10%	10%	0%	0%	5%
2012	0%	58%	42%	84%	16%	5%	32%	63%	95%	0%	5%	89%	5%	0%	5%	47%	21%	5%	11%	0%	0%	0%	16%	0%	0%	0%
2013	0%	53%	47%	88%	12%	24%	41%	35%	88%	6%	6%	82%	0%	18%	0%	47%	35%	0%	12%	0%	0%	0%	6%	0%	0%	6%
2014	0%	30%	70%	80%	20%	10%	30%	60%	70%	0%	30%	80%	0%	10%	10%	30%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2015	0%	18%	82%	73%	27%	27%	27%	45%	73%	0%	27%	82%	0%	18%	0%	36%	36%	0%	0%	0%	0%	9%	18%	0%	0%	0%
TOTAL	0%	43%	57%	82%	18%	19%	31%	49%	79%	4%	17%	79%	1%	16%	4%	40%	34%	1%	8%	0%	0%	4%	10%	0%	0%	3%

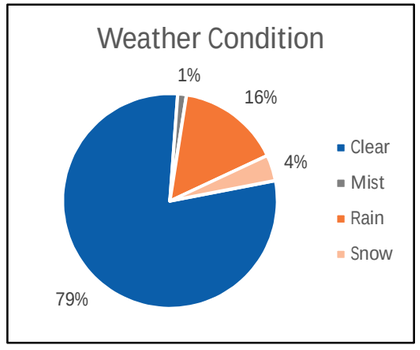












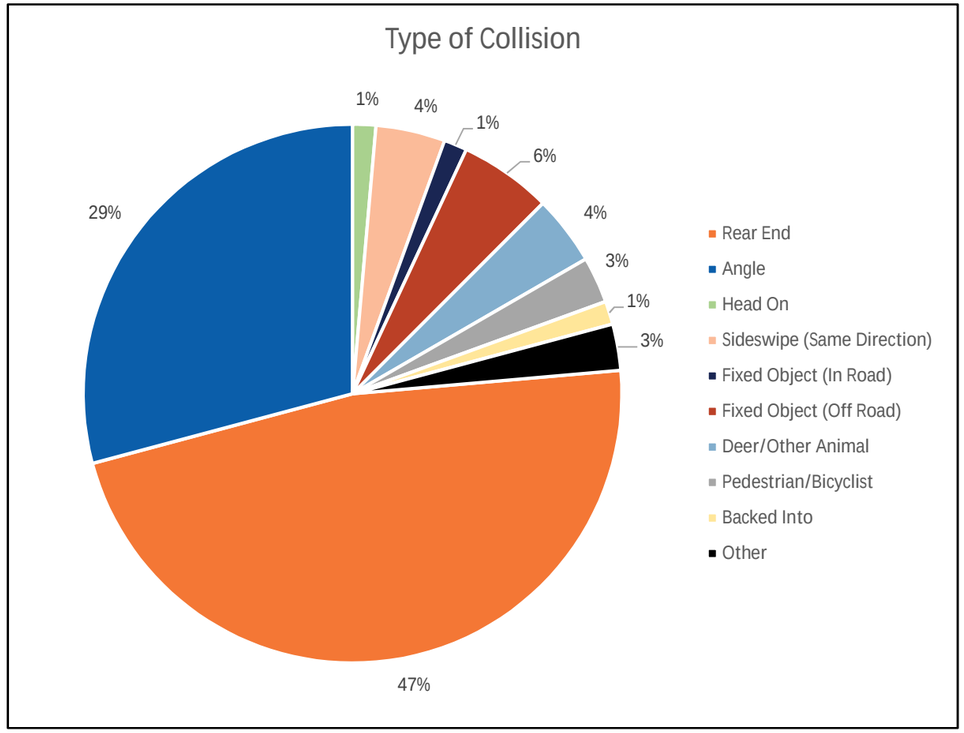
US 460 Corridor Improvement Study
Summary of Corridor Crash Data: Westbound US 460 - MP 12.00 to MP 13.43
Crash Dates: January 1, 2011 - December 31, 2015

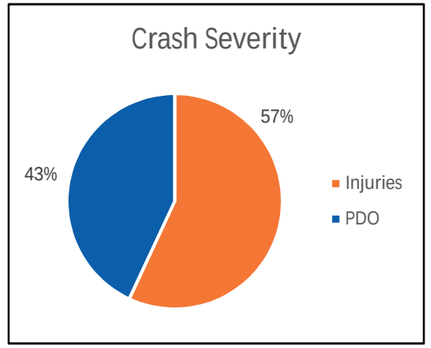
Total Comparison

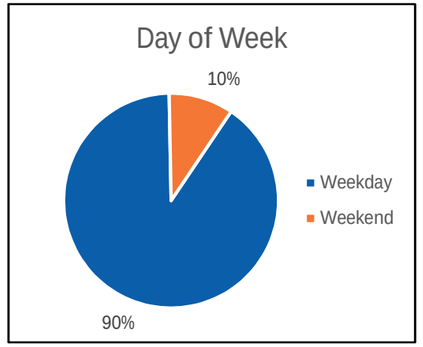
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION											TOTAL
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other	
2011	0	11	7	18	0	1	7	10	13	2	3	16	0	1	1	8	8	1	0	0	0	1	0	0	0	0	18
2012	0	14	8	21	1	3	11	8	18	0	4	18	1	3	0	11	7	0	0	0	0	1	2	0	1	0	22
2013	0	7	4	11	0	4	4	3	9	0	2	11	0	0	0	8	2	0	0	0	0	1	0	0	0	0	11
2014	0	5	4	7	2	1	4	4	5	2	2	8	1	0	0	4	2	0	1	0	1	0	0	1	0	0	9
2015	0	4	8	8	4	3	2	7	8	0	4	7	0	4	1	3	2	0	2	0	0	1	1	1	0	2	12
TOTAL	0	41	31	65	7	12	28	32	53	4	15	60	2	8	2	34	21	1	3	0	1	4	3	2	1	2	72

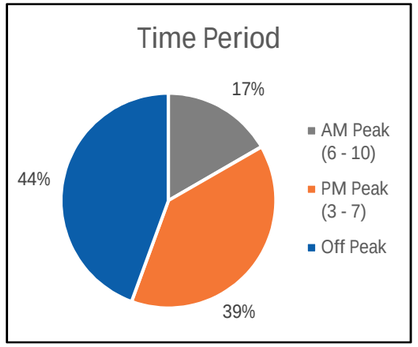
Percentage Comparison

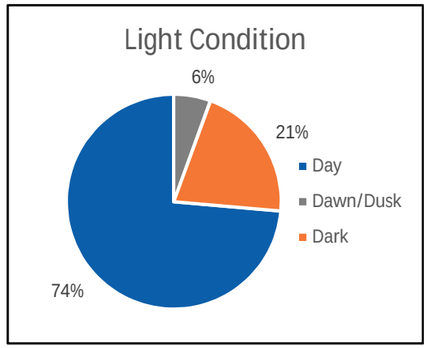
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION									
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other
2011	0%	61%	39%	100%	0%	6%	39%	56%	72%	11%	17%	89%	0%	6%	6%	44%	44%	6%	0%	0%	0%	6%	0%	0%	0%	0%
2012	0%	64%	36%	95%	5%	14%	50%	36%	82%	0%	18%	82%	5%	14%	0%	50%	32%	0%	0%	0%	0%	5%	9%	0%	5%	0%
2013	0%	64%	36%	100%	0%	36%	36%	27%	82%	0%	18%	100%	0%	0%	0%	73%	18%	0%	0%	0%	0%	9%	0%	0%	0%	0%
2014	0%	56%	44%	78%	22%	11%	44%	44%	56%	22%	22%	89%	11%	0%	0%	44%	22%	0%	11%	0%	11%	0%	0%	11%	0%	0%
2015	0%	33%	67%	67%	33%	25%	17%	58%	67%	0%	33%	58%	0%	33%	8%	25%	17%	0%	17%	0%	0%	8%	8%	8%	0%	17%
TOTAL	0%	57%	43%	90%	10%	17%	39%	44%	74%	6%	21%	83%	3%	11%	3%	47%	29%	1%	4%	0%	1%	6%	4%	3%	1%	3%

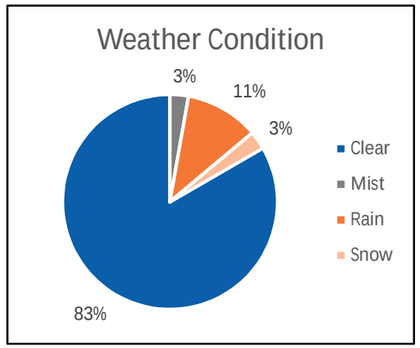












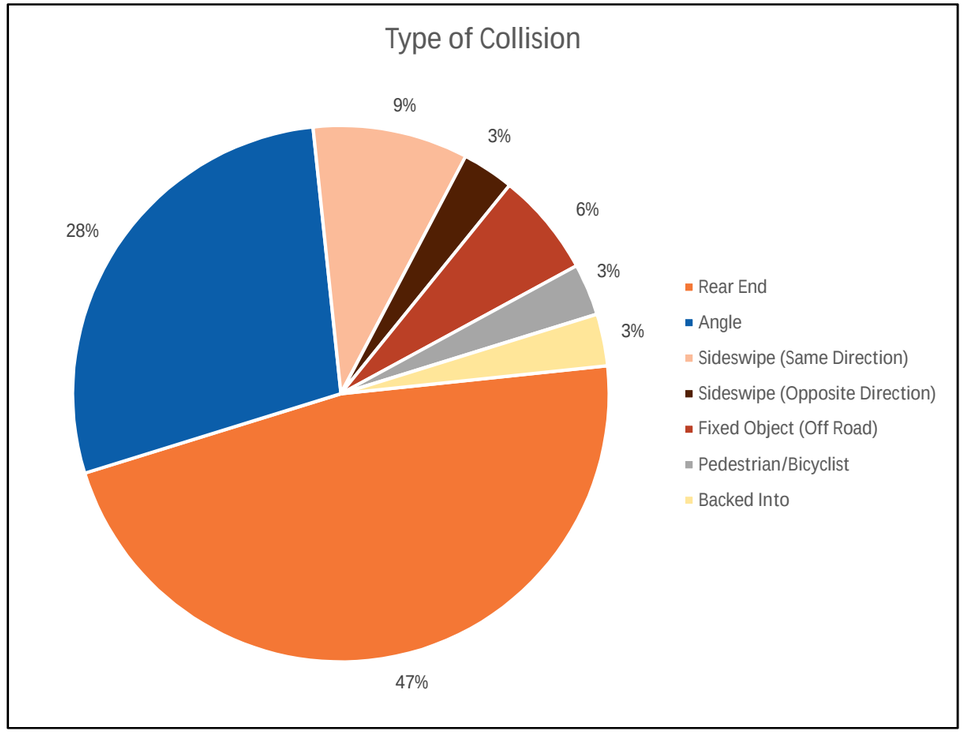
US 460 Corridor Improvement Study
Summary of Corridor Crash Data: Front Street (Both Directions) - MP 13.43 to 13.78
Crash Dates: January 1, 2011 - December 31, 2015

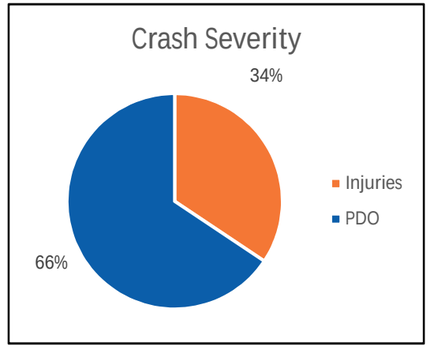
Total Comparison

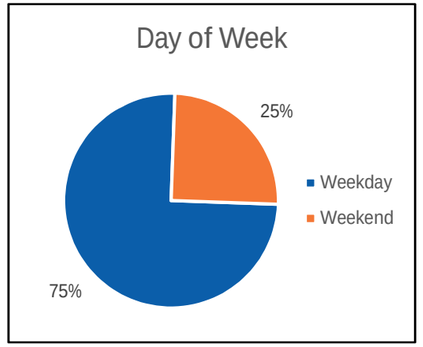
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION											TOTAL
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other	
2011	0	3	7	8	2	2	3	5	10	0	0	9	0	1	0	7	2	0	0	0	0	0	0	1	0	0	10
2012	0	4	5	5	4	2	2	5	9	0	0	8	0	1	0	5	2	0	0	1	0	0	0	0	1	0	9
2013	0	0	4	3	1	0	2	2	3	0	1	4	0	0	0	2	1	0	0	0	0	1	0	0	0	0	4
2014	0	3	2	5	0	0	2	3	3	0	2	4	0	1	0	0	3	0	2	0	0	0	0	0	0	0	5
2015	0	1	3	3	1	0	1	3	3	0	1	3	0	1	0	1	1	0	1	0	0	1	0	0	0	0	4
TOTAL	0	11	21	24	8	4	10	18	28	0	4	28	0	4	0	15	9	0	3	1	0	2	0	1	1	0	32

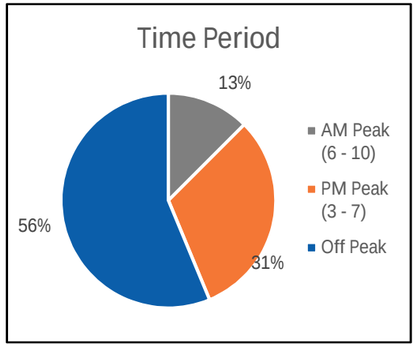
Percentage Comparison

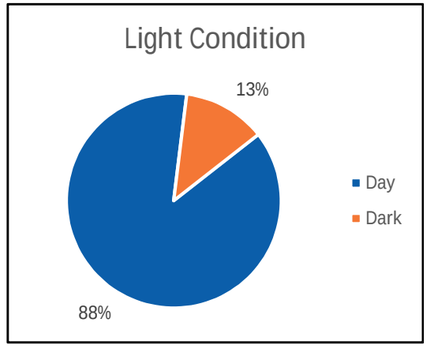
YEAR	SEVERITY			DAY OF WEEK		TIME PERIOD			LIGHT CONDITION			WEATHER CONDITION				TYPE OF COLLISION									
	Fatalities	Injuries	PDO	Week-day	Week-end	AM Peak (6 - 10)	PM Peak (3 - 7)	Off Peak	Day	Dawn/ Dusk	Dark	Clear	Mist	Rain	Snow	Rear End	Angle	Head On	Side-swipe (Same)	Side-swipe (Opp.)	Fixed Object (In Road)	Fixed Object (Off Road)	Deer/ Other Animal	Pedestrian/ Bicyclist	Backed Into	Other
2011	0%	30%	70%	80%	20%	20%	30%	50%	100%	0%	0%	90%	0%	10%	0%	70%	20%	0%	0%	0%	0%	0%	0%	10%	0%	0%
2012	0%	44%	56%	56%	44%	22%	22%	56%	100%	0%	0%	89%	0%	11%	0%	56%	22%	0%	0%	11%	0%	0%	0%	0%	11%	0%
2013	0%	0%	100%	75%	25%	0%	50%	50%	75%	0%	25%	100%	0%	0%	0%	50%	25%	0%	0%	0%	0%	25%	0%	0%	0%	0%
2014	0%	60%	40%	100%	0%	0%	40%	60%	60%	0%	40%	80%	0%	20%	0%	0%	60%	0%	40%	0%	0%	0%	0%	0%	0%	0%
2015	0%	25%	75%	75%	25%	0%	25%	75%	75%	0%	25%	75%	0%	25%	0%	25%	25%	0%	25%	0%	0%	25%	0%	0%	0%	0%
TOTAL	0%	34%	66%	75%	25%	13%	31%	56%	88%	0%	13%	88%	0%	13%	0%	47%	28%	0%	9%	3%	0%	6%	0%	3%	3%	0%

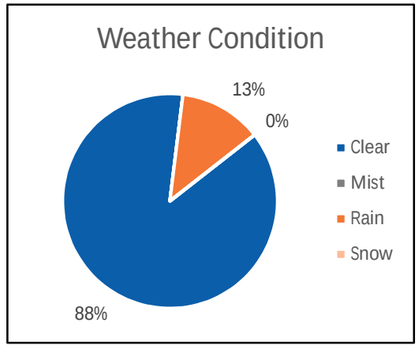












APPENDIX A-7: SPEED STUDY

MEMORANDUM – US 460 SPEED STUDY RESULTS SUMMARY

Subject: US 460 Speed Study
Conducted by VDOT on December 19, 2016

Summary of US 460 Speed Study Results

A speed study was conducted by VDOT on December 19, 2016 to evaluate vehicle speeds in the US 460 study corridor. Vehicle speeds were collected in both the eastbound and westbound directions of US 460 at the following three locations:

- Station 1: US 460 approximately 1/8 mile east of Front Street
- Station 2: US 460 at Patteson Street
- Station 3: US 460 at Mudlick Road

Summaries of the speed data collected at the three locations are provided in the following three tables. The speeds on the eastern end of the corridor are slightly higher than on the western end, but the data at the three stations is consistent with the observations of local law enforcement.

Station 1: US 460 approximately 1/8 mile east of Front Street

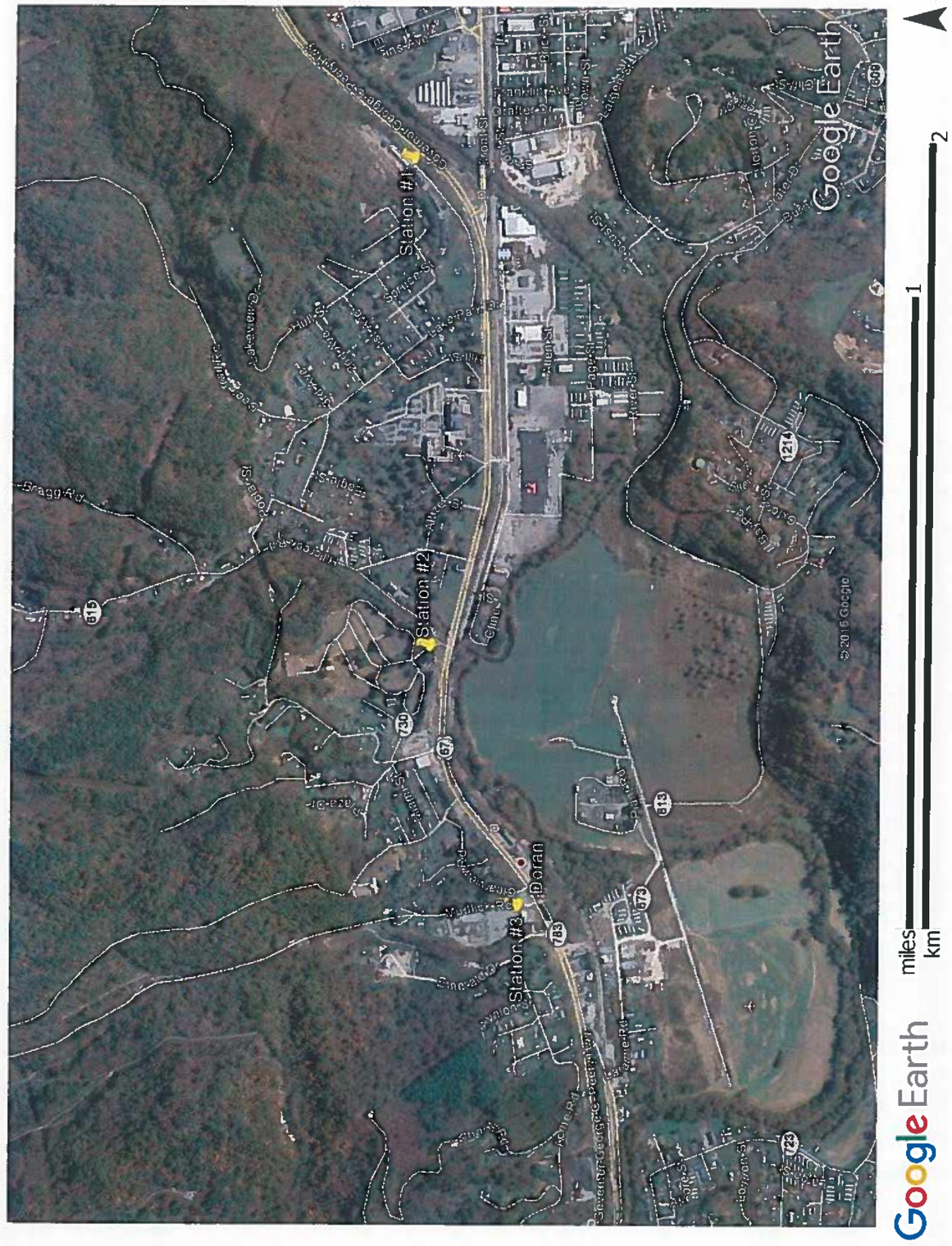
	Eastbound US 460	Westbound US 460
Posted Speed Limit	35 MPH	
Sample Date & Time	12/19/16 from approximately 11:00 AM to 1:45 PM	
Total Vehicles in Sample	546	655
Average Speed	46.81 MPH	44.59 MPH
50th Percentile Speed	47 MPH	45 MPH
85th Percentile Speed	54 MPH	51 MPH
Ten Mile Pace	44 - 53 MPH	40 - 49 MPH

Station 2: US 460 at Patteson Street

	Eastbound US 460	Westbound US 460
Posted Speed Limit	35 MPH	
Sample Date & Time	12/19/16 from approximately 12:45 PM to 3:15 PM	
Total Vehicles in Sample	980	746
Average Speed	36.08 MPH	35.97 MPH
50th Percentile Speed	36 MPH	36 MPH
85th Percentile Speed	41 MPH	41 MPH
Ten Mile Pace	32 - 41 MPH	32 - 41 MPH

Station 3: US 460 at Mudlick Road

	Eastbound US 460	Westbound US 460
Posted Speed Limit	35 MPH	
Sample Date & Time	12/19/16 from approximately 12:30 PM to 3:15 PM	
Total Vehicles in Sample	829	665
Average Speed	34.69 MPH	32.87
50th Percentile Speed	35 MPH	34 MPH
85th Percentile Speed	40 MPH	40 MPH
Ten Mile Pace	30 - 39 MPH	32 - 41 MPH



STEALTH SURVEY INFO

<TAZ. RT. 460 STA. 1 (APP=WB)> EAST 130 UND
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06>

FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB) (RECEDING).DAT

MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TOTAL VEHICLES = 546 MINIMUM SPEED = 18 MAXIMUM SPEED = 68

AVERAGE SPEED = 46.81 50th PERCENTILE = 47 85th PERCENTILE = 54

TEN MILE PACE = 44 to 53

END OF REPORT

STEALTH SURVEY SUMMARY

<TAZ. RT. 460 STA. 1 (APP=WB)>
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06>

FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB) (RECEDING).DAT

MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TIME	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30
VEH.	32	50	45	50	58	57	58	53	57	59	27
AVG.	44.9	45.7	47.1	47.8	45.1	46.9	48.3	48.0	45.7	47.9	46.8

TOTAL VEHICLES = 546 MINIMUM SPEED = 18 MAXIMUM SPEED = 68

AVERAGE SPEED = 46.81 50th PERCENTILE = 47 85th PERCENTILE = 54

TEN MILE PACE = 44 to 53

END OF REPORT

STEALTH SURVEY DETAILS

<TAZ. RT. 460 STA. 1 (APP=WB)>
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06>

FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB)

MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
11:00	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	1	1	0	1	4	1
11:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	1	2
11:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4	0	1	1	4
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	1	0	3	1	1
12:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	2	0	3	3	2	2	1	3
12:15	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	2	2	4	3
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	3	1	1	3
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3	1	1
13:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	2	0	2	4	3
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	3
13:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	1	2
VEH.	2	0	0	0	0	0	0	0	0	3	1	3	2	3	4	2	3	7	4	9	16	12	17	22	26
%ILE	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	3	4	5	6	7	10	13	16	20	24

	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
11:00	0	1	3	2	2	2	3	1	1	0	1	0	1	1	2	0	0	0	0	0	0	0	0	0	0
11:15	1	8	2	5	2	6	1	5	2	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11:30	2	1	0	3	4	3	5	1	3	2	1	2	2	0	2	1	0	1	0	0	0	0	0	0	0
11:45	2	5	0	2	2	2	7	4	1	1	4	2	1	2	1	2	0	1	0	1	0	0	0	0	0
12:00	0	2	4	3	3	8	4	4	0	2	1	1	3	1	1	1	0	0	0	0	0	0	0	0	0
12:15	1	1	0	2	5	6	7	4	3	4	4	2	0	0	2	1	0	0	0	0	0	0	0	0	0
12:30	1	3	4	3	4	2	0	6	4	2	4	3	4	3	0	0	1	1	0	0	0	0	0	0	0
12:45	0	3	4	4	6	3	4	3	1	1	2	0	4	1	1	1	1	1	1	1	0	0	0	0	0
13:00	1	1	2	5	5	3	5	3	0	2	6	3	1	1	2	0	0	0	0	0	0	0	0	0	0
13:15	3	3	7	5	1	8	2	5	2	1	3	2	2	0	4	1	0	1	0	0	0	0	0	0	0
13:30	1	1	2	2	0	1	3	1	2	1	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0
VEH.	12	29	28	36	34	44	41	37	19	17	28	17	24	10	15	7	3	5	1	2	0	0	0	0	0
%ILE	27	32	37	44	50	58	65	72	76	79	84	87	91	93	96	97	98	99	99	99	99	99	99	99	99

	68
11:00	0
11:15	0
11:30	0
11:45	0
12:00	0
12:15	0
12:30	1
12:45	0
13:00	0
13:15	0
13:30	0
VEH.	1
%ILE	100

STEALTH SURVEY INFO

<TAZ. RT. 460 STA. 1 (APP=WB)> WESTBOUND
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06>

FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB) (APPROACHING).DAT

MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TOTAL VEHICLES = 655 MINIMUM SPEED = 15 MAXIMUM SPEED = 63

AVERAGE SPEED = 44.59 50th PERCENTILE = 45 85th PERCENTILE = 51

TEN MILE PACE = 40 to 49

END OF REPORT

STEALTH SURVEY SUMMARY

<TAZ. RT. 460 STA. 1 (APP=WB)>
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06>

FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB) (APPROACHING).DAT

MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TIME	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30
VEH.	42	64	64	66	66	58	72	56	73	64	30
AVG.	43.6	44.1	45.2	42.9	45.7	44.3	44.6	45.4	44.1	44.2	47.6

TOTAL VEHICLES = 655 MINIMUM SPEED = 15 MAXIMUM SPEED = 63

AVERAGE SPEED = 44.59 50th PERCENTILE = 45 85th PERCENTILE = 51

TEN MILE PACE = 40 to 49

END OF REPORT

STEALTH SURVEY DETAILS

<TAZ. RT. 460 STA. 1 (APP=WB)>
<CLOUDY>
POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 11:06> FILENAME: 16121911 TAZ. RT. 460 STA. 1 (APP=WB)
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	5	2	2
11:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3	3	1	0	1	1	3	2
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	4
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	3	1	2	2	4	1
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	3	5
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	1	4
12:30	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	4	1	2	6	0	3
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0
13:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	1	2	3	2
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	0	2	2	3	2
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
VEH.	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	4	2	6	12	15	7	14	28	22	26
%ILE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4	6	7	9	14	17	21

	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
11:00	4	0	1	0	7	2	2	0	1	4	0	4	0	1	2	0	0	1	0	0	0	0	0	0
11:15	4	2	2	1	2	6	4	1	3	6	4	5	3	0	0	0	0	1	1	0	0	1	0	1
11:30	3	5	5	2	5	5	1	2	4	2	5	7	1	1	2	0	2	1	0	0	0	0	0	0
11:45	6	5	5	2	2	6	5	2	4	2	0	1	0	4	1	1	1	0	0	1	0	0	0	0
12:00	7	2	2	1	4	3	0	2	6	3	5	4	2	2	3	2	2	0	0	1	0	0	0	1
12:15	3	3	6	2	2	6	3	4	5	2	5	1	0	0	1	1	1	1	0	0	0	0	0	0
12:30	1	4	3	2	2	5	5	3	6	6	2	6	3	1	2	0	1	1	0	0	0	0	0	1
12:45	3	7	3	2	1	6	7	3	4	7	1	1	1	2	2	0	0	1	0	0	0	0	0	0
13:00	6	3	3	1	5	5	9	3	9	4	1	0	1	1	2	4	0	0	0	0	1	0	0	0
13:15	2	3	5	2	3	3	4	4	2	7	2	3	1	4	1	0	0	0	0	2	0	0	0	0
13:30	0	0	4	1	2	2	3	2	1	0	2	3	1	3	2	1	0	1	0	0	0	0	0	0
VEH.	39	34	39	16	35	49	43	26	45	43	27	35	13	19	18	9	7	7	1	4	1	1	0	3
%ILE	27	32	38	41	46	53	60	64	71	77	81	87	89	92	94	96	97	98	98	99	99	99	99	100

STEALTH SURVEY INFO

<STA.2> EASTBOUND
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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1R00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TOTAL VEHICLES = 980 MINIMUM SPEED = 16 MAXIMUM SPEED = 54

AVERAGE SPEED = 36.08 50th PERCENTILE = 36 85th PERCENTILE = 41

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY SUMMARY

<STA.2>
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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1R00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TIME	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
VEH.	0	107	73	102	111	96	98	106	92	91	104
AVG.	0.0	35.0	35.9	37.2	34.8	36.4	36.8	37.6	34.5	37.0	35.8

TOTAL VEHICLES = 980 MINIMUM SPEED = 16 MAXIMUM SPEED = 54

AVERAGE SPEED = 36.08 50th PERCENTILE = 36 85th PERCENTILE = 41

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY DETAILS

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SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1R00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
12:45	0	0	1	0	0	0	0	1	1	1	2	1	1	3	2	6	4	9	17	17	2	11	4	6	9
13:00	1	0	0	0	0	0	0	0	0	0	1	0	4	2	5	2	3	4	7	8	4	6	3	5	5
13:15	0	0	0	0	0	0	0	0	1	0	0	1	2	3	2	2	6	6	13	8	4	7	8	5	4
13:30	0	1	0	0	1	0	0	0	0	2	2	1	2	4	5	3	8	11	14	6	8	9	12	8	5
13:45	0	0	0	0	0	0	0	0	0	1	0	1	2	1	2	2	4	12	15	6	9	9	5	3	2
14:00	0	0	0	0	0	0	0	1	0	0	0	2	1	0	0	2	3	8	8	16	5	9	10	7	10
14:15	0	0	0	0	0	0	0	0	0	1	0	1	2	3	4	3	4	3	9	8	6	11	12	5	5
14:30	1	0	0	1	1	0	0	0	2	0	0	3	2	2	4	4	8	8	8	9	6	5	6	3	11
14:45	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	2	4	8	9	6	8	8	8	6	6
15:00	0	0	0	0	0	1	0	0	1	0	2	1	0	3	2	7	6	7	9	9	7	9	12	6	9
VEH.	2	1	1	1	2	1	0	2	5	5	7	11	17	25	27	33	50	76	109	93	59	84	80	54	66
%ILE	0	0	0	0	0	0	0	1	1	2	2	3	5	8	10	14	19	27	38	47	53	62	70	76	82

	41	42	43	44	45	46	47	48	49	50	51	52	53	54
12:45	3	1	2	2	0	0	0	0	0	0	0	0	0	1
13:00	2	2	2	2	0	2	3	0	0	0	0	0	0	0
13:15	11	5	4	2	1	1	1	2	2	1	0	0	0	0
13:30	3	2	2	1	0	0	1	0	0	0	0	0	0	0
13:45	9	3	3	1	2	2	0	1	1	0	0	0	0	0
14:00	5	5	3	2	1	0	0	0	0	0	0	0	0	0
14:15	7	5	3	0	3	3	3	1	2	1	1	0	0	0
14:30	5	0	2	0	1	0	0	0	0	0	0	0	0	0
14:45	6	3	5	2	0	3	0	1	0	0	0	0	0	0
15:00	3	5	1	1	1	1	1	0	0	0	0	0	0	0
VEH.	54	31	27	13	9	12	9	5	5	2	1	0	0	1
%ILE	88	91	94	95	96	97	98	99	99	99	99	99	99	100

STEALTH SURVEY INFO

<STA.2> WESTBOUND
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SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1A00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TOTAL VEHICLES = 746 MINIMUM SPEED = 15 MAXIMUM SPEED = 53

AVERAGE SPEED = 35.97 50th PERCENTILE = 36 85th PERCENTILE = 41

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY SUMMARY

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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1A00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TIME	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
VEH.	0	74	65	71	67	75	75	71	87	85	76
AVG.	0.0	36.0	32.2	36.6	35.8	35.7	37.0	37.8	35.4	36.0	36.9

TOTAL VEHICLES = 746 MINIMUM SPEED = 15 MAXIMUM SPEED = 53

AVERAGE SPEED = 35.97 50th PERCENTILE = 36 85th PERCENTILE = 41

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY DETAILS

<STA.2>
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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:30> FILENAME: 1A00052.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	9	8	2	7	8	4	4	6	7
13:00	0	1	7	3	0	0	0	0	0	0	0	1	1	3	3	1	1	1	2	8	6	4	6	5	4
13:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3	1	5	5	7	7	5	6	3	2
13:30	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	2	6	2	3	8	5	6	3	4	5
13:45	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	3	3	9	8	11	5	8	6	3
14:00	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	2	3	3	8	5	7	7	7	9
14:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	3	11	9	3	8	6	4
14:30	0	0	0	0	0	1	0	1	0	0	1	0	0	3	2	4	5	4	3	7	9	13	8	6	8
14:45	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	2	3	8	9	6	6	12	10	7	4
15:00	1	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	3	5	2	7	8	4	7	4	3
VEH.	1	2	8	4	0	1	0	1	1	0	2	2	7	13	19	14	34	40	41	77	74	63	67	54	49
%ILE	0	0	1	2	2	2	2	2	2	2	2	2	3	5	8	10	14	19	25	35	45	54	63	70	76

	40	41	42	43	44	45	46	47	48	49	50	51	52	53
12:45	5	3	3	0	0	2	1	0	0	0	0	1	0	0
13:00	2	4	1	1	0	0	0	0	0	0	0	0	0	0
13:15	5	8	4	2	1	1	1	0	0	0	0	1	0	0
13:30	5	6	0	2	1	0	1	0	1	0	0	0	0	0
13:45	5	6	0	0	0	0	1	0	0	0	0	1	0	0
14:00	3	7	4	0	2	1	1	1	0	1	0	0	0	0
14:15	4	5	2	2	4	2	0	1	1	2	0	0	0	0
14:30	1	4	3	1	1	1	1	0	0	0	0	0	0	0
14:45	3	6	1	0	3	0	0	0	1	0	0	0	0	1
15:00	4	8	7	4	0	2	0	0	1	1	0	0	0	0
VEH.	37	57	25	12	12	9	6	2	4	4	0	3	0	1
%ILE	81	89	92	94	96	97	98	98	98	99	99	99	99	100

STEALTH SURVEY INFO

<STA.3> EAST BOUND
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TOTAL VEHICLES = 829 MINIMUM SPEED = 16 MAXIMUM SPEED = 53

AVERAGE SPEED = 34.69 50th PERCENTILE = 35 85th PERCENTILE = 40

TEN MILE PACE = 30 to 39

END OF REPORT

STEALTH SURVEY SUMMARY

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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:27> FILENAME: 1R00003.DAT
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TIME	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
VEH.	14	82	88	80	84	93	78	77	72	92	69
AVG.	33.9	36.4	34.2	34.4	34.6	34.5	35.2	34.3	34.7	34.2	34.6

TOTAL VEHICLES = 829 MINIMUM SPEED = 16 MAXIMUM SPEED = 53

AVERAGE SPEED = 34.69 50th PERCENTILE = 35 85th PERCENTILE = 40

TEN MILE PACE = 30 to 39

END OF REPORT

STEALTH SURVEY DETAILS

<STA.3>
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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:27> FILENAME: 1R00003.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
12:30	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1	0	2	2	0	0	1	2	0
12:45	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	2	9	7	6	8	6	6	5	6	4
13:00	0	0	0	1	0	0	2	1	0	0	3	3	2	2	8	4	5	2	8	8	11	7	3	4	4
13:15	0	0	0	0	0	1	0	0	2	1	2	1	4	3	3	3	3	6	11	9	5	4	7	4	4
13:30	0	0	0	0	0	0	0	1	2	0	0	1	2	2	4	9	11	6	7	6	7	3	5	4	6
13:45	2	1	4	0	1	0	0	0	1	2	0	0	0	2	4	4	3	5	5	8	8	14	6	6	1
14:00	0	0	0	0	0	0	0	0	1	1	0	4	1	2	1	5	2	6	14	10	5	7	3	3	2
14:15	0	0	1	0	1	0	0	0	0	0	3	1	2	3	1	3	7	10	5	10	9	3	3	4	4
14:30	0	0	0	0	0	0	0	2	0	0	0	0	3	4	2	3	4	9	9	5	8	3	8	5	2
14:45	0	0	0	0	0	1	0	1	2	2	0	3	2	4	3	6	10	10	7	8	5	4	6	5	1
15:00	1	0	0	0	0	0	0	1	0	1	0	2	2	2	3	3	2	4	11	6	9	4	4	7	2
VEH.	3	1	5	1	2	2	2	6	8	7	8	16	21	27	32	44	57	65	85	80	73	55	51	50	30
%ILE	0	0	1	1	1	1	1	2	3	4	5	7	9	13	17	22	29	37	47	56	65	72	78	84	88

	41	42	43	44	45	46	47	48	49	50	51	52	53
12:30	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45	5	3	2	1	0	2	2	1	0	0	0	0	0
13:00	5	2	1	2	0	0	0	0	0	0	0	0	0
13:15	1	2	1	1	1	0	0	0	0	1	0	0	0
13:30	1	0	2	2	3	0	0	0	0	0	0	0	0
13:45	9	3	1	1	0	1	1	0	0	0	0	0	0
14:00	4	1	2	1	1	0	1	0	0	0	0	0	1
14:15	4	0	1	1	1	0	0	0	0	0	0	0	0
14:30	3	0	0	0	1	1	0	0	0	0	0	0	0
14:45	6	2	1	0	1	0	0	1	1	0	0	0	0
15:00	1	0	3	1	0	0	0	0	0	0	0	0	0
VEH.	39	14	14	10	8	4	4	2	1	1	0	0	1
%ILE	92	94	96	97	98	98	99	99	99	99	99	99	100

STEALTH SURVEY INFO

<STA.3> WESTBOUND
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SURVEY STARTED: <2016/12/19 12:27> FILENAME: 1A00003.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TOTAL VEHICLES = 665 MINIMUM SPEED = 15 MAXIMUM SPEED = 48

AVERAGE SPEED = 32.87 50th PERCENTILE = 34 85th PERCENTILE = 40

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY SUMMARY

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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:27> FILENAME: 1A00003.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

TIME	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
VEH.	9	72	54	73	64	64	74	69	80	63	43
AVG.	30.4	34.9	29.0	31.9	32.8	34.7	34.7	33.4	31.7	31.2	34.4

TOTAL VEHICLES = 665 MINIMUM SPEED = 15 MAXIMUM SPEED = 48

AVERAGE SPEED = 32.87 50th PERCENTILE = 34 85th PERCENTILE = 40

TEN MILE PACE = 32 to 41

END OF REPORT

STEALTH SURVEY DETAILS

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POSTED SPEED LIMIT: <35>
SURVEY STARTED: <2016/12/19 12:27> FILENAME: 1A00003.DAT
MIN SPEED ALLOWED <15> MAX SPEED ALLOWED <100>

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
12:30	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	2	2	1	0	0	0	0
12:45	2	0	0	0	0	1	0	0	0	1	0	0	3	5	2	1	3	3	5	7	4	5	1	7	5
13:00	2	1	2	3	3	1	1	0	0	2	1	2	2	2	0	3	2	5	3	6	3	3	3	2	1
13:15	0	1	0	2	2	2	2	0	0	0	1	2	5	2	3	3	4	5	4	5	4	11	3	3	2
13:30	0	0	0	2	2	1	2	1	2	0	3	0	0	1	2	3	3	2	6	5	5	8	2	0	4
13:45	1	0	0	1	0	0	1	0	1	2	1	1	2	3	1	0	1	4	4	4	3	4	4	3	4
14:00	1	0	1	0	2	1	0	2	0	2	1	1	1	1	2	0	0	3	6	3	3	7	6	4	9
14:15	0	1	0	1	2	0	1	1	0	0	1	2	2	4	1	2	4	3	6	4	7	4	5	4	4
14:30	0	1	0	2	1	0	3	2	2	1	0	3	5	5	5	2	4	4	4	5	6	5	7	2	4
14:45	1	2	2	0	1	1	0	0	0	2	4	4	3	2	1	2	2	5	4	3	5	4	3	5	2
15:00	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	1	3	3	6	6	2	3	2	4	3
VEH.	7	6	7	11	13	8	10	6	5	10	12	17	24	25	18	17	26	38	50	50	43	54	36	34	38
%ILE	1	1	3	4	6	7	9	10	10	12	14	16	20	24	26	29	33	39	46	54	60	68	74	79	84

	40	41	42	43	44	45	46	47	48
12:30	0	0	0	0	0	0	0	0	0
12:45	2	7	2	1	3	0	1	0	1
13:00	0	0	0	0	1	0	0	0	0
13:15	1	4	0	2	0	0	0	0	0
13:30	0	3	3	2	1	0	0	0	1
13:45	7	8	1	2	0	0	0	0	1
14:00	7	4	3	2	2	0	0	0	0
14:15	1	4	3	1	0	0	1	0	0
14:30	2	2	1	0	0	1	0	1	0
14:45	1	1	1	1	0	0	0	1	0
15:00	0	4	0	2	0	0	0	0	0
VEH.	21	37	14	13	7	1	2	2	3
%ILE	88	93	95	97	98	98	99	99	100

APPENDIX B – EXISTING CONDITIONS

APPENDIX B-1: SYNCHRO MODELING INPUTS AND ASSUMPTIONS

US 460 Corridor Improvement Study – Synchro Existing (2016) Conditions Modeling Inputs and Assumptions

The existing (2016) AM and PM peak hour Synchro models were developed based on a combination of collected data and visual observations. The following inputs and assumptions were used in the existing Synchro models. The inputs and assumptions were used in both the AM and PM peak hour models, unless otherwise noted.

Geometric Inputs

- Lane configurations were based on existing geometry, with the following exceptions:
  - At the US 460 at Front Street intersection, the curb radius for the channelized eastbound right-turn movement was set to the Synchro maximum allowable value of 250 feet
  - At the Front Street at 2nd Street/Kents Ridge Road intersection, the northbound, Kents Ridge Road, approach is signed as yield controlled in the field; however, this approach was modeled as stop-controlled to match the operations observed in the field
  - At the US 460 at Clinch Valley Medical Center Entrance intersection, a "dummy" southbound stop-controlled right-turn lane with no volume was added to the model to accommodate reporting requirements for HCM 2010 methodology
- Lane width of 12 feet was input for all lanes except for the westbound left turn at Route 67, which was input as 10 feet based on aerial measurements and field observations
- Effective storage length, equal to storage length plus half of the taper length, was input as the storage length for all turn lanes
- Taper length was set to zero for all turn lanes
- Link speed was based on the posted speed limit. For locations with no posted speed limit, 25 MPH was assumed.
  - US 460 = 35 MPH
  - Front Street = 25 MPH
  - Route 67 = 40 MPH
  - Acme Road = 25 MPH (not posted)
  - Clearview Road = 25 MPH (not posted)
  - Baker Hollow Road = 25 MPH (not posted)
  - Patteson Street = 25 MPH (not posted)
  - Hillcreek Road = 25 MPH
  - Clinch Valley Medical Center Exit = 25 MPH (not posted)
  - Railroad Crossings = 25 MPH (not posted)
  - Clinch Valley Medical Center Entrance = 25 MPH (not posted)
  - Lake Park Drive = 25 MPH (not posted)
  - 2nd Street = 25 MPH
  - Rockbridge Avenue = 25 MPH (not posted)
  - Kents Ridge Road = 25 MPH (not posted)
- Grades were estimated based on field observations and roadway design plans. Grades less than approximately ±2% were not input into the Synchro model (kept default value of 0%). Grades greater than approximately ±2% were approximated and input into the Synchro model. The following grades were adjusted from the default value (grades shown in the direction of the intersection approach):
  - Intersection 3: US 460 at Clearview Road
    - Eastbound approach (US 460): +5%
    - Westbound approach (US 460): -5%
  - Intersection 4: US 460 at Baker Hollow Road
    - Eastbound approach (US 460): -3%
    - Westbound approach (US 460): +3%
  - Intersection 7: US 460 at Medical Center Exit:
    - Southbound approach (Medical Center Exit): -5%
  - Intersection 8: US 460 at Medical Center entrance
    - Southbound approach (Medical Center Entrance): -8%

Signal Timing Inputs

- Signal timing inputs were based on the existing signal timings provided by VDOT
- Existing AM and PM peak hour scenarios operate under the same signal timings
- All signals operate as actuated-uncoordinated.

Traffic Volume Inputs

- Balanced existing traffic volumes were input for all movements
- Individual movement heavy vehicle percentages were input for all movements at each intersection
- Overall intersection peak hour factors were input for all movements at each intersection

Synchro Analysis Method

HCM 2010 methodologies were used for analysis of all unsignalized intersections in the study corridor. Due to the limitations of the HCM 2010 methodologies to analyze intersections with split phasing and turning movements with shared and exclusive lanes, HCM 2000 methodologies were used for the analysis of the signalized intersections.

Synchro 95th Percentile Queue Length Results

Synchro 95th percentile queue length results were reported from different sources for signalized and unsignalized intersections.

- For signalized intersections, 95th percentile queue lengths, measured in feet, were taken from Synchro queue reports.
- Synchro does not provide a queue report for unsignalized intersections. For unsignalized intersections, the 95th percentile queue lengths, measured in vehicles, were taken from the HCM 2010 reports. An average vehicle length of 25 feet was assumed to convert the queue lengths in the HCM 2010 reports from vehicles to feet.

APPENDIX B-2: SYNCHRO DELAY & LEVEL OF SERVICE SUMMARY

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2016 Existing Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1 US 460 at Route 67			US 460				US 460				Route 67									
	Signal	Left	--	--	--	--	18.5	B	19.4	B	17.4	B	20.1	C	--	--	--	--	Delay	Delay
		Through	17.6	B	20.5	C	4.7	A	4.3	A	--	--	--	--	--	--	--	--	11.9	12.8
		Right	--	--	--	--	--	--	--	--	6.8	A	5.5	A	--	--	--	--	LOS	LOS
		Approach	17.6	B	20.5	C	10.6	B	11.4	B	7.2	A	6.1	A	--	--	--	--	B	B
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left	25.4	C	20.4	C	--	--	--	--	--	--	--	--	22.4	C	21.0	C	Delay	Delay
		Through	2.7	A	3.0	A	5.5	A	8.1	A	--	--	--	--	--	--	--	--	4.5	6.6
		Right	--	--	--	--	--	--	--	--	--	--	--	--	14.0	B	11.8	B	LOS	LOS
		Approach	3.1	A	3.5	A	5.5	A	8.1	A	--	--	--	--	19.3	B	16.1	B	A	A
3 US 460 at Clearview Road			US 460				US 460								Clearview Road					
	One-Way Stop	Left	8.2	A	10.9	B	--	--	--	--	--	--	--	--	13.4	B	16.3	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	13.4	B	16.3	C	--	--
4 US 460 at Baker Hollow Road			US 460				US 460								Baker Hollow Road					
	One-Way Stop	Left	8.2	A	9.1	A	--	--	--	--	--	--	--	--	15.0	B	12.6	B	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	15.0	B	12.6	B	--	--
5 US 460 at Patteson Street			US 460				US 460								Patteson Street					
	One-Way Stop	Left	8.7	A	9.7	A	--	--	--	--	--	--	--	--	13.2	B	15.4	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	13.2	B	15.4	C	--	--
6 US 460 at Hillcreek Road			US 460				US 460								Hillcreek Road					
	One-Way Stop	Left	8.2	A	9.2	A	--	--	--	--	--	--	--	--	16.2	C	22.2	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	16.2	C	22.2	C	--	--
7 US 460 at Clinch Valley Medical Center Exit			US 460				US 460				Railroad Crossing				Medical Center Exit					
	Signal	Left	--	--	--	--	47.3	D	35.8	D	30.0	C	32.8	C	28.5	C	29.7	C	Delay	Delay
		Through	9.6	A	19.0	B	5.2	A	11.2	B	--	--	--	--	27.1	C	27.0	C	9.6	18.8
		Right	--	--	--	--	--	--	--	--	28.4	C	29.4	C	--	--	--	--	LOS	LOS
		Approach	9.6	A	19.0	B	6.6	A	13.2	B	29.2	C	31.7	C	27.9	C	28.8	C	A	B
8 US 460 at Clinch Valley Medical Center Entrance			US 460				US 460								Medical Center Entrance					
	One-Way Stop	Left	8.8	A	9.1	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9 US 460 at Lake Park Drive			US 460				US 460				Railroad Crossing				Lake Park Drive					
	Signal	Left	41.3	D	49.7	D	34.0	C	36.2	D	--	--	--	--	--	--	--	--	Delay	Delay
		Through	12.1	B	19.0	B	9.6	A	13.4	B	31.6	C	31.9	C	34.2	C	35.9	D	13.5	19.6
		Right	--	--	--	--	--	--	--	--	31.0	C	32.1	C	30.1	C	33.0	C	LOS	LOS
		Approach	12.4	B	19.5	B	11.6	B	16.3	B	31.1	C	32.1	C	33.7	C	35.5	D	B	B
10 US 460 at Front Street			US 460				US 460				Front Street									
	Signal	Left	--	--	--	--	24.9	C	31.4	C	19.5	B	21.6	C	--	--	--	--	Delay	Delay
		Through	16.1	B	16.5	B	6.2	A	7.5	A	--	--	--	--	--	--	--	--	15.5	16.6
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	16.1	B	16.5	B	9.6	A	10.5	B	19.5	B	21.6	C	--	--	--	--	B	B
11 Fronst Street at 2nd Street/Kents Ridge Road			Front Street								Kents Ridge Road				2nd Street					
	Two-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	10.2	B	10.2	B	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	10.2	B	10.2	B	--	--
		Right	†	†	†	†	--	--	--	--	11.9	B	13.0	B	†	†	†	†	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	11.9	B	13.0	B	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue			Front Street												Rockbridge Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

APPENDIX B-3: SYNCHRO 95TH PERCENTILE QUEUE LENGTH SUMMARY

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2016 Existing Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)	
				AM	PM		AM	PM		AM	PM		AM	PM
1 US 460 at Route 67				US 460			US 460			Route 67				
	Signal	Left		--	--	425	105	183	38	20	16		--	--
		Through		103	102		26	34		--	--		--	--
		Right		--	--		--	--		50	25		--	--
2 US 460 at Acme Road				US 460			US 460						Acme Road	
	Signal	Left	140	15	18		--	--		--	--	65	22	32
		Through		65	53		69	116		--	--		--	--
		Right		--	--		--	--		--	--		7	14
3 US 460 at Clearview Road				US 460			US 460						Clearview Road	
	One-Way Stop	Left	145	0	0		--	--		--	--		3	3
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
4 US 460 at Baker Hollow Road				US 460			US 460						Baker Hollow Road	
	One-Way Stop	Left	135	0	0		--	--		--	--		5	3
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
5 US 460 at Patteson Street				US 460			US 460						Patteson Street	
	One-Way Stop	Left	138	0	0		--	--		--	--		3	3
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
6 US 460 at Hillcreek Road				US 460			US 460						Hillcreek Road	
	One-Way Stop	Left	150	0	0		--	--		--	--		8	13
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
7 US 460 at Clinch Valley Medical Center Exit				US 460			US 460			Railroad Crossing			Medical Center Exit	
	Signal	Left		--	--	140	22	66		19	101		35	122
		Through		198	223		67	150		--	--		20	40
		Right		--	--		--	--		0	0		--	--
8 US 460 at Clinch Valley Medical Center Entrance				US 460			US 460						Medical Center Entrance	
	One-Way Stop	Left	138	5	3		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
9 US 460 at Lake Park Drive				US 460			US 460			Railroad Crossing			Lake Park Drive	
	Signal	Left	138	18	22	150	55	115		--	--		--	--
		Through		197	256		153	230		20	22		57	77
		Right		--	--		--	--		0	54		0	0
10 US 460 at Front Street				US 460			US 460			Front Street				
	Signal	Left		--	--	138	71	69		136	205		--	--
		Through		164	225		51	76		--	--		--	--
		Right		--	--		--	--		--	--		--	--
11 Front Street at 2nd Street/Kents Ridge Road				Front Street						Kents Ridge Road			2nd Street	
	Two-Way Stop	Left		--	--		--	--		--	--		3	3
		Through		†	†		--	--		--	--		3	3
		Right	215	†	†		--	--		33	53		†	†
12 Front Street at Rockbridge Avenue				Front Street									Rockbridge Road	
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for unsignalized intersections.

NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.

† SYNCHRO does not provide queue length for movements with no conflicting volumes.

APPENDIX B-4: SYNCHRO OUTPUT SHEETS

HCM 2000 SIGNALIZED INTERSECTION OUTPUT SHEETS

1: Route 67 & US 460

Existing 2016 AM Peak

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	352	6	157	212	15	314
Future Volume (vph)	352	6	157	212	15	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3400		1604	3312	1421	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3400		1604	3312	1421	1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	400	7	178	241	17	357
RTOR Reduction (vph)	2	0	0	0	0	122
Lane Group Flow (vph)	405	0	178	241	17	235
Heavy Vehicles (%)	6%	0%	5%	9%	27%	3%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	13.1		12.5	31.6	10.5	28.7
Effective Green, g (s)	13.1		12.5	31.6	10.5	28.7
Actuated g/C Ratio	0.25		0.24	0.60	0.20	0.54
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	840		378	1974	281	849
v/s Ratio Prot	c0.12		c0.11	0.07	0.01	c0.15
v/s Ratio Perm						
v/c Ratio	0.48		0.47	0.12	0.06	0.28
Uniform Delay, d1	17.1		17.4	4.7	17.2	6.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		1.1	0.0	0.1	0.2
Delay (s)	17.6		18.5	4.7	17.4	6.8
Level of Service	B		B	A	B	A
Approach Delay (s)	17.6			10.6	7.2	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	16.9
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

2: US 460 & Acme Road

Existing 2016 AM Peak

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	653	355	6	25	14
Future Volume (vph)	13	653	355	6	25	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3360		1805	1509
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3360		1805	1509
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	726	394	7	28	16
RTOR Reduction (vph)	0	0	1	0	0	13
Lane Group Flow (vph)	14	726	400	0	28	3
Heavy Vehicles (%)	0%	5%	7%	17%	0%	7%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	1.0	31.2	24.1		2.3	9.5
Effective Green, g (s)	1.0	31.2	24.1		2.3	9.5
Actuated g/C Ratio	0.02	0.70	0.54		0.05	0.21
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	40	2394	1807		92	319
v/s Ratio Prot	0.01	c0.21	0.12		c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.35	0.30	0.22		0.30	0.01
Uniform Delay, d1	21.6	2.6	5.4		20.5	13.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.8	0.1	0.1		1.9	0.0
Delay (s)	25.4	2.7	5.5		22.4	14.0
Level of Service	C	A	A		C	B
Approach Delay (s)		3.1	5.5		19.3	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

7: Railroad Crossing/Medical Center Exit & US 460

Existing 2016 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	659	36	13	371	0	10	0	10	25	5	11
Future Volume (vph)	0	659	36	13	371	0	10	0	10	25	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.89	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3420		1570	3406		1805		1468	1779	1637	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3420		1570	3406		1805		1468	1779	1637	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	716	39	14	403	0	11	0	11	27	5	12
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	11	0	11	0
Lane Group Flow (vph)	0	753	0	14	403	0	11	0	0	27	6	0
Heavy Vehicles (%)	0%	5%	0%	15%	6%	0%	0%	0%	10%	4%	0%	9%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		30.9		1.1	37.2		2.0		2.0	3.6	3.6	
Effective Green, g (s)		30.9		1.1	37.2		2.0		2.0	3.6	3.6	
Actuated g/C Ratio		0.51		0.02	0.61		0.03		0.03	0.06	0.06	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1746		28	2094		59		48	105	97	
v/s Ratio Prot		c0.22		0.01	c0.12		c0.01		0.00	c0.02	0.00	
v/s Ratio Perm												
v/c Ratio		0.43		0.50	0.19		0.19		0.01	0.26	0.06	
Uniform Delay, d1		9.3		29.4	5.1		28.5		28.3	27.2	26.9	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3		17.9	0.1		1.5		0.1	1.3	0.3	
Delay (s)		9.6		47.3	5.2		30.0		28.4	28.5	27.1	
Level of Service		A		D	A		C		C	C	C	
Approach Delay (s)		9.6			6.6			29.2			27.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	22.9
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

9: Railroad Crossing/Lake Park Drive & US 460

Existing 2016 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	628	5	48	516	25	5	5	30	44	5	7
Future Volume (vph)	8	628	5	48	516	25	5	5	30	44	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3411		1736	3373			1854	1568		1818	1417
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3411		1736	3373			1854	1568		1818	1417
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	9	668	5	51	549	27	5	5	32	47	5	7
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	30	0	0	7
Lane Group Flow (vph)	9	672	0	51	574	0	0	10	2	0	52	0
Heavy Vehicles (%)	0%	5%	100%	4%	6%	12%	0%	0%	3%	0%	0%	14%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	3	4	4	4
Permitted Phases												
Actuated Green, G (s)	1.1	32.1		4.6	35.4			3.3	3.3		4.1	4.1
Effective Green, g (s)	1.1	32.1		4.6	35.4			3.3	3.3		4.1	4.1
Actuated g/C Ratio	0.02	0.47		0.07	0.52			0.05	0.05		0.06	0.06
Clearance Time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	29	1607		117	1753			89	75		109	85
v/s Ratio Prot	0.00	c0.20		c0.03	c0.17			c0.01	0.00		c0.03	0.00
v/s Ratio Perm												
v/c Ratio	0.31	0.42		0.44	0.33			0.11	0.02		0.48	0.00
Uniform Delay, d1	33.1	11.9		30.5	9.5			31.0	30.9		31.0	30.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	8.2	0.2		3.5	0.1			0.6	0.1		3.3	0.0
Delay (s)	41.3	12.1		34.0	9.6			31.6	31.0		34.2	30.1
Level of Service	D	B		C	A			C	C		C	C
Approach Delay (s)		12.4			11.6			31.1			33.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	24.2
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	349	353	64	291	298	121
Future Volume (vph)	349	353	64	291	298	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3164		1656	3374	3217	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	3164		1656	3374	3217	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	392	397	72	327	335	136
RTOR Reduction (vph)	145	0	0	0	42	0
Lane Group Flow (vph)	644	0	72	327	429	0
Heavy Vehicles (%)	8%	3%	9%	7%	5%	8%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	21.2		6.6	33.4	15.1	
Effective Green, g (s)	21.2		6.6	33.4	15.1	
Actuated g/C Ratio	0.36		0.11	0.57	0.26	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1134		184	1906	821	
v/s Ratio Prot	c0.20		c0.04	0.10	c0.13	
v/s Ratio Perm						
v/c Ratio	0.57		0.39	0.17	0.52	
Uniform Delay, d1	15.3		24.4	6.2	18.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.8		0.5	0.1	0.6	
Delay (s)	16.1		24.9	6.2	19.5	
Level of Service	B		C	A	B	
Approach Delay (s)	16.1			9.6	19.5	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	16.2
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	319	5	309	340	9	234
Future Volume (vph)	319	5	309	340	9	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1652	3505	1805	1553
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1652	3505	1805	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	343	5	332	366	10	252
RTOR Reduction (vph)	1	0	0	0	0	103
Lane Group Flow (vph)	347	0	332	366	10	149
Heavy Vehicles (%)	6%	0%	2%	3%	0%	4%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	12.7		18.7	37.4	10.1	34.5
Effective Green, g (s)	12.7		18.7	37.4	10.1	34.5
Actuated g/C Ratio	0.22		0.32	0.64	0.17	0.59
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	739		528	2244	312	917
v/s Ratio Prot	c0.10		c0.20	0.10	0.01	c0.10
v/s Ratio Perm						
v/c Ratio	0.47		0.63	0.16	0.03	0.16
Uniform Delay, d1	19.9		16.9	4.2	20.1	5.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		2.5	0.0	0.0	0.1
Delay (s)	20.5		19.4	4.3	20.1	5.5
Level of Service	C		B	A	C	A
Approach Delay (s)	20.5			11.4	6.1	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	16.9
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	537	604	6	38	45
Future Volume (vph)	16	537	604	6	38	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3501		1752	1615
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	17	577	649	6	41	48
RTOR Reduction (vph)	0	0	1	0	0	34
Lane Group Flow (vph)	17	577	654	0	41	14
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	3.2	30.9	21.6		3.7	13.1
Effective Green, g (s)	3.2	30.9	21.6		3.7	13.1
Actuated g/C Ratio	0.07	0.67	0.47		0.08	0.29
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	125	2314	1647		141	460
v/s Ratio Prot	0.01	c0.17	c0.19		c0.02	0.01
v/s Ratio Perm						
v/c Ratio	0.14	0.25	0.40		0.29	0.03
Uniform Delay, d1	20.1	2.9	7.9		19.9	11.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2		1.1	0.0
Delay (s)	20.4	3.0	8.1		21.0	11.8
Level of Service	C	A	A		C	B
Approach Delay (s)		3.5	8.1		16.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.9	Sum of lost time (s)	17.4
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	539	58	49	567	0	88	0	40	114	9	45
Future Volume (vph)	0	539	58	49	567	0	88	0	40	114	9	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.88	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3394		1805	3505		1805		1568	1796	1678	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3394		1805	3505		1805		1568	1796	1678	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	573	62	52	603	0	94	0	43	121	10	48
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	38	0	41	0
Lane Group Flow (vph)	0	628	0	52	603	0	94	0	5	121	17	0
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%	0%	0%	3%	3%	0%	2%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		26.6		5.1	36.9		7.9		7.9	11.0	11.0	
Effective Green, g (s)		26.6		5.1	36.9		7.9		7.9	11.0	11.0	
Actuated g/C Ratio		0.36		0.07	0.50		0.11		0.11	0.15	0.15	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1228		125	1759		194		168	268	251	
v/s Ratio Prot		c0.19		0.03	c0.17		c0.05		0.00	c0.07	0.01	
v/s Ratio Perm												
v/c Ratio		0.51		0.42	0.34		0.48		0.03	0.45	0.07	
Uniform Delay, d1		18.4		32.8	11.0		30.9		29.4	28.5	26.8	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.6		3.0	0.2		1.9		0.1	1.2	0.1	
Delay (s)		19.0		35.8	11.2		32.8		29.4	29.7	27.0	
Level of Service		B		D	B		C		C	C	C	
Approach Delay (s)		19.0			13.2			31.7			28.8	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	22.9
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

9: Railroad Crossing/Lake Park Drive & US 460

Existing 2016 PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	662	5	101	637	59	5	5	119	53	5	10
Future Volume (vph)	9	662	5	101	637	59	5	5	119	53	5	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3502		1770	3469			1685	1599		1816	1468
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3502		1770	3469			1685	1599		1816	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	10	727	5	111	700	65	5	5	131	58	5	11
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	117	0	0	10
Lane Group Flow (vph)	10	731	0	111	760	0	0	10	14	0	63	1
Heavy Vehicles (%)	0%	3%	0%	2%	3%	0%	20%	0%	1%	0%	0%	10%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		4	4	4	3	3	3
Permitted Phases												
Actuated Green, G (s)	1.2	30.6		9.2	38.4			8.2	8.2		6.7	6.7
Effective Green, g (s)	1.2	30.6		9.2	38.4			8.2	8.2		6.7	6.7
Actuated g/C Ratio	0.02	0.39		0.12	0.49			0.10	0.10		0.09	0.09
Clearance Time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	27	1361		206	1692			175	166		154	124
v/s Ratio Prot	0.01	c0.21		c0.06	0.22			0.01	c0.01		c0.03	0.00
v/s Ratio Perm												
v/c Ratio	0.37	0.54		0.54	0.45			0.06	0.08		0.41	0.01
Uniform Delay, d1	38.4	18.6		32.8	13.2			31.8	31.9		34.1	33.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	11.3	0.5		3.4	0.2			0.1	0.2		1.8	0.0
Delay (s)	49.7	19.0		36.2	13.4			31.9	32.1		35.9	33.0
Level of Service	D	B		D	B			C	C		D	C
Approach Delay (s)		19.5			16.3			32.1			35.5	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	78.7	Sum of lost time (s)	24.2
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

10: Front Street & US 460

Existing 2016 PM Peak

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	398	436	51	361	436	97
Future Volume (vph)	398	436	51	361	436	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3248		1736	3471	3398	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3248		1736	3471	3398	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	447	490	57	406	490	109
RTOR Reduction (vph)	145	0	0	0	17	0
Lane Group Flow (vph)	792	0	57	406	582	0
Heavy Vehicles (%)	4%	1%	4%	4%	1%	3%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	27.2		4.4	37.2	19.1	
Effective Green, g (s)	27.2		4.4	37.2	19.1	
Actuated g/C Ratio	0.41		0.07	0.56	0.29	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1320		114	1930	970	
v/s Ratio Prot	c0.24		c0.03	0.12	c0.17	
v/s Ratio Perm						
v/c Ratio	0.60		0.50	0.21	0.60	
Uniform Delay, d1	15.6		30.2	7.5	20.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		1.3	0.1	1.0	
Delay (s)	16.5		31.4	7.5	21.6	
Level of Service	B		C	A	C	
Approach Delay (s)	16.5			10.5	21.6	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	16.2
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 UNSIGNALIZED INTERSECTION OUTPUT SHEETS

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	13	665	381	5	5	5
Future Vol, veh/h	13	665	381	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	15	756	433	6	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	439	0	-	0	843	219
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1132	-	-	-	307	791
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1132	-	-	-	303	791
Mov Cap-2 Maneuver	-	-	-	-	303	-
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	637	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1132	-	-	-	438
HCM Lane V/C Ratio	0.013	-	-	-	0.026
HCM Control Delay (s)	8.2	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	665	381	5	13	5
Future Vol, veh/h	5	665	381	5	13	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	747	428	6	15	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	434	0	-	0	816	217
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	385	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1136	-	-	-	319	794
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1136	-	-	-	317	794
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1136	-	-	-	380
HCM Lane V/C Ratio	0.005	-	-	-	0.053
HCM Control Delay (s)	8.2	-	-	-	15
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	673	381	5	5	5
Future Vol, veh/h	5	673	381	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	25	5	7	33	0	0
Mvmt Flow	6	756	428	6	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	434	0	-	0	820	217
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.6	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.45	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	975	-	-	-	317	794
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	315	794
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	451
HCM Lane V/C Ratio	0.006	-	-	-	0.025
HCM Control Delay (s)	8.7	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	673	381	11	22	5
Future Vol, veh/h	5	673	381	11	22	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	756	428	12	25	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	440	0	-	0	823	220
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1131	-	-	-	316	790
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1131	-	-	-	314	790
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1131	-	-	-	353
HCM Lane V/C Ratio	0.005	-	-	-	0.086
HCM Control Delay (s)	8.2	-	-	-	16.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	53	641	384	144	0	0
Future Vol, veh/h	53	641	384	144	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	7	3	0	0
Mvmt Flow	58	697	417	157	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	574	0	-	0	960	287
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	464	-
Critical Hdwy	4.1	-	-	-	5.2	6.1
Critical Hdwy Stg 1	-	-	-	-	4.2	-
Critical Hdwy Stg 2	-	-	-	-	4.2	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1009	-	-	-	395	763
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	744	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1009	-	-	-	372	763
Mov Cap-2 Maneuver	-	-	-	-	372	-
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1009	-	-	-	-
HCM Lane V/C Ratio	0.057	-	-	-	-
HCM Control Delay (s)	8.8	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	259	108	0	0	0	0	0	213	16	46	367
Future Vol, veh/h	0	259	108	0	0	0	0	0	213	16	46	367
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	215	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	4	0	0	0	0	0	5	0	11	4
Mvmt Flow	0	282	117	0	0	0	0	0	232	17	50	399

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	307	282	282	282	282	-
Stage 1	-	-	-	282	282	-	0	0	-
Stage 2	-	-	-	25	0	-	282	282	-
Critical Hdwy	-	-	-	6.4	6.5	6.25	6.4	6.61	-
Critical Hdwy Stg 1	-	-	-	5.4	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.61	-
Follow-up Hdwy	-	-	-	3.5	4	3.345	3.5	4.099	-
Pot Cap-1 Maneuver	-	-	-	689	630	750	712	612	0
Stage 1	-	-	-	770	681	-	-	-	0
Stage 2	-	-	-	-	-	-	770	662	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	689	0	750	712	0	-
Mov Cap-2 Maneuver	-	-	-	689	0	-	712	0	-
Stage 1	-	-	-	770	0	-	-	0	-
Stage 2	-	-	-	-	0	-	770	0	-

Approach	EB	NB	SB
HCM Control Delay, s	0	11.9	
HCM LOS		B	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	750	-	-	-	712	-	-
HCM Lane V/C Ratio	0.309	-	-	-	0.024	-	-
HCM Control Delay (s)	11.9	0	-	-	10.2	-	0
HCM Lane LOS	B	A	-	-	B	-	A
HCM 95th %tile Q(veh)	1.3	-	-	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	570	663	5	5	5
Future Vol, veh/h	5	570	663	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	5	2	0	0	0
Mvmt Flow	5	626	729	5	5	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	734	0	-	0	1055	367
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	5.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.7	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	613	-	-	-	224	636
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	613	-	-	-	222	636
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	705	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	613	-	-	-	329
HCM Lane V/C Ratio	0.009	-	-	-	0.033
HCM Control Delay (s)	10.9	-	-	-	16.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	9	566	663	14	11	5
Future Vol, veh/h	9	566	663	14	11	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	3	0	0	0
Mvmt Flow	10	615	721	15	12	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	736	0	-	0	1055	368
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	327	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	879	-	-	-	224	635
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	879	-	-	-	221	635
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	879	-	-	-	490
HCM Lane V/C Ratio	0.011	-	-	-	0.035
HCM Control Delay (s)	9.1	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	6	571	668	9	6	9
Future Vol, veh/h	6	571	668	9	6	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	17	5	2	0	0	11
Mvmt Flow	6	614	718	10	6	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	728	0	-	0	1043	364
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	320	-
Critical Hdwy	4.44	-	-	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.37	-	-	-	3.5	3.41
Pot Cap-1 Maneuver	779	-	-	-	228	608
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	779	-	-	-	226	608
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	779	-	-	-	363
HCM Lane V/C Ratio	0.008	-	-	-	0.044
HCM Control Delay (s)	9.7	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	572	672	28	25	5
Future Vol, veh/h	5	572	672	28	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	5	2	4	4	0
Mvmt Flow	5	615	723	30	27	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	753	0	-	0	1056	376
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	4.1	-	-	-	6.88	6.9
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.2	-	-	-	3.54	3.3
Pot Cap-1 Maneuver	866	-	-	-	217	627
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	866	-	-	-	216	627
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	700	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	22.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	866	-	-	-	242
HCM Lane V/C Ratio	0.006	-	-	-	0.133
HCM Control Delay (s)	9.2	-	-	-	22.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	17	676	616	36	0	0
Future Vol, veh/h	17	676	616	36	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	6	0	0
Mvmt Flow	18	735	670	39	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	709	0	-	0	1093	354
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	4.1	-	-	-	5.2	6.1
Critical Hdwy Stg 1	-	-	-	-	4.2	-
Critical Hdwy Stg 2	-	-	-	-	4.2	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	899	-	-	-	344	701
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	899	-	-	-	337	701
Mov Cap-2 Maneuver	-	-	-	-	337	-
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	760	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	899	-	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	9.1	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	250	238	0	0	0	0	0	308	31	111	504
Future Vol, veh/h	0	250	238	0	0	0	0	0	308	31	111	504
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	215	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0	0	0	1	0	1	1
Mvmt Flow	0	266	253	0	0	0	0	0	328	33	118	536

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	325	266	266	266	266	-
Stage 1	-	-	-	266	266	-	0	0	-
Stage 2	-	-	-	59	0	-	266	266	-
Critical Hdwy	-	-	-	6.4	6.5	6.21	6.4	6.51	-
Critical Hdwy Stg 1	-	-	-	5.4	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.51	-
Follow-up Hdwy	-	-	-	3.5	4	3.309	3.5	4.009	-
Pot Cap-1 Maneuver	-	-	-	673	643	775	727	641	0
Stage 1	-	-	-	783	692	-	-	-	0
Stage 2	-	-	-	-	-	-	783	691	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	673	0	775	727	0	-
Mov Cap-2 Maneuver	-	-	-	673	0	-	727	0	-
Stage 1	-	-	-	783	0	-	-	0	-
Stage 2	-	-	-	-	0	-	783	0	-

Approach	EB	NB	SB
HCM Control Delay, s	0	13	
HCM LOS		B	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	775	-	-	-	727	-	-
HCM Lane V/C Ratio	0.423	-	-	-	0.045	-	-
HCM Control Delay (s)	13	0	-	-	10.2	-	0
HCM Lane LOS	B	A	-	-	B	-	A
HCM 95th %tile Q(veh)	2.1	-	-	-	0.1	-	-

SYNCHRO QUEUE OUTPUT SHEETS

1: Route 67 & US 460

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	407	178	241	17	357
v/c Ratio	0.49	0.47	0.12	0.06	0.37
Control Delay	19.7	22.7	4.7	20.8	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	22.7	4.7	20.8	3.5
Queue Length 50th (ft)	54	46	14	4	12
Queue Length 95th (ft)	103	105	26	20	50
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2922	919	3312	814	1393
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.19	0.07	0.02	0.26

Intersection Summary

2: US 460 & Acme Road

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	14	726	401	28	16
v/c Ratio	0.05	0.25	0.15	0.09	0.04
Control Delay	16.0	3.0	5.4	15.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	3.0	5.4	15.6	4.2
Queue Length 50th (ft)	2	0	0	4	0
Queue Length 95th (ft)	15	65	69	22	7
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	774	3438	3358	774	834
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.21	0.12	0.04	0.02

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	755	14	403	11	11	27	17
v/c Ratio	0.32	0.06	0.16	0.05	0.04	0.11	0.07
Control Delay	9.4	26.4	6.1	27.6	0.2	26.9	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	26.4	6.1	27.6	0.2	26.9	18.2
Queue Length 50th (ft)	43	4	20	3	0	7	1
Queue Length 95th (ft)	198	22	67	19	0	35	20
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	3002	539	3305	620	591	815	756
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.03	0.12	0.02	0.02	0.03	0.02

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	9	673	51	576	10	32	52	7
v/c Ratio	0.03	0.33	0.17	0.25	0.04	0.09	0.18	0.02
Control Delay	31.9	16.2	29.9	10.2	32.3	0.5	30.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	16.2	29.9	10.2	32.3	0.5	30.8	0.1
Queue Length 50th (ft)	3	125	19	68	4	0	20	0
Queue Length 95th (ft)	18	197	55	153	20	0	57	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	567	2619	727	2722	776	732	571	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.26	0.07	0.21	0.01	0.04	0.09	0.01

Intersection Summary

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	789	72	327	471
v/c Ratio	0.61	0.27	0.18	0.54
Control Delay	13.8	30.0	6.6	21.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.8	30.0	6.6	21.1
Queue Length 50th (ft)	82	23	24	65
Queue Length 95th (ft)	164	71	51	136
Internal Link Dist (ft)	669		798	633
Turn Bay Length (ft)		138		
Base Capacity (vph)	2478	620	3287	2480
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	0.32	0.12	0.10	0.19

Intersection Summary

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	348	332	366	10	252
v/c Ratio	0.47	0.63	0.16	0.03	0.25
Control Delay	23.1	23.1	4.2	24.2	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	23.1	4.2	24.2	1.7
Queue Length 50th (ft)	55	97	22	3	0
Queue Length 95th (ft)	102	183	34	16	25
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2649	857	3505	936	1264
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.13	0.39	0.10	0.01	0.20

Intersection Summary

2: US 460 & Acme Road

Existing 2016 PM Peak

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	17	577	655	41	48
v/c Ratio	0.06	0.22	0.31	0.14	0.09
Control Delay	19.2	3.6	10.0	18.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	3.6	10.0	18.6	4.0
Queue Length 50th (ft)	4	30	70	9	0
Queue Length 95th (ft)	18	53	116	32	14
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	702	3438	3407	682	921
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.17	0.19	0.06	0.05

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Existing 2016 PM Peak

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	635	52	603	94	43	121	58
v/c Ratio	0.49	0.22	0.35	0.37	0.13	0.43	0.19
Control Delay	22.1	36.1	13.0	37.1	0.8	36.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	36.1	13.0	37.1	0.8	36.6	14.7
Queue Length 50th (ft)	127	22	84	40	0	51	4
Queue Length 95th (ft)	223	66	150	101	0	122	40
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	2329	412	3059	412	460	547	544
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.13	0.20	0.23	0.09	0.22	0.11

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Existing 2016 PM Peak

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	10	732	111	765	10	131	63	11
v/c Ratio	0.05	0.56	0.39	0.42	0.05	0.44	0.28	0.04
Control Delay	38.2	23.5	36.4	13.0	37.0	13.1	38.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	23.5	36.4	13.0	37.0	13.1	38.2	0.2
Queue Length 50th (ft)	4	150	46	98	4	0	27	0
Queue Length 95th (ft)	22	256	115	230	22	54	77	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	396	2301	518	2450	370	453	532	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.32	0.21	0.31	0.03	0.29	0.12	0.02

Intersection Summary

10: Front Street & US 460

Existing 2016 PM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	937	57	406	599
v/c Ratio	0.63	0.23	0.22	0.59
Control Delay	14.2	35.5	8.2	24.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.2	35.5	8.2	24.0
Queue Length 50th (ft)	122	22	38	110
Queue Length 95th (ft)	225	69	76	205
Internal Link Dist (ft)	669		798	633
Turn Bay Length (ft)		138		
Base Capacity (vph)	2429	598	3227	2479
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	0.10	0.13	0.24

Intersection Summary

APPENDIX C – TRAFFIC FORECASTING

APPENDIX C-1: VDOT PUBLISHED HISTORIC AADT DATA

VDOT Published Historic AADT Traffic Volume Estimates & Calculated Historical Growth Rates

	US 460 from Route 67 to BUS US 460		Front Street from US 460 to 2nd Street		Route 67 from Russell County Line to US 460	
VDOT ANNUAL AVERAGE DAILY TRAFFIC VOLUME ESTIMATES						
Year	AADT Estimate	Quality	AADT Estimate	Quality	AADT Estimate	Quality
2001	18,000	G	12,000	G	2,200	G
2002	12,000	F	13,000	F	5,900	F
2003	12,000	G	13,000	G	5,800	G
2004	12,000	G	13,000	G	5,800	G
2005	16,000	F	13,000	F	6,000	F
2006	16,000	G	14,000	G	6,100	G
2007	16,000	G	13,000	G	6,100	G
2008	16,000	G	14,000	F	5,800	F
2009	16,000	G	14,000	G	6,000	G
2010	17,000	G	15,000	G	6,200	G
2011	15,000	F	13,000	F	5,300	F
2012	14,000	G	13,000	G	5,300	G
2013	14,000	G	13,000	G	5,200	G
2014	13,000	F	13,000	F	4,800	F
2015	13,000	G	13,000	G	4,900	G
LINEAR GROWTH RATES						
12 - Year (2002 - 2014)	0.69%		0.00%		-1.55%	
9 - Year (2005 - 2014)	-2.08%		0.00%		-2.22%	
3 - Year (2011 - 2014)	-4.44%		0.00%		-3.14%	
EXPONENTIAL GROWTH RATES						
12 - Year (2002 - 2014)	0.67%		0.00%		-1.70%	
9 - Year (2005 - 2014)	-2.28%		0.00%		-2.45%	
3 - Year (2011 - 2014)	-4.66%		0.00%		-3.25%	

AADT Quality:
F: Factored Short Term Traffic Count Data
G: Factored Short Term Traffic Count Data with Growth Element

APPENDIX C-2: STATEWIDE PLANNING SYSTEM (SPS) FUTURE GROWTH RATES

Statewide Planning System (SPS) Forecast AADT and Projected Future Growth Rates

Year	US 460 from Route 67 to BUS US 460	Front Street from US 460 to 2nd Street
SPS DATA		
MOST RECENT COUNT AADT		
2015	13,378	12,973
FORECAST AADT		
2020	13,822	13,780
2030	14,709	15,393
2040	15,597	17,007
LINEAR GROWTH RATES		
25 - Year (2015 - 2040)	0.66%	1.24%
15 - Year (2015 - 2030)	0.66%	1.24%
5 - Year (2015 - 2020)	0.66%	1.24%
EXPONENTIAL GROWTH RATES		
25 - Year (2015 - 2040)	0.66%	1.21%
15 - Year (2015 - 2030)	0.63%	1.15%
5 - Year (2015 - 2020)	0.62%	1.09%

APPENDIX D – NO-BUILD CONDITIONS

APPENDIX D-1: SYNCHRO MODELING INPUTS AND ASSUMPTIONS

US 460 Corridor Improvement Study – Synchro No-Build (2030) Conditions Modeling Inputs and Assumptions

The no-build 2030 AM and PM peak hour Synchro models were developed based on the existing (2016) Synchro models. The following inputs and assumptions were used in both the AM and PM peak hour no-build Synchro models.

Geometric Inputs

- No changes to geometric inputs were made in the no-build 2030 models

Signal Timing Inputs

- Signal timing inputs were based on the existing signal timings provided by VDOT
- No changes were made to signal timing splits or cycle length

Traffic Volume Inputs

- Projected no-build 2030 traffic volumes were input in the no-build AM and PM peak hour models
- Heavy vehicle percentages were kept the same as the existing (2016) models
- Peak hour factors were kept the same as the existing (2016) models since all existing peak hour factors were greater than or equal to 0.88, per TOSAM direction for future conditions in rural areas

Synchro Analysis Method

The same analysis methods used for existing conditions were used for no-build analysis. HCM 2010 methodologies were used for analysis of all unsignalized intersections in the study corridor. Due to the limitations of the HCM 2010 methodologies to analyze intersections with split phasing and turning movements with shared and exclusive lanes, HCM 2000 methodologies were used for the analysis of the signalized intersections.

Synchro 95th Percentile Queue Length Results

The same analysis methods used for existing conditions were used for no-build analysis. Synchro 95th percentile queue length results were reported from different sources for signalized and unsignalized intersections:

- For signalized intersections, 95th percentile queue lengths, measured in feet, were taken from Synchro queue reports.
- Synchro does not provide a queue report for unsignalized intersections. For unsignalized intersections, the 95th percentile queue lengths, measured in vehicles, were taken from the HCM 2010 reports. An average vehicle length of 25 feet was assumed to convert the queue lengths in the HCM 2010 reports from vehicles to feet.

APPENDIX D-2: SYNCHRO DELAY & LEVEL OF SERVICE SUMMARY

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 No-Build Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1 US 460 at Route 67			US 460				US 460				Route 67									
	Signal	Left	--	--	--	--	19.2	B	19.3	B	18.0	B	21.6	C	--	--	--	--	Delay	Delay
		Through	18.2	B	21.7	C	4.8	A	4.1	A	--	--	--	--	--	--	--	--	12.4	13.1
		Right	--	--	--	--	--	--	--	--	7.2	A	5.6	A	--	--	--	--	LOS	LOS
		Approach	18.2	B	21.7	C	10.9	B	11.4	B	7.7	A	6.2	A	--	--	--	--	B	B
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left	26.5	C	21.4	C	--	--	--	--	--	--	--	--	22.7	C	20.1	C	Delay	Delay
		Through	2.7	A	3.6	A	5.5	A	9.0	A	--	--	--	--	--	--	--	--	4.6	7.3
		Right	--	--	--	--	--	--	--	--	--	--	--	--	14.1	B	11.6	B	LOS	LOS
		Approach	3.2	A	4.1	A	5.5	A	9.0	A	--	--	--	--	19.6	B	15.5	B	A	A
3 US 460 at Clearview Road			US 460				US 460								Clearview Road					
	One-Way Stop	Left	8.3	A	11.3	B	--	--	--	--	--	--	--	--	14.1	B	17.5	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	14.1	B	17.5	C	--	--
4 US 460 at Baker Hollow Road			US 460				US 460								Baker Hollow Road					
	One-Way Stop	Left	8.3	A	9.3	A	--	--	--	--	--	--	--	--	16.0	C	20.8	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	16.0	C	20.8	C	--	--
5 US 460 at Patteson Street			US 460				US 460								Patteson Street					
	One-Way Stop	Left	8.8	A	9.9	A	--	--	--	--	--	--	--	--	13.8	B	16.0	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	13.8	B	16.0	C	--	--
6 US 460 at Hillcreek Road			US 460				US 460								Hillcreek Road					
	One-Way Stop	Left	8.3	A	9.4	A	--	--	--	--	--	--	--	--	17.4	C	24.7	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	17.4	C	24.7	C	--	--
7 US 460 at Clinch Valley Medical Center Exit			US 460				US 460				Railroad Crossing				Medical Center Exit					
	Signal	Left	--	--	--	--	57.3	E	37.5	D	30.9	C	34.5	C	29.2	C	31.0	C	Delay	Delay
		Through	9.6	A	19.5	B	5.1	A	11.5	B	--	--	--	--	27.7	C	28.0	C	9.8	19.4
		Right	--	--	--	--	--	--	--	--	29.1	C	30.6	C	--	--	--	--	LOS	LOS
		Approach	9.6	A	19.5	B	6.9	A	13.6	B	30.0	C	33.2	C	28.6	C	30.0	C	A	B
8 US 460 at Clinch Valley Medical Center Entrance			US 460				US 460								Medical Center Entrance					
	One-Way Stop	Left	8.9	A	9.3	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9 US 460 at Lake Park Drive			US 460				US 460				Railroad Crossing				Lake Park Drive					
	Signal	Left	44.5	D	53.8	D	35.5	D	37.8	D	--	--	--	--	--	--	--	--	Delay	Delay
		Through	12.1	B	19.7	B	9.5	A	13.7	B	32.6	C	32.7	C	35.7	D	37.0	D	13.6	20.2
		Right	--	--	--	--	--	--	--	--	32.0	C	32.9	C	31.0	C	33.8	C	LOS	LOS
		Approach	12.5	B	20.1	C	11.6	B	16.7	B	32.1	C	32.9	C	35.2	D	36.6	D	B	C
10 US 460 at Front Street			US 460				US 460				Front Street									
	Signal	Left	--	--	--	--	26.9	C	32.6	C	20.9	C	24.8	C	--	--	--	--	Delay	Delay
		Through	16.8	B	18.8	B	6.5	A	7.8	A	--	--	--	--	--	--	--	--	16.4	18.7
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	16.8	B	18.8	B	10.2	B	10.9	B	20.9	C	24.8	C	--	--	--	--	B	B
11 Fronst Street at 2nd Street/Kents Ridge Road			Front Street								Kents Ridge Road				2nd Street					
	Two-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	10.3	B	10.3	B	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	10.3	B	10.3	B	--	--
		Right	†	†	†	†	--	--	--	--	12.4	B	13.8	B	†	†	†	†	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	12.4	B	13.8	B	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue			Front Street												Rockbridge Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.

NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.

† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

APPENDIX D-3: SYNCHRO 95TH PERCENTILE QUEUE LENGTH SUMMARY

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 No-Build Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)	
				AM	PM		AM	PM		AM	PM		AM	PM
1 US 460 at Route 67				US 460			US 460			Route 67				
	Signal	Left		--	--	425	120	200	38	22	18		--	--
		Through		117	113		31	36		--	--		--	--
		Right		--	--		--	--		65	26		--	--
2 US 460 at Acme Road				US 460			US 460						Acme Road	
	Signal	Left	140	16	19		--	--		--	--	65	23	34
		Through		71	57		74	127		--	--		--	--
		Right		--	--		--	--		--	--		7	15
3 US 460 at Clearview Road				US 460			US 460						Clearview Road	
	One-Way Stop	Left	145	0	0		--	--		--	--		3	3
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
4 US 460 at Baker Hollow Road				US 460			US 460						Baker Hollow Road	
	One-Way Stop	Left	135	0	0		--	--		--	--		5	5
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
5 US 460 at Patteson Street				US 460			US 460						Patteson Street	
	One-Way Stop	Left	138	0	0		--	--		--	--		3	5
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
6 US 460 at Hillcreek Road				US 460			US 460						Hillcreek Road	
	One-Way Stop	Left	150	0	0		--	--		--	--		8	15
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
7 US 460 at Clinch Valley Medical Center Exit				US 460			US 460			Railroad Crossing			Medical Center Exit	
	Signal	Left		--	--	140	25	71		22	111		38	135
		Through		217	248		73	168		--	--		22	42
		Right		--	--		--	--		0	0		--	--
8 US 460 at Clinch Valley Medical Center Entrance				US 460			US 460						Medical Center Entrance	
	One-Way Stop	Left	138	5	3		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
9 US 460 at Lake Park Drive				US 460			US 460			Railroad Crossing			Lake Park Drive	
	Signal	Left	138	20	25	150	60	127		--	--		--	--
		Through		215	286		166	254		21	23		62	85
		Right		--	--		--	--		0	57		0	0
10 US 460 at Front Street				US 460			US 460			Front Street				
	Signal	Left		--	--	138	80	79		157	237		--	--
		Through		192	262		58	85		--	--		--	--
		Right		--	--		--	--		--	--		--	--
11 Front Street at 2nd Street/Kents Ridge Road				Front Street						Kents Ridge Road			2nd Street	
	Two-Way Stop	Left		--	--		--	--		--	--		3	5
		Through		†	†		--	--		--	--		3	5
		Right	215	†	†		--	--		38	63		†	†
12 Front Street at Rockbridge Avenue				Front Street									Rockbridge Road	
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for unsignalized intersections.

NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.

† SYNCHRO does not provide queue length for movements with no conflicting volumes.

APPENDIX D-4: SYNCHRO OUTPUT SHEETS

HCM 2000 SIGNALIZED INTERSECTION OUTPUT SHEETS

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	376	6	168	227	16	336
Future Volume (vph)	376	6	168	227	16	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1604	3312	1421	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1604	3312	1421	1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	427	7	191	258	18	382
RTOR Reduction (vph)	1	0	0	0	0	110
Lane Group Flow (vph)	433	0	191	258	18	272
Heavy Vehicles (%)	6%	0%	5%	9%	27%	3%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	13.9		13.3	33.2	11.0	30.0
Effective Green, g (s)	13.9		13.3	33.2	11.0	30.0
Actuated g/C Ratio	0.25		0.24	0.60	0.20	0.54
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	857		387	1995	283	853
v/s Ratio Prot	c0.13		c0.12	0.08	0.01	c0.17
v/s Ratio Perm						
v/c Ratio	0.51		0.49	0.13	0.06	0.32
Uniform Delay, d1	17.7		18.0	4.7	17.9	6.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		1.2	0.0	0.1	0.3
Delay (s)	18.2		19.2	4.8	18.0	7.2
Level of Service	B		B	A	B	A
Approach Delay (s)	18.2			10.9	7.7	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	16.9
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	698	380	6	27	15
Future Volume (vph)	14	698	380	6	27	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3360		1805	1509
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3360		1805	1509
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	776	422	7	30	17
RTOR Reduction (vph)	0	0	1	0	0	13
Lane Group Flow (vph)	16	776	428	0	30	4
Heavy Vehicles (%)	0%	5%	7%	17%	0%	7%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	1.0	31.5	24.4		2.3	9.5
Effective Green, g (s)	1.0	31.5	24.4		2.3	9.5
Actuated g/C Ratio	0.02	0.70	0.54		0.05	0.21
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	40	2401	1817		92	317
v/s Ratio Prot	0.01	c0.23	0.13		c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.40	0.32	0.24		0.33	0.01
Uniform Delay, d1	21.8	2.6	5.4		20.7	14.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.7	0.1	0.1		2.1	0.0
Delay (s)	26.5	2.7	5.5		22.7	14.1
Level of Service	C	A	A		C	B
Approach Delay (s)		3.2	5.5		19.6	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	17.4
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

7: Railroad Crossing/Medical Center Exit & US 460

No Build 2030 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Future Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.89	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3420		1570	3406		1805		1468	1779	1631	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3420		1570	3406		1805		1468	1779	1631	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	766	42	15	432	0	12	0	12	29	5	13
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	12	0	12	0
Lane Group Flow (vph)	0	806	0	15	432	0	12	0	0	29	6	0
Heavy Vehicles (%)	0%	5%	0%	15%	6%	0%	0%	0%	10%	4%	0%	9%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		32.2		1.1	38.5		2.0		2.0	3.7	3.7	
Effective Green, g (s)		32.2		1.1	38.5		2.0		2.0	3.7	3.7	
Actuated g/C Ratio		0.52		0.02	0.62		0.03		0.03	0.06	0.06	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1779		27	2118		58		47	106	97	
v/s Ratio Prot		c0.24		0.01	c0.13		c0.01		0.00	c0.02	0.00	
v/s Ratio Perm												
v/c Ratio		0.45		0.56	0.20		0.21		0.01	0.27	0.06	
Uniform Delay, d1		9.3		30.2	5.1		29.2		29.0	27.8	27.5	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.3		27.1	0.1		1.8		0.1	1.4	0.3	
Delay (s)		9.6		57.3	5.1		30.9		29.1	29.2	27.7	
Level of Service		A		E	A		C		C	C	C	
Approach Delay (s)		9.6			6.9			30.0			28.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	61.9	Sum of lost time (s)	22.9
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

9: Railroad Crossing/Lake Park Drive & US 460

No Build 2030 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Future Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3413		1736	3373			1854	1568		1817	1417
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3413		1736	3373			1854	1568		1817	1417
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	715	5	54	588	29	5	5	34	50	5	7
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	32	0	0	7
Lane Group Flow (vph)	10	719	0	54	615	0	0	10	2	0	55	0
Heavy Vehicles (%)	0%	5%	100%	4%	6%	12%	0%	0%	3%	0%	0%	14%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	3	4	4	4
Permitted Phases												
Actuated Green, G (s)	1.1	33.9		4.7	37.3			3.3	3.3		4.2	4.2
Effective Green, g (s)	1.1	33.9		4.7	37.3			3.3	3.3		4.2	4.2
Actuated g/C Ratio	0.02	0.48		0.07	0.53			0.05	0.05		0.06	0.06
Clearance Time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	28	1650		116	1794			87	73		108	84
v/s Ratio Prot	0.01	c0.21		c0.03	c0.18			c0.01	0.00		c0.03	0.00
v/s Ratio Perm												
v/c Ratio	0.36	0.44		0.47	0.34			0.11	0.02		0.51	0.00
Uniform Delay, d1	34.2	11.8		31.5	9.4			32.0	31.9		32.0	31.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	10.3	0.2		4.0	0.1			0.6	0.1		3.7	0.0
Delay (s)	44.5	12.1		35.5	9.5			32.6	32.0		35.7	31.0
Level of Service	D	B		D	A			C	C		D	C
Approach Delay (s)		12.5			11.6			32.1			35.2	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.1	Sum of lost time (s)	24.2
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	373	378	68	311	320	129
Future Volume (vph)	373	378	68	311	320	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3164		1656	3374	3217	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	3164		1656	3374	3217	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	419	425	76	349	360	145
RTOR Reduction (vph)	142	0	0	0	41	0
Lane Group Flow (vph)	702	0	76	349	464	0
Heavy Vehicles (%)	8%	3%	9%	7%	5%	8%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	23.6		6.8	36.0	16.4	
Effective Green, g (s)	23.6		6.8	36.0	16.4	
Actuated g/C Ratio	0.37		0.11	0.57	0.26	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1185		178	1928	837	
v/s Ratio Prot	c0.22		c0.05	0.10	c0.14	
v/s Ratio Perm						
v/c Ratio	0.59		0.43	0.18	0.55	
Uniform Delay, d1	15.8		26.3	6.5	20.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		0.6	0.1	0.8	
Delay (s)	16.8		26.9	6.5	20.9	
Level of Service	B		C	A	C	
Approach Delay (s)	16.8			10.2	20.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	341	5	331	363	10	250
Future Volume (vph)	341	5	331	363	10	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1652	3505	1805	1553
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1652	3505	1805	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	367	5	356	390	11	269
RTOR Reduction (vph)	1	0	0	0	0	108
Lane Group Flow (vph)	371	0	356	390	11	161
Heavy Vehicles (%)	6%	0%	2%	3%	0%	4%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	13.4		21.0	40.4	10.1	36.8
Effective Green, g (s)	13.4		21.0	40.4	10.1	36.8
Actuated g/C Ratio	0.22		0.34	0.66	0.16	0.60
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	742		565	2306	296	930
v/s Ratio Prot	c0.11		c0.22	0.11	0.01	c0.10
v/s Ratio Perm						
v/c Ratio	0.50		0.63	0.17	0.04	0.17
Uniform Delay, d1	21.1		16.9	4.0	21.6	5.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		2.4	0.0	0.1	0.1
Delay (s)	21.7		19.3	4.1	21.6	5.6
Level of Service	C		B	A	C	A
Approach Delay (s)	21.7			11.4	6.2	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	16.9
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	574	646	6	41	48
Future Volume (vph)	17	574	646	6	41	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3501		1752	1615
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	18	617	695	6	44	52
RTOR Reduction (vph)	0	0	1	0	0	36
Lane Group Flow (vph)	18	617	700	0	44	16
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	3.4	31.5	22.0		5.3	14.9
Effective Green, g (s)	3.4	31.5	22.0		5.3	14.9
Actuated g/C Ratio	0.07	0.65	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	127	2251	1601		193	500
v/s Ratio Prot	0.01	c0.18	c0.20		c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.14	0.27	0.44		0.23	0.03
Uniform Delay, d1	21.0	3.5	8.9		19.5	11.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2		0.6	0.0
Delay (s)	21.4	3.6	9.0		20.1	11.6
Level of Service	C	A	A		C	B
Approach Delay (s)		4.1	9.0		15.5	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Future Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.88	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3394		1805	3505		1805		1568	1796	1680	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3394		1805	3505		1805		1568	1796	1680	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	614	66	55	646	0	100	0	46	130	11	51
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	41	0	43	0
Lane Group Flow (vph)	0	673	0	55	646	0	100	0	5	130	19	0
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%	0%	0%	3%	3%	0%	2%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		28.4		5.3	38.9		8.3		8.3	11.6	11.6	
Effective Green, g (s)		28.4		5.3	38.9		8.3		8.3	11.6	11.6	
Actuated g/C Ratio		0.37		0.07	0.51		0.11		0.11	0.15	0.15	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1259		125	1782		195		170	272	254	
v/s Ratio Prot		c0.20		0.03	c0.18		c0.06		0.00	c0.07	0.01	
v/s Ratio Perm												
v/c Ratio		0.53		0.44	0.36		0.51		0.03	0.48	0.07	
Uniform Delay, d1		18.9		34.2	11.3		32.2		30.5	29.7	27.8	
Progression Factor		1.00		1.00	1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.7		3.3	0.2		2.3		0.1	1.3	0.1	
Delay (s)		19.5		37.5	11.5		34.5		30.6	31.0	28.0	
Level of Service		B		D	B		C		C	C	C	
Approach Delay (s)		19.5			13.6			33.2			30.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	76.5	Sum of lost time (s)	22.9
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Future Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3502		1770	3469			1685	1599		1816	1468
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3502		1770	3469			1685	1599		1816	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	779	5	119	749	69	5	5	140	63	5	12
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	125	0	0	11
Lane Group Flow (vph)	11	783	0	119	813	0	0	10	15	0	68	1
Heavy Vehicles (%)	0%	3%	0%	2%	3%	0%	20%	0%	1%	0%	0%	10%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		4	4	4	3	3	3
Permitted Phases												
Actuated Green, G (s)	1.2	31.8		9.6	40.0			8.4	8.4		6.9	6.9
Effective Green, g (s)	1.2	31.8		9.6	40.0			8.4	8.4		6.9	6.9
Actuated g/C Ratio	0.01	0.39		0.12	0.50			0.10	0.10		0.09	0.09
Clearance Time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	26	1379		210	1719			175	166		155	125
v/s Ratio Prot	0.01	c0.22		c0.07	0.23			0.01	c0.01		c0.04	0.00
v/s Ratio Perm												
v/c Ratio	0.42	0.57		0.57	0.47			0.06	0.09		0.44	0.01
Uniform Delay, d1	39.4	19.1		33.6	13.4			32.6	32.7		35.1	33.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	14.4	0.6		4.2	0.2			0.1	0.2		2.0	0.0
Delay (s)	53.8	19.7		37.8	13.7			32.7	32.9		37.0	33.8
Level of Service	D	B		D	B			C	C		D	C
Approach Delay (s)		20.1			16.7			32.9			36.6	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	24.2
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	426	467	55	386	467	104
Future Volume (vph)	426	467	55	386	467	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3248		1736	3471	3398	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3248		1736	3471	3398	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	479	525	62	434	525	117
RTOR Reduction (vph)	145	0	0	0	17	0
Lane Group Flow (vph)	859	0	62	434	625	0
Heavy Vehicles (%)	4%	1%	4%	4%	1%	3%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	30.3		6.5	42.4	21.0	
Effective Green, g (s)	30.3		6.5	42.4	21.0	
Actuated g/C Ratio	0.41		0.09	0.57	0.28	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1329		152	1988	964	
v/s Ratio Prot	c0.26		c0.04	0.13	c0.18	
v/s Ratio Perm						
v/c Ratio	0.65		0.41	0.22	0.65	
Uniform Delay, d1	17.5		31.9	7.7	23.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.2		0.7	0.1	1.5	
Delay (s)	18.8		32.6	7.8	24.8	
Level of Service	B		C	A	C	
Approach Delay (s)	18.8			10.9	24.8	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 UNSIGNALIZED INTERSECTION OUTPUT SHEETS

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	14	711	408	5	5	5
Future Vol, veh/h	14	711	408	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	16	808	464	6	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	469	0	-	0	902	235
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1103	-	-	-	281	773
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1103	-	-	-	277	773
Mov Cap-2 Maneuver	-	-	-	-	277	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	616	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1103	-	-	-	408
HCM Lane V/C Ratio	0.014	-	-	-	0.028
HCM Control Delay (s)	8.3	-	-	-	14.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	711	408	5	14	5
Future Vol, veh/h	5	711	408	5	14	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	799	458	6	16	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	872	232
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1108	-	-	-	294	776
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	643	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1108	-	-	-	292	776
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	-	-	349
HCM Lane V/C Ratio	0.005	-	-	-	0.061
HCM Control Delay (s)	8.3	-	-	-	16
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	720	408	5	5	5
Future Vol, veh/h	5	720	408	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	25	5	7	33	0	0
Mvmt Flow	6	809	458	6	6	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	877	232
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.6	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.45	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	947	-	-	-	292	776
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	947	-	-	-	290	776
Mov Cap-2 Maneuver	-	-	-	-	290	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	947	-	-	-	422
HCM Lane V/C Ratio	0.006	-	-	-	0.027
HCM Control Delay (s)	8.8	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	720	408	12	24	5
Future Vol, veh/h	5	720	408	12	24	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	809	458	13	27	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	881	236
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1100	-	-	-	290	772
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	288	772
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	637	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1100	-	-	-	323
HCM Lane V/C Ratio	0.005	-	-	-	0.101
HCM Control Delay (s)	8.3	-	-	-	17.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

8: US 460 & Medical Center Entrance

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	57	686	411	154	0	0
Future Vol, veh/h	57	686	411	154	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	7	3	0	0
Mvmt Flow	62	746	447	167	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	614	0	-	0	1027	307
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	497	-
Critical Hdwy	4.1	-	-	-	5.2	6.1
Critical Hdwy Stg 1	-	-	-	-	4.2	-
Critical Hdwy Stg 2	-	-	-	-	4.2	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	975	-	-	-	369	744
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	726	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	346	744
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	680	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	-
HCM Lane V/C Ratio	0.064	-	-	-	-
HCM Control Delay (s)	8.9	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-

11: Kents Ridge Road/2nd Street & Front Street

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	277	116	0	0	0	0	0	228	17	49	394
Future Vol, veh/h	0	277	116	0	0	0	0	0	228	17	49	394
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	215	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	4	0	0	0	0	0	5	0	11	4
Mvmt Flow	0	301	126	0	0	0	0	0	248	18	53	428

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	328	301	301	301	301	-
Stage 1	-	-	-	301	301	-	0	0	-
Stage 2	-	-	-	27	0	-	301	301	-
Critical Hdwy	-	-	-	6.4	6.5	6.25	6.4	6.61	-
Critical Hdwy Stg 1	-	-	-	5.4	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.61	-
Follow-up Hdwy	-	-	-	3.5	4	3.345	3.5	4.099	-
Pot Cap-1 Maneuver	-	-	-	671	615	732	695	597	0
Stage 1	-	-	-	755	669	-	-	-	0
Stage 2	-	-	-	-	-	-	755	649	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	671	0	732	695	0	-
Mov Cap-2 Maneuver	-	-	-	671	0	-	695	0	-
Stage 1	-	-	-	755	0	-	-	0	-
Stage 2	-	-	-	-	0	-	755	0	-

Approach	EB	NB	SB
HCM Control Delay, s	0	12.4	
HCM LOS		B	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	732	-	-	-	695	-	-
HCM Lane V/C Ratio	0.339	-	-	-	0.027	-	-
HCM Control Delay (s)	12.4	0	-	-	10.3	-	0
HCM Lane LOS	B	A	-	-	B	-	A
HCM 95th %tile Q(veh)	1.5	-	-	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	610	709	5	5	5
Future Vol, veh/h	5	610	709	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	5	2	0	0	0
Mvmt Flow	5	670	779	5	5	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	785	0	-	0	1128	392
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	346	-
Critical Hdwy	5.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.7	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	580	-	-	-	201	613
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	580	-	-	-	199	613
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	580	-	-	-	300
HCM Lane V/C Ratio	0.009	-	-	-	0.037
HCM Control Delay (s)	11.3	-	-	-	17.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	10	605	709	15	12	5
Future Vol, veh/h	10	605	709	15	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	3	0	0	0
Mvmt Flow	11	658	771	16	13	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	787	0	-	0	1130	393
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	841	-	-	-	201	612
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	690	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	841	-	-	-	198	612
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	841	-	-	-	247
HCM Lane V/C Ratio	0.013	-	-	-	0.075
HCM Control Delay (s)	9.3	-	-	-	20.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	6	611	714	10	6	10
Future Vol, veh/h	6	611	714	10	6	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	17	5	2	0	0	11
Mvmt Flow	6	657	768	11	6	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	778	0	-	0	1114	389
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	4.44	-	-	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.37	-	-	-	3.5	3.41
Pot Cap-1 Maneuver	744	-	-	-	205	585
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	744	-	-	-	203	585
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	692	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	744	-	-	-	343
HCM Lane V/C Ratio	0.009	-	-	-	0.05
HCM Control Delay (s)	9.9	-	-	-	16
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	5	612	719	30	27	5
Future Vol, veh/h	5	612	719	30	27	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	5	2	4	4	0
Mvmt Flow	5	658	773	32	29	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	805	0	-	0	1129	403
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	340	-
Critical Hdwy	4.1	-	-	-	6.88	6.9
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.2	-	-	-	3.54	3.3
Pot Cap-1 Maneuver	828	-	-	-	195	603
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	828	-	-	-	194	603
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	24.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	828	-	-	-	217
HCM Lane V/C Ratio	0.006	-	-	-	0.159
HCM Control Delay (s)	9.4	-	-	-	24.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

8: US 460 & Medical Center Entrance

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	18	724	659	39	0	0
Future Vol, veh/h	18	724	659	39	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	6	0	0
Mvmt Flow	20	787	716	42	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	759	0	-	0	1171	379
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	433	-
Critical Hdwy	4.1	-	-	-	5.2	6.1
Critical Hdwy Stg 1	-	-	-	-	4.2	-
Critical Hdwy Stg 2	-	-	-	-	4.2	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	862	-	-	-	317	679
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	862	-	-	-	310	679
Mov Cap-2 Maneuver	-	-	-	-	310	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	862	-	-	-	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	9.3	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

11: Kents Ridge Road/2nd Street & Front Street

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	268	255	0	0	0	0	0	330	33	119	539
Future Vol, veh/h	0	268	255	0	0	0	0	0	330	33	119	539
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	215	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0	0	0	1	0	1	1
Mvmt Flow	0	285	271	0	0	0	0	0	351	35	127	573

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	348	285	285	285	285	-
Stage 1	-	-	-	285	285	-	0	0	-
Stage 2	-	-	-	63	0	-	285	285	-
Critical Hdwy	-	-	-	6.4	6.5	6.21	6.4	6.51	-
Critical Hdwy Stg 1	-	-	-	5.4	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.51	-
Follow-up Hdwy	-	-	-	3.5	4	3.309	3.5	4.009	-
Pot Cap-1 Maneuver	-	-	-	653	628	756	710	626	0
Stage 1	-	-	-	768	679	-	-	-	0
Stage 2	-	-	-	-	-	-	768	678	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	653	0	756	710	0	-
Mov Cap-2 Maneuver	-	-	-	653	0	-	710	0	-
Stage 1	-	-	-	768	0	-	-	0	-
Stage 2	-	-	-	-	0	-	768	0	-

Approach	EB	NB	SB
HCM Control Delay, s	0	13.8	
HCM LOS		B	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	756	-	-	-	710	-	-
HCM Lane V/C Ratio	0.464	-	-	-	0.049	-	-
HCM Control Delay (s)	13.8	0	-	-	10.3	-	0
HCM Lane LOS	B	A	-	-	B	-	A
HCM 95th %tile Q(veh)	2.5	-	-	-	0.2	-	-

SYNCHRO QUEUE OUTPUT SHEETS

1: Route 67 & US 460

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	434	191	258	18	382
v/c Ratio	0.51	0.49	0.13	0.06	0.40
Control Delay	20.8	23.9	4.9	21.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	23.9	4.9	21.6	4.5
Queue Length 50th (ft)	60	51	15	5	20
Queue Length 95th (ft)	117	120	31	22	65
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2824	887	3312	786	1361
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.22	0.08	0.02	0.28

Intersection Summary

2: US 460 & Acme Road

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	776	429	30	17
v/c Ratio	0.05	0.27	0.16	0.09	0.04
Control Delay	16.2	3.1	5.4	15.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	3.1	5.4	15.8	4.3
Queue Length 50th (ft)	2	0	0	5	0
Queue Length 95th (ft)	16	71	74	23	7
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	769	3438	3362	769	830
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.23	0.13	0.04	0.02

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	808	15	432	12	12	29	18
v/c Ratio	0.34	0.06	0.17	0.05	0.04	0.11	0.07
Control Delay	9.5	27.6	6.0	28.8	0.3	27.9	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	27.6	6.0	28.8	0.3	27.9	18.6
Queue Length 50th (ft)	47	4	22	3	0	8	1
Queue Length 95th (ft)	217	25	73	22	0	38	22
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	2886	530	3278	609	584	801	741
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.03	0.13	0.02	0.02	0.04	0.02

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	10	720	54	617	10	34	55	7
v/c Ratio	0.04	0.35	0.18	0.26	0.04	0.10	0.19	0.02
Control Delay	33.3	16.2	31.2	10.1	33.9	0.6	32.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	16.2	31.2	10.1	33.9	0.6	32.2	0.1
Queue Length 50th (ft)	4	137	21	74	4	0	22	0
Queue Length 95th (ft)	20	215	60	166	21	0	62	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	551	2575	706	2673	755	715	555	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.28	0.08	0.23	0.01	0.05	0.10	0.01

Intersection Summary

10: Front Street & US 460

No Build 2030 AM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	844	76	349	505
v/c Ratio	0.63	0.29	0.19	0.57
Control Delay	14.7	32.9	6.9	22.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.7	32.9	6.9	22.8
Queue Length 50th (ft)	97	27	28	77
Queue Length 95th (ft)	192	80	58	157
Internal Link Dist (ft)	669		798	633
Turn Bay Length (ft)		138		
Base Capacity (vph)	2368	589	3228	2364
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	0.36	0.13	0.11	0.21

Intersection Summary

1: Route 67 & US 460

No Build 2030 PM Peak

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	372	356	390	11	269
v/c Ratio	0.51	0.63	0.17	0.04	0.26
Control Delay	24.5	22.9	4.1	25.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	22.9	4.1	25.7	1.7
Queue Length 50th (ft)	63	108	24	4	0
Queue Length 95th (ft)	113	200	36	18	26
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2519	815	3505	891	1219
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.44	0.11	0.01	0.22

Intersection Summary

2: US 460 & Acme Road

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	18	617	701	44	52
v/c Ratio	0.07	0.26	0.37	0.16	0.08
Control Delay	19.9	4.4	10.9	19.6	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	4.4	10.9	19.6	3.9
Queue Length 50th (ft)	4	32	76	10	0
Queue Length 95th (ft)	19	57	127	34	15
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	635	3438	3357	617	945
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.18	0.21	0.07	0.06

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	680	55	646	100	46	130	62
v/c Ratio	0.52	0.24	0.37	0.40	0.14	0.46	0.20
Control Delay	22.7	38.1	13.4	39.1	0.9	38.5	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	38.1	13.4	39.1	0.9	38.5	15.1
Queue Length 50th (ft)	143	24	94	44	0	57	5
Queue Length 95th (ft)	248	71	168	111	0	135	42
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	2250	398	2986	398	449	528	530
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.14	0.22	0.25	0.10	0.25	0.12

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	11	784	119	818	10	140	68	12
v/c Ratio	0.06	0.59	0.41	0.44	0.05	0.46	0.30	0.04
Control Delay	40.3	24.2	38.0	13.3	38.8	13.3	40.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	24.2	38.0	13.3	38.8	13.3	40.0	0.3
Queue Length 50th (ft)	5	167	52	108	5	0	31	0
Queue Length 95th (ft)	25	286	127	254	23	57	85	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	393	2237	514	2380	367	458	528	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.35	0.23	0.34	0.03	0.31	0.13	0.02

Intersection Summary

10: Front Street & US 460

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	1004	62	434	642
v/c Ratio	0.68	0.27	0.23	0.65
Control Delay	16.7	40.0	8.4	27.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.7	40.0	8.4	27.9
Queue Length 50th (ft)	148	27	45	130
Queue Length 95th (ft)	262	79	85	237
Internal Link Dist (ft)	669		798	633
Turn Bay Length (ft)		138		
Base Capacity (vph)	2189	526	3092	2208
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	0.46	0.12	0.14	0.29

Intersection Summary

APPENDIX E – IMPROVEMENT SCREENING

APPENDIX E-1: ALTERNATIVE DEVELOPMENT WORKSHOP SUMMARY

Meeting Summary – Proposed Alternatives

Meeting Subject: Alternative Development Workshop

Meeting Date: Tuesday, November 15, 2016

Meeting Time: 9:00 a.m. to 11:30 a.m.

Meeting Location: Richlands Town Hall
200 Washington Square
Richlands, VA 24641

Summary of Proposed Alternatives

The following table provides a summary of the alternatives proposed for further consideration based on discussions at the alternative development workshop. The table also indicates whether operational analysis and/or preliminary cost estimates will be completed for each alternative. Additional details and figures of the alternatives are provided in the following sections.

Alternative	Operational Analysis (Y/N)	Cost Estimate (Y/N)
1. Access Management – Median Opening Spacing Full Compliance	Y	Y
2. Access Management – Median Opening Spacing Partial Compliance	Y	Y
3. Traffic Signal Communications and Retiming	Y	Y
4. Clearview Road – Convert to One-Way Street	Y	Y
5. Clearview Road, Mudlick Road, and Acme Road Connection	Y	Y
6. Front Street/2nd Street – Partial Roundabout	Y	Y
7. Realign 2nd Street Approach at Front Street	Y	Y
8. Rockbridge Avenue Railroad Crossing	Y	Y
9. New Frontage Road Bridge	N	Y
10. Clinch Street Railroad Crossings Improvements	N	Y
11. Flashing Speed Limit Signs	N	Y

1. Access Management – Median Opening Spacing Full Compliance

- Bring median opening spacing on US 460 into full compliance with VDOT access management standards
  - Maintain Baker Hollow Road as a full median opening
  - Convert all other unsignalized median openings to directional median openings and partial access entrances
    - Clearview Road – partial access entrance
    - Patteson Street –directional median opening
    - Hillcreek Road – directional median opening
    - Clinch Valley Medical Center Entrance – directional median opening

2. Access Management – Median Opening Spacing Partial Compliance

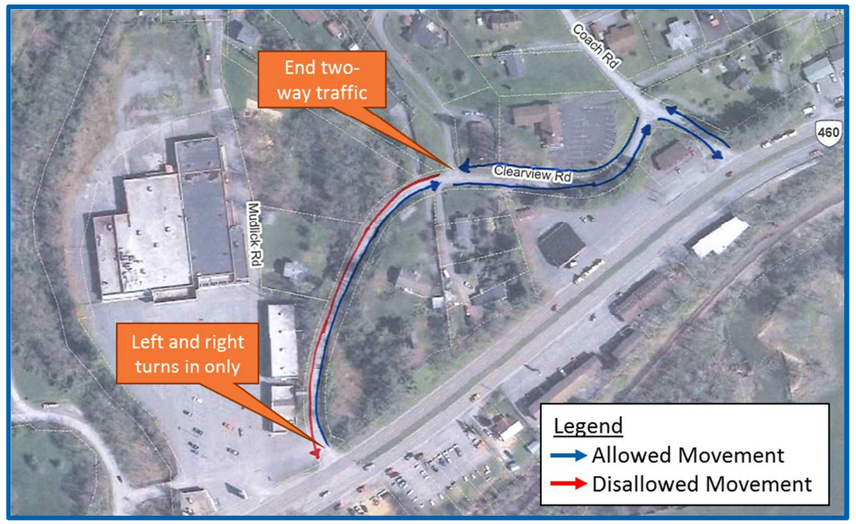
- Bring median opening spacing on US 460 into partial compliance with VDOT access management standards
  - Maintain Baker Hollow Road and Patteson Street as full median openings
  - Convert all other unsignalized median openings to directional median openings and partial access entrances
    - Clearview Road – partial access entrance
    - Hillcreek Road – directional median opening
    - Clinch Valley Medical Center Entrance – directional median opening
  - One median opening would not meet VDOT median opening spacing standards: Baker Hollow Road

3. Traffic Signal Communications and Retiming

- Provide communications between three traffic signals on US 460
  - Front Street
  - Lake Park Drive
  - Clinch Valley Medical Center Exit
- Town of Richlands has existing fiber that can be used for communications
- Retime the traffic signals to improve corridor progression

4. Clearview Road – Convert to One-Way Street

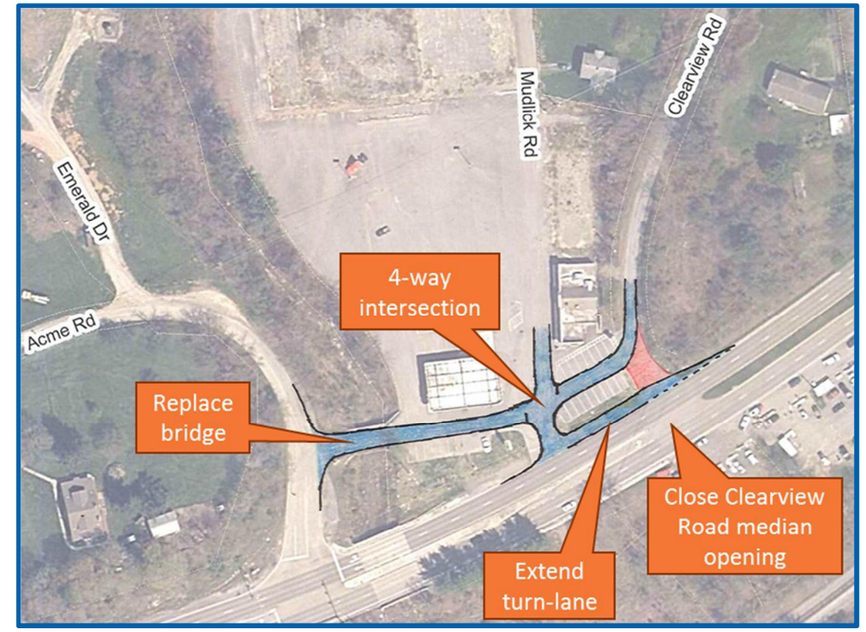
- Convert Clearview Road to one-way operations between US 460 and Stage Road
- Vehicles permitted to turn left and right onto Clearview from US 460, but not permitted to turn left or right from Clearview onto US 460



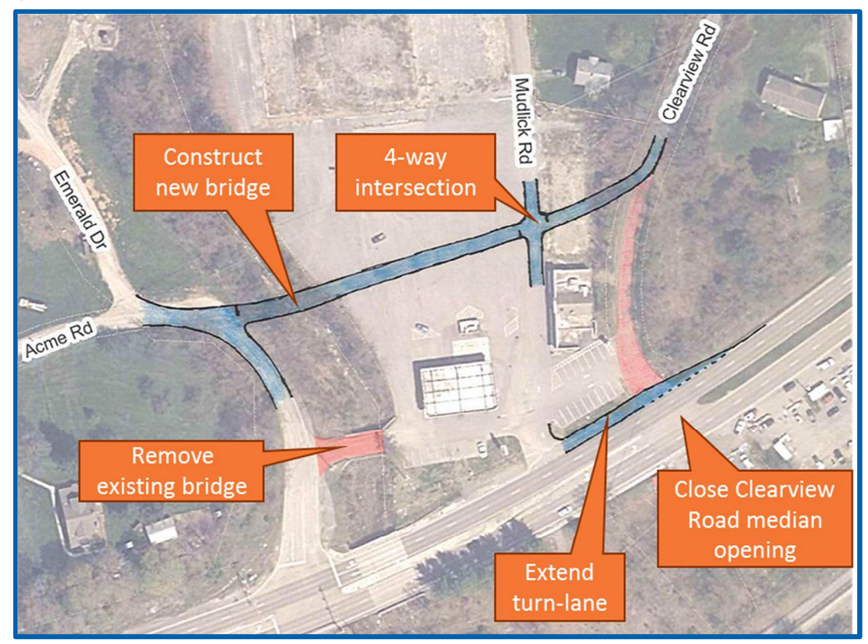
5. Clearview Road, Mudlick Road, and Acme Road Connection

- Connect Clearview Road and Acme Road to Mudlick Road through parking lot
- Channelize eastbound vehicles from the commercial establishments to turn left at the existing Acme Road traffic signal
- Two options:
  - (A) connect to the south of the gas station and replace existing bridge
  - (B) connect to the north of the gas station with a new bridge and remove existing bridge

Option 5A

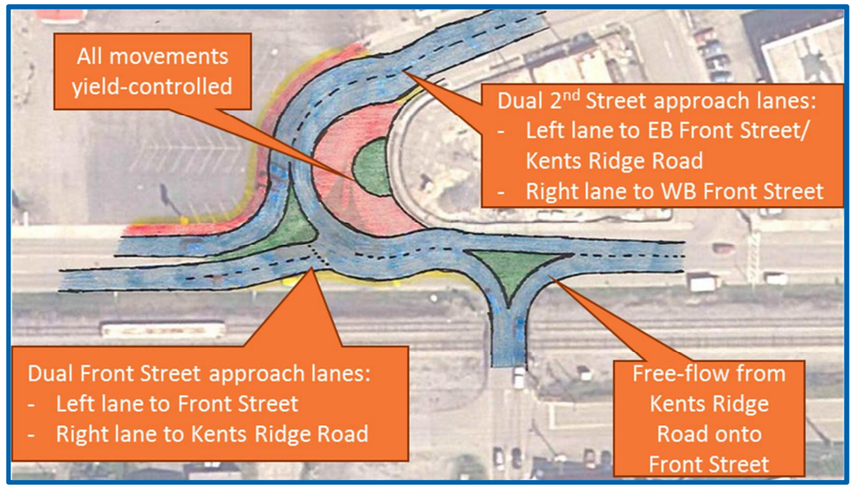


Option 5B



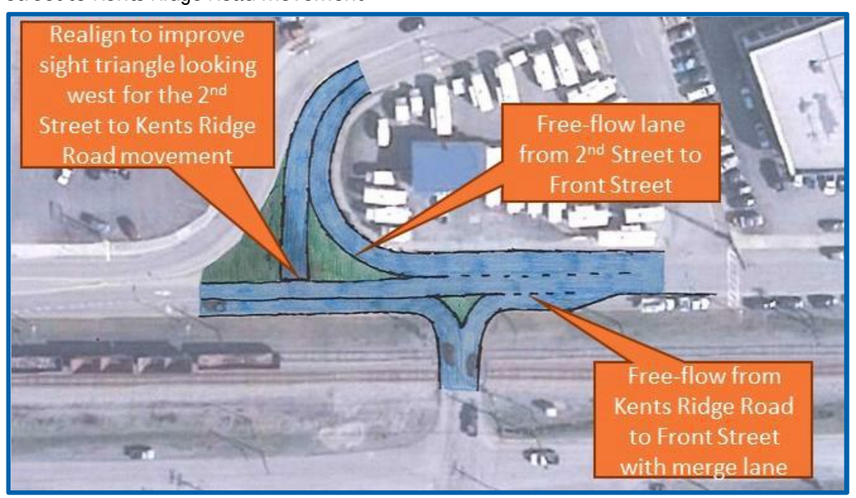
6. Front Street/2nd Street – Partial Roundabout

- Convert Front Street and 2nd Street intersection to a partial roundabout with two approach lanes from Front Street and two approach lanes from 2nd Street
  - Two approach lanes provide separate lanes for vehicles heading to Kents Ridge Road to queue in when a train passes
- Construct channelizing island at Front Street and Kents Ridge Road intersection to create a free-flow movement from Kents Ridge Road
  - Free-flow movement prevents vehicles from queuing on the train tracks



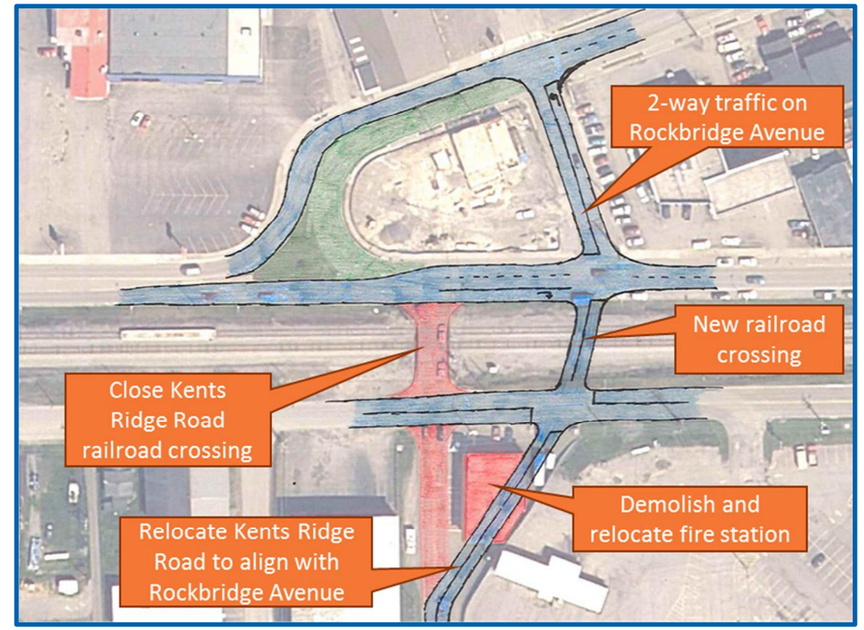
7. Realign 2nd Street Approach at Front Street

- Realign the Front Street and 2nd Street intersection to improve the sight triangle looking west for the 2nd Street to Kents Ridge Road movement



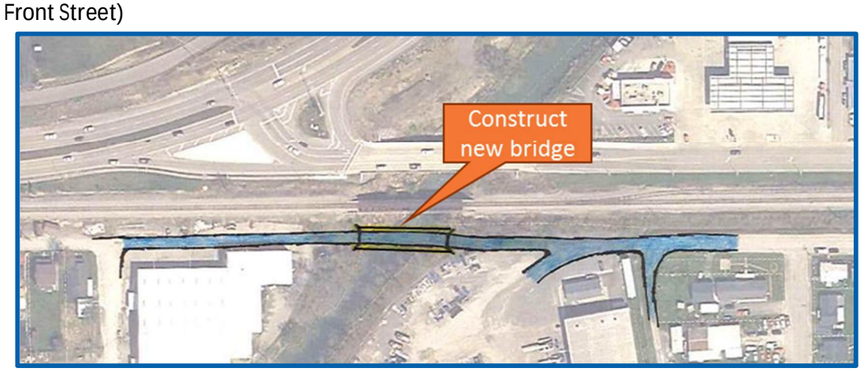
8. Rockbridge Avenue Railroad Crossing

- Close the Kents Ridge Road railroad crossing and construct a new at-grade railroad crossing at Rockbridge Avenue
- Realign Kents Ridge Road south of the railroad track to create a 4-way intersection at Rockbridge Avenue
  - Requires demolition and relocation of existing fire station
- Convert Rockbridge Avenue to a two-way street



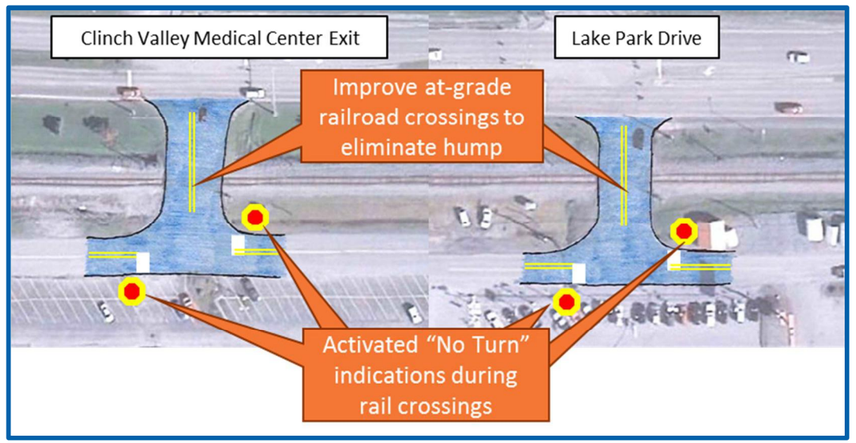
9. New Frontage Road Bridge

- Construct a new bridge over the Clinch River that connects the two frontage roads (Clinch Street and S. Front Street)



10. Clinch Street Railroad Crossings Improvements

- Raise the grade of Clinch Street to improve the two at-grade railroad crossings:
  - Clinch Valley Medical Center Exit
  - Lake Park Drive
- Install "No-Turn" indications to be activated during rail crossing
  - Activation tied to preemption of adjacent US 460 signals



11. Flashing Speed Limit Signs

- Evaluate alternatives for flashing speed limit signs and/or pole-mounted speed display signs on westbound US 460 at the location where the speed limit drops from 55 MPH to 35 MPH

Eliminated Alternatives

During the alternative development workshop, the following alternatives were discussed but were eliminated from further consideration.

- Clinch Street traffic signals
  - Traffic signals were proposed at the intersections of Clinch Street at Clinch Valley Medical Center Exit and Lake Park Drive that would be coordinated with the adjacent traffic signals on US 460 and would prevent vehicles from queuing across railroad tracks
  - This alternative was removed from consideration for two reasons: there were no crashes at these locations and this improvement would require significant clearance intervals, which would degrade operations on US 460

APPENDIX E-2: ALTERNATIVE ANALYSIS SYNCHRO DELAY & LEVEL OF SERVICE SUMMARY

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 1 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left/U	22.4	C	21.7	C	5.4	A	7.2	A	--	--	--	--	22.3	C	20.2	C	Delay	Delay
		Through	2.8	A	3.5	A	6.2	A	9.1	A	--	--	--	--	--	--	--	--	5.0	7.4
		Right	--	--	--	--	--	--	--	--	--	--	--	--	12.9	B	11.6	B	LOS	LOS
		Approach	3.5	A	4.2	A	6.2	A	9.1	A	--	--	--	--	18.9	B	15.6	B	A	A
3 US 460 at Clearview Road			US 460				US 460								Clearview Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	10.9	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	10.9	B	--	--
4 US 460 at Baker Hollow Road			US 460				US 460								Baker Hollow Road					
	One-Way Stop	Left/U	8.3	A	9.3	A	11.1	B	10.3	B	--	--	--	--	17.0	C	22.0	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	17.0	C	22.0	C	--	--
5 US 460 at Patteson Street			US 460				US 460								Patteson Street					
	One-Way Stop	Left	8.9	A	9.9	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.8	A	11.3	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.8	A	11.3	B	--	--
6 US 460 at Hillcreek Road			US 460				US 460								Hillcreek Road					
	One-Way Stop	Left	8.3	A	9.4	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.9	A	11.4	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.9	A	11.4	B	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 2 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left/U	22.4	C	21.7	C	5.4	A	7.2	A	--	--	--	--	22.3	C	20.2	C	Delay	Delay
		Through	2.8	A	3.5	A	6.2	A	9.1	A	--	--	--	--	--	--	--	--	5.0	7.4
		Right	--	--	--	--	--	--	--	--	--	--	--	--	12.9	B	11.6	B	LOS	LOS
		Approach	3.5	A	4.2	A	6.2	A	9.1	A	--	--	--	--	18.9	B	15.6	B	A	A
3 US 460 at Clearview Road			US 460				US 460								Clearview Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	10.9	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	10.9	B	--	--
5 US 460 at Patteson Street			US 460				US 460								Patteson Street					
	One-Way Stop	Left/U	8.8	A	9.8	A	11.1	B	10.3	B	--	--	--	--	15.7	C	11.2	B	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	15.7	C	11.2	B	--	--
6 US 460 at Hillcreek Road			US 460				US 460								Hillcreek Road					
	One-Way Stop	Left	8.3	A	9.4	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.9	A	11.4	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.9	A	11.4	B	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 3 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
7 US 460 at Clinch Valley Medical Center Exit			US 460				US 460				Railroad Crossing				Medical Center Exit					
	Signal	Left	--	--	--	--	32.1	C	19.6	B	44.4	D	58.4	E	43.1	D	50.5	D	Delay	Delay
		Through	8.1	A	19.9	B	0.8	A	1.0	A	--	--	--	--	40.9	D	40.2	D	7.9	18.7
		Right	--	--	--	--	--	--	--	--	42.3	D	42.5	D	--	--	--	--	LOS	LOS
		Approach	8.1	A	19.9	B	1.9	A	2.5	A	43.4	D	53.4	D	42.2	D	47.2	D	A	B
9 US 460 at Lake Park Drive			US 460				US 460				Railroad Crossing				Lake Park Drive					
	Signal	Left	35.4	D	31.5	C	53.8	D	58.8	E	--	--	--	--	--	--	--	--	Delay	Delay
		Through	8.1	A	13.8	B	4.9	A	4.7	A	41.7	D	43.7	D	41.3	D	47.6	D	10.9	16.5
		Right	--	--	--	--	--	--	--	--	41.1	D	43.8	D	38.3	D	42.9	D	LOS	LOS
		Approach	8.5	A	14.0	B	8.9	A	11.5	B	41.2	D	43.8	D	40.9	D	46.9	D	B	B
10 US 460 at Front Street			US 460				US 460				Front Street									
	Signal	Left	--	--	--	--	44.3	D	46.8	D	38.1	D	41.2	D	--	--	--	--	Delay	Delay
		Through	8.6	A	8.8	A	5.0	A	6.8	A	--	--	--	--	--	--	--	--	17.8	19.2
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	8.6	A	8.8	A	12.1	B	11.8	B	38.1	D	41.2	D	--	--	--	--	B	B

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 4 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left	21.4	C	21.4	C	--	--	--	--	--	--	--	--	20.5	C	20.2	C	Delay	Delay
		Through	3.3	A	3.6	A	6.9	A	9.1	A	--	--	--	--	--	--	--	--	5.3	7.4
		Right	--	--	--	--	--	--	--	--	--	--	--	--	12.3	B	11.6	B	LOS	LOS
		Approach	3.6	A	4.1	A	6.9	A	9.1	A	--	--	--	--	17.3	B	15.6	B	A	A
3 US 460 at Clearview Road			US 460				US 460													
	One-Way Stop	Left	8.3	A	11.3	B	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternatives 5A and 5B Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left	22.4	C	21.8	C	--	--	--	--	--	--	--	--	22.7	C	20.4	C	Delay	Delay
		Through	2.8	A	3.6	A	6.3	A	9.1	A	--	--	--	--	--	--	--	--	5.2	7.4
		Right	--	--	--	--	--	--	--	--	--	--	--	--	12.8	B	11.7	B	LOS	LOS
		Approach	3.6	A	4.3	A	6.3	A	9.1	A	--	--	--	--	18.9	B	15.7	B	A	A
3 US 460 at Clearview Road			US 460				US 460													
	Free Flow	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 6 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
11 Fronst Street at 2nd Street/Kents Ridge Road*			Front Street								Kents Ridge Road				2nd Street					
	Partial Round-about	Left	--	--	--	--	--	--	--	--	--	--	--	--	7.4	A	7.5	A	Delay	Delay
		Through	12.1	B	19.4	C	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	†	†	†	†	†	†	†	†	LOS	LOS
		Approach	12.1	B	19.4	C	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue*			Front Street												Rockbridge Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.
*HCM 2000 results were reported for this intersection (instead of HCM 2010 results used for all other unsignalized intersections) because no results were provided by HCM 2010

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 7 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
11 Fronst Street at 2nd Street/Kents Ridge Road			Front Street								Kents Ridge Road				2nd Street					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	†	†	†	†	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	10.5	B	11.4	B	--	--
		Right	†	†	†	†	--	--	--	--	†	†	†	†	†	†	†	†	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	†	†	†	†	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue			Front Street												Rockbridge Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 8 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
11 Fronst Street at 2nd Street/Kents Ridge Road			Front Street												2nd Street					
	Free Flow	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	†	†	†	†	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue			Front Street								Kents Ridge Road				Rockbridge Road					
	One-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	13.4	B	14.7	B	12.4	B	13.8	B	--	--
		Right	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	13.4	B	14.7	B	12.4	B	13.8	B	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.

NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.

† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

APPENDIX E-3: ALTERNATIVE ANALYSIS SYNCHRO 95TH PERCENTILE QUEUE LENGTH SUMMARY

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 1 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)	
				AM	PM		AM	PM		AM	PM		AM	PM
2 US 460 at Acme Road			US 460			US 460						Acme Road		
	Signal	Left/U	140	25	24	150	7	6		--	--	65	24	35
		Through		69	57		76	129		--	--		--	--
		Right		--	--		--	--		--	--		7	15
3 US 460 at Clearview Road			US 460			US 460						Clearview Road		
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		0	3
4 US 460 at Baker Hollow Road			US 460			US 460						Baker Hollow Road		
	One-Way Stop	Left/U	135	0	0	150	5	5		--	--		5	8
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
5 US 460 at Patteson Street			US 460			US 460						Patteson Street		
	One-Way Stop	Left	138	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		0	3
6 US 460 at Hillcreek Road			US 460			US 460						Hillcreek Road		
	One-Way Stop	Left	150	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		3	5

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 2 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
2 US 460 at Acme Road			US 460			US 460						Acme Road		
	Signal	Left/U	140	25	24	150	7	6		--	--	65	24	35
		Through		69	57		76	129		--	--		--	--
		Right		--	--		--	--		--	--		7	15
3 US 460 at Clearview Road			US 460			US 460						Clearview Road		
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		0	3
5 US 460 at Patteson Street			US 460			US 460						Patteson Street		
	One-Way Stop	Left/U	138	0	0	150	3	3		--	--		3	3
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
6 US 460 at Hillcreek Road			US 460			US 460						Hillcreek Road		
	One-Way Stop	Left	150	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		3	5

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 3 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
7 US 460 at Clinch Valley Medical Center Exit			US 460			US 460			Railroad Crossing			Medical Center Exit		
	Signal	Left		--	--	140	24	58		23	116		42	142
		Through		238	237		7	4		--	--		23	45
		Right		--	--		--	--		0	0		--	--
9 US 460 at Lake Park Drive			US 460			US 460			Railroad Crossing			Lake Park Drive		
	Signal	Left	138	11	13	150	52	123		--	--		--	--
		Through		44	45		72	83		21	23		65	85
		Right		--	--		--	--		0	12		0	0
10 US 460 at Front Street			US 460			US 460			Front Street					
	Signal	Left		--	--	138	85	79		163	236		--	--
		Through		115*	118*		54	81		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.
* Synchro 50th percentile queue length results were reported for these movements due to software limitations. 95th percentile queue lengths were reported as 0 feet.

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 4 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
2 US 460 at Acme Road				US 460			US 460						Acme Road	
	Signal	Left	140	16	20		--	--		--	--	65	26	37
		Through		72	58		74	127		--	--		--	--
		Right		--	--		--	--		--	--		9	16
3 US 460 at Clearview Road				US 460			US 460							
	One-Way Stop	Left	145	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternatives 5A and 5B Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
2 US 460 at Acme Road				US 460			US 460						Acme Road	
	Signal	Left	140	25	24		--	--		--	--	65	27	38
		Through		70	58		76	130		--	--		--	--
		Right		--	--		--	--		--	--		9	16
3 US 460 at Clearview Road				US 460			US 460							
	Free Flow	Left		--	--		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 6 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
11 Front Street at 2nd Street/Kents Ridge Road*				Front Street						Kents Ridge Road			2nd Street	
	Partial Round-about	Left		--	--		--	--		--	--		3	8
		Through		30	79		--	--		--	--		--	--
		Right		--	--		--	--		†	†		†	†
12 Front Street at Rockbridge Avenue*				Front Street									Rockbridge Road	
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.
*HCM 2000 results were reported for this intersection (instead of HCM 2010 results used for all other unsignalized intersections) because no results were provided by HCM 2010

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 7 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
11 Front Street at 2nd Street/Kents Ridge Road				Front Street						Kents Ridge Road			2nd Street	
	One-Way Stop	Left		--	--		--	--		--	--		†	†
		Through		†	†		--	--		--	--		5	18
		Right	215	†	†		--	--		†	†		†	†
12 Front Street at Rockbridge Avenue				Front Street									Rockbridge Road	
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

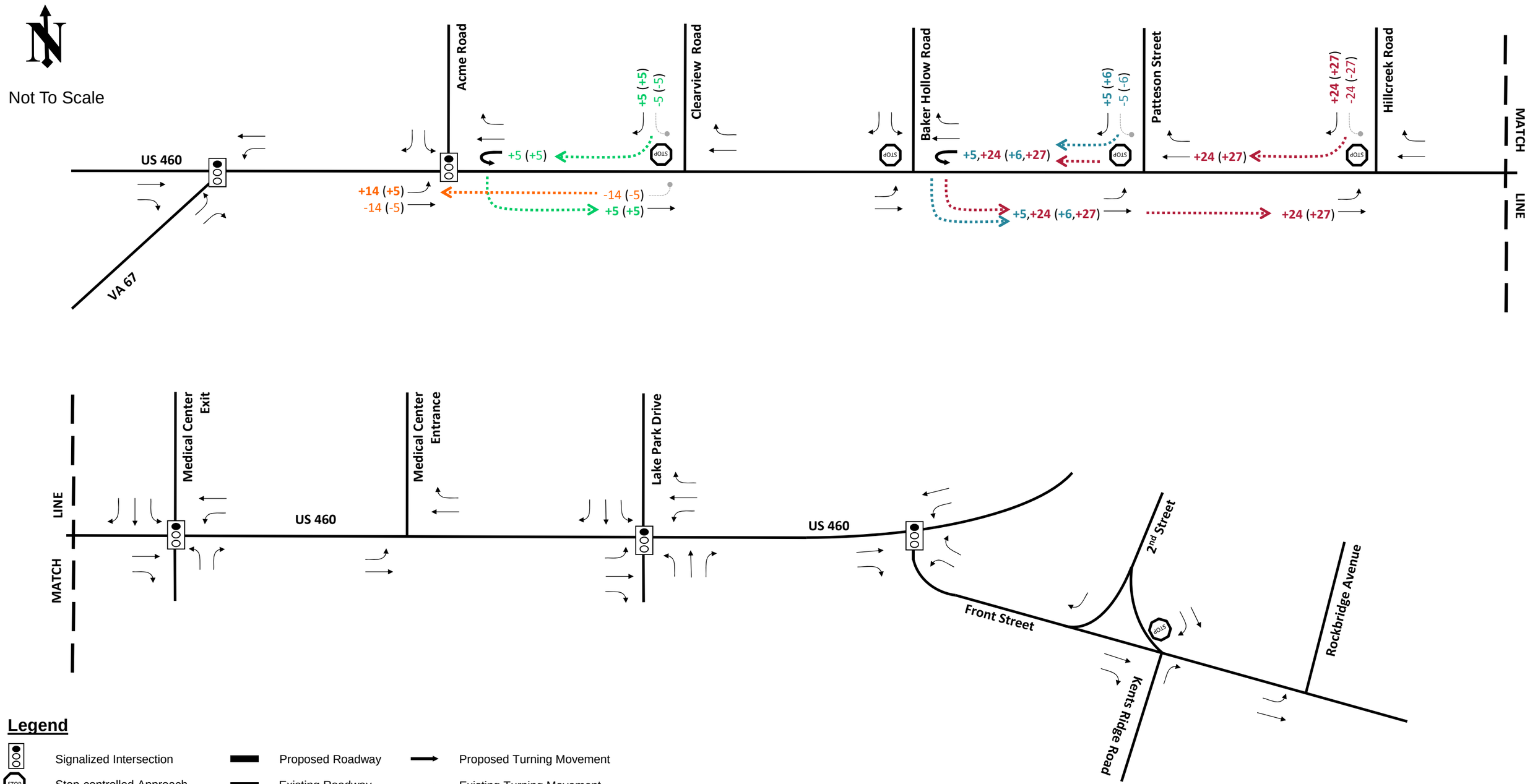
SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Build Alternative 8 Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue		Effective Storage	95th Percentile Queue	
				AM	PM		AM	PM		AM	PM		AM	PM
11 Front Street at 2nd Street/Kents Ridge Road				Front Street									2nd Street	
	Free Flow	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		†	†
12 Front Street at Rockbridge Avenue				Front Street						Kents Ridge Road			Rockbridge Road	
	One-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		43	68		13	30
		Right	215	†	†		--	--		--	--		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide queue length for movements with no conflicting volumes.

APPENDIX E-4: ALTERNATIVE ANALYSIS PEAK HOUR VOLUMES & SYNCHRO OUTPUT SHEETS

ALTERNATIVE 1: ACCESS MANAGEMENT IMPROVEMENTS – MEDIAN OPENING SPACING FULL COMPLIANCE

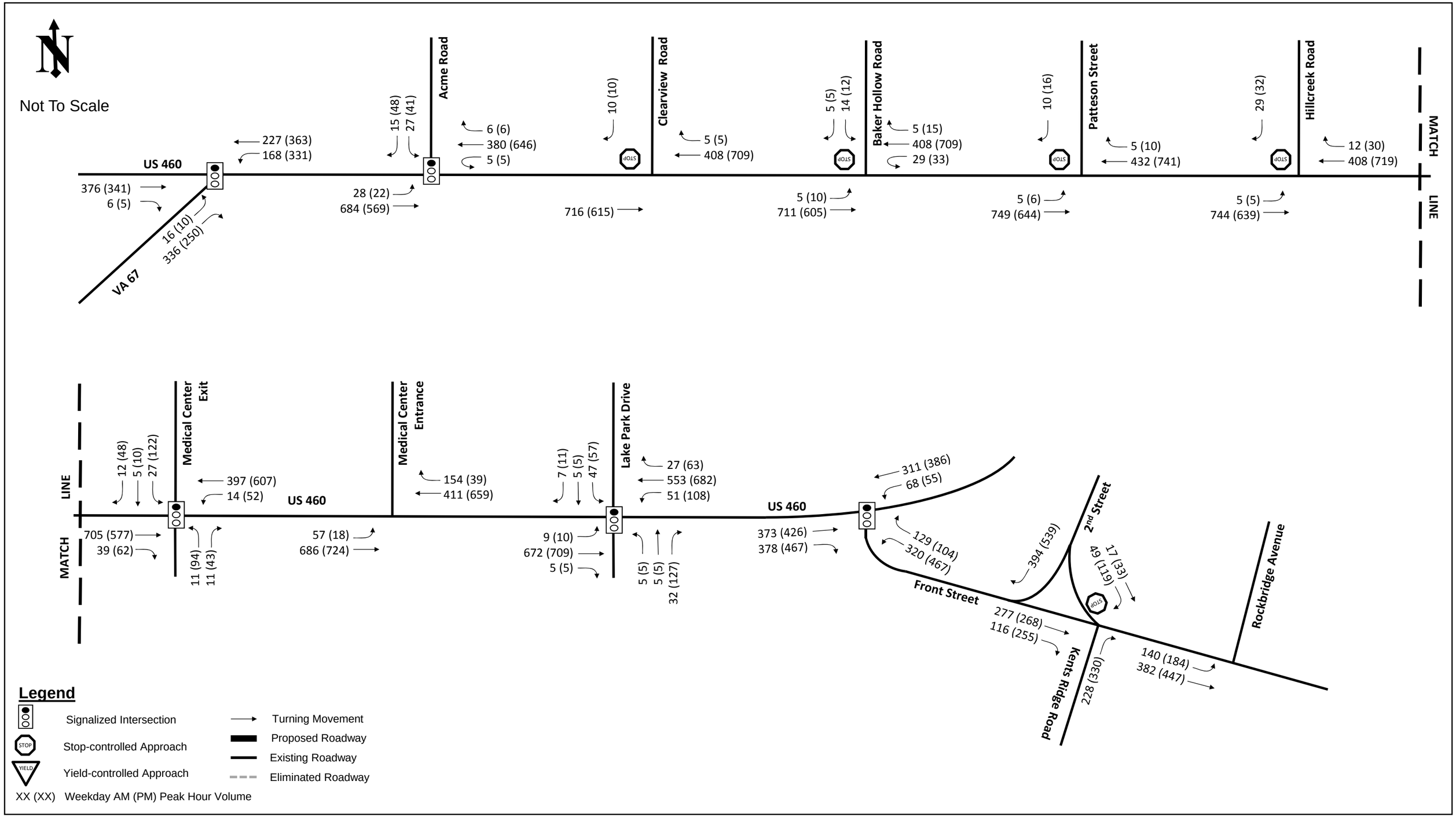


BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 1



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 1

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	28	684	5	380	6	27	15
Future Volume (vph)	28	684	5	380	6	27	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	1.00	0.95		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	1805	3360		1805	1509
Flt Permitted	0.95	1.00	0.36	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	690	3360		1805	1509
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	760	6	422	7	30	17
RTOR Reduction (vph)	0	0	0	1	0	0	13
Lane Group Flow (vph)	31	760	6	428	0	30	4
Heavy Vehicles (%)	0%	5%	0%	7%	17%	0%	7%
Turn Type	Prot	NA	Perm	NA		Prot	pt+ov
Protected Phases	5	2		6		4	4 5
Permitted Phases			6				4
Actuated Green, G (s)	2.1	30.8	22.6	22.6		2.3	10.6
Effective Green, g (s)	2.1	30.8	22.6	22.6		2.3	10.6
Actuated g/C Ratio	0.05	0.69	0.51	0.51		0.05	0.24
Clearance Time (s)	5.9	5.1	5.3	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	85	2384	351	1710		93	360
v/s Ratio Prot	0.02	c0.22		0.13		c0.02	0.00
v/s Ratio Perm			0.01				
v/c Ratio	0.36	0.32	0.02	0.25		0.32	0.01
Uniform Delay, d1	20.5	2.7	5.4	6.1		20.3	12.9
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.9	0.1	0.0	0.1		2.0	0.0
Delay (s)	22.4	2.8	5.4	6.2		22.3	12.9
Level of Service	C	A	A	A		C	B
Approach Delay (s)		3.5		6.2		18.9	
Approach LOS		A		A		B	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	17.4
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	22	569	5	646	6	41	48
Future Volume (vph)	22	569	5	646	6	41	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	1.00	0.95		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1626	3438	1805	3501		1752	1615
Flt Permitted	0.95	1.00	0.42	1.00		0.95	1.00
Satd. Flow (perm)	1626	3438	798	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	612	5	695	6	44	52
RTOR Reduction (vph)	0	0	0	1	0	0	36
Lane Group Flow (vph)	24	612	5	700	0	44	16
Heavy Vehicles (%)	11%	5%	0%	3%	0%	3%	0%
Turn Type	Prot	NA	Perm	NA		Prot	pt+ov
Protected Phases	5	2		6		4	4 5
Permitted Phases			6				4
Actuated Green, G (s)	3.5	31.7	22.1	22.1		5.3	15.0
Effective Green, g (s)	3.5	31.7	22.1	22.1		5.3	15.0
Actuated g/C Ratio	0.07	0.66	0.46	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	117	2256	365	1601		192	501
v/s Ratio Prot	0.01	c0.18		c0.20		c0.03	0.01
v/s Ratio Perm			0.01				
v/c Ratio	0.21	0.27	0.01	0.44		0.23	0.03
Uniform Delay, d1	21.1	3.5	7.2	8.9		19.6	11.6
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.0	0.2		0.6	0.0
Delay (s)	21.7	3.5	7.2	9.1		20.2	11.6
Level of Service	C	A	A	A		C	B
Approach Delay (s)		4.2		9.1		15.6	
Approach LOS		A		A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBU	WBT	SBL	SBR
Lane Group Flow (vph)	31	760	6	429	30	17
v/c Ratio	0.10	0.26	0.01	0.18	0.10	0.04
Control Delay	16.6	3.0	10.2	7.5	16.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	3.0	10.2	7.5	16.1	4.3
Queue Length 50th (ft)	5	0	0	0	4	0
Queue Length 95th (ft)	25	69	7	76	24	7
Internal Link Dist (ft)		768		348	560	
Turn Bay Length (ft)	140		150		65	
Base Capacity (vph)	764	3438	687	3346	764	822
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.22	0.01	0.13	0.04	0.02

Intersection Summary

Lane Group	EBL	EBT	WBU	WBT	SBL	SBR
Lane Group Flow (vph)	24	612	5	701	44	52
v/c Ratio	0.10	0.26	0.01	0.37	0.16	0.08
Control Delay	20.3	4.3	10.4	10.9	19.8	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	4.3	10.4	10.9	19.8	3.9
Queue Length 50th (ft)	6	32	1	76	10	0
Queue Length 95th (ft)	24	57	6	129	35	15
Internal Link Dist (ft)		768		349	560	
Turn Bay Length (ft)	140		150		65	
Base Capacity (vph)	570	3438	762	3344	614	941
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.18	0.01	0.21	0.07	0.06

Intersection Summary

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	716	408	5	0	10
Future Vol, veh/h	0	716	408	5	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	0	814	464	6	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	773
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	773
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	773
HCM Lane V/C Ratio	-	-	-	0.015
HCM Control Delay (s)	-	-	-	9.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	615	709	5	0	10
Future Vol, veh/h	0	615	709	5	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	2	0	0	0
Mvmt Flow	0	668	771	5	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	388
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	616
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	616
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	616
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection							
Int Delay, s/veh	0.6						

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	5	711	29	408	5	14	5
Future Vol, veh/h	5	711	29	408	5	14	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	135	-	150	-	-	0	-
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	-3	-	3	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89
Heavy Vehicles, %	0	5	0	6	0	0	0
Mvmt Flow	6	799	33	458	6	16	6

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	464	0	583	-	0	937	232
Stage 1	-	-	-	-	-	526	-
Stage 2	-	-	-	-	-	411	-
Critical Hdwy	4.1	-	6.4	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	2.5	-	-	3.5	3.3
Pot Cap-1 Maneuver	1108	-	621	-	-	267	776
Stage 1	-	-	-	-	-	563	-
Stage 2	-	-	-	-	-	643	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	1108	-	621	-	-	266	776
Mov Cap-2 Maneuver	-	-	-	-	-	266	-
Stage 1	-	-	-	-	-	563	-
Stage 2	-	-	-	-	-	640	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0.7	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	621	-	-	322
HCM Lane V/C Ratio	0.005	-	0.052	-	-	0.066
HCM Control Delay (s)	8.3	-	11.1	-	-	17
HCM Lane LOS	A	-	B	-	-	C
HCM 95th %tile Q(veh)	0	-	0.2	-	-	0.2

Intersection							
Int Delay, s/veh	0.6						

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	10	605	33	709	15	12	5
Future Vol, veh/h	10	605	33	709	15	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	135	-	150	-	-	0	-
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	-3	-	3	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93
Heavy Vehicles, %	0	5	3	3	0	0	0
Mvmt Flow	11	651	35	762	16	13	5

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	778	0	475	-	0	1188	389
Stage 1	-	-	-	-	-	841	-
Stage 2	-	-	-	-	-	347	-
Critical Hdwy	4.1	-	6.46	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	2.53	-	-	3.5	3.3
Pot Cap-1 Maneuver	848	-	714	-	-	184	615
Stage 1	-	-	-	-	-	388	-
Stage 2	-	-	-	-	-	693	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	848	-	714	-	-	182	615
Mov Cap-2 Maneuver	-	-	-	-	-	182	-
Stage 1	-	-	-	-	-	388	-
Stage 2	-	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0.4	22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	848	-	714	-	-	230
HCM Lane V/C Ratio	0.013	-	0.05	-	-	0.079
HCM Control Delay (s)	9.3	-	10.3	-	-	22
HCM Lane LOS	A	-	B	-	-	C
HCM 95th %tile Q(veh)	0	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	749	432	5	0	10
Future Vol, veh/h	5	749	432	5	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	25	5	7	33	0	0
Mvmt Flow	6	851	491	6	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	497	0	-	0	-	248
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.6	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.45	-	-	-	-	3.3
Pot Cap-1 Maneuver	918	-	-	-	0	758
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	918	-	-	-	-	758
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	918	-	-	-	758
HCM Lane V/C Ratio	0.006	-	-	-	0.015
HCM Control Delay (s)	8.9	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	644	741	10	0	16
Future Vol, veh/h	6	644	741	10	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	17	5	2	0	0	7
Mvmt Flow	6	678	780	11	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	791	0	-	0	-	395
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.44	-	-	-	-	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.37	-	-	-	-	3.37
Pot Cap-1 Maneuver	735	-	-	-	0	590
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	735	-	-	-	-	590
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	735	-	-	-	590
HCM Lane V/C Ratio	0.009	-	-	-	0.029
HCM Control Delay (s)	9.9	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	744	408	12	0	29
Future Vol, veh/h	5	744	408	12	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	836	458	13	0	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	-	236
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	1100	-	-	-	0	772
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	-	772
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1100	-	-	-	772
HCM Lane V/C Ratio	0.005	-	-	-	0.042
HCM Control Delay (s)	8.3	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					

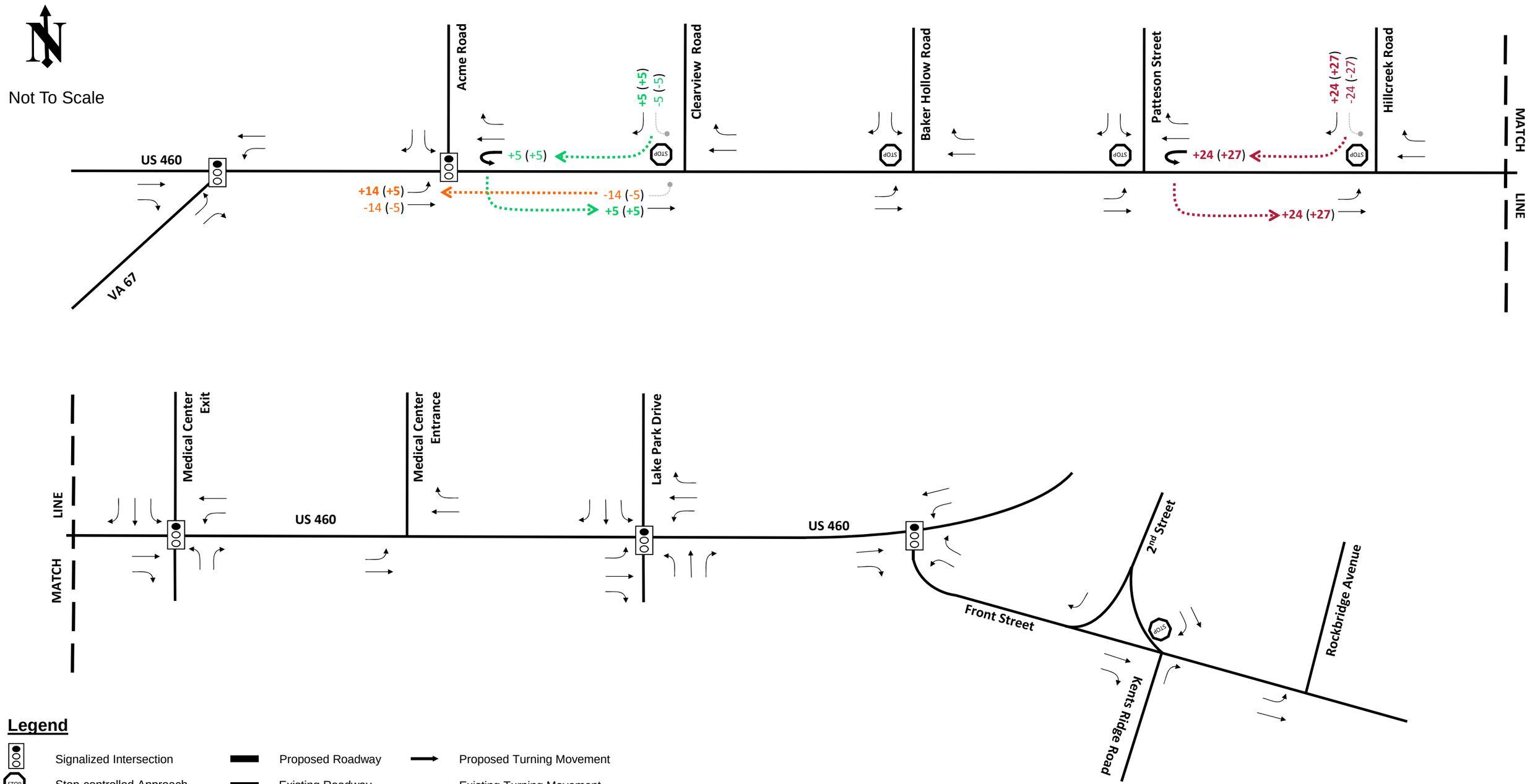
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	639	719	30	0	32
Future Vol, veh/h	5	639	719	30	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	5	2	4	0	3
Mvmt Flow	5	687	773	32	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	805	0	-	0	-	403
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.33
Pot Cap-1 Maneuver	828	-	-	-	0	594
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	828	-	-	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	828	-	-	-	594
HCM Lane V/C Ratio	0.006	-	-	-	0.058
HCM Control Delay (s)	9.4	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

ALTERNATIVE 2: ACCESS MANAGEMENT IMPROVEMENTS – MEDIAN OPENING SPACING PARTIAL COMPLIANCE

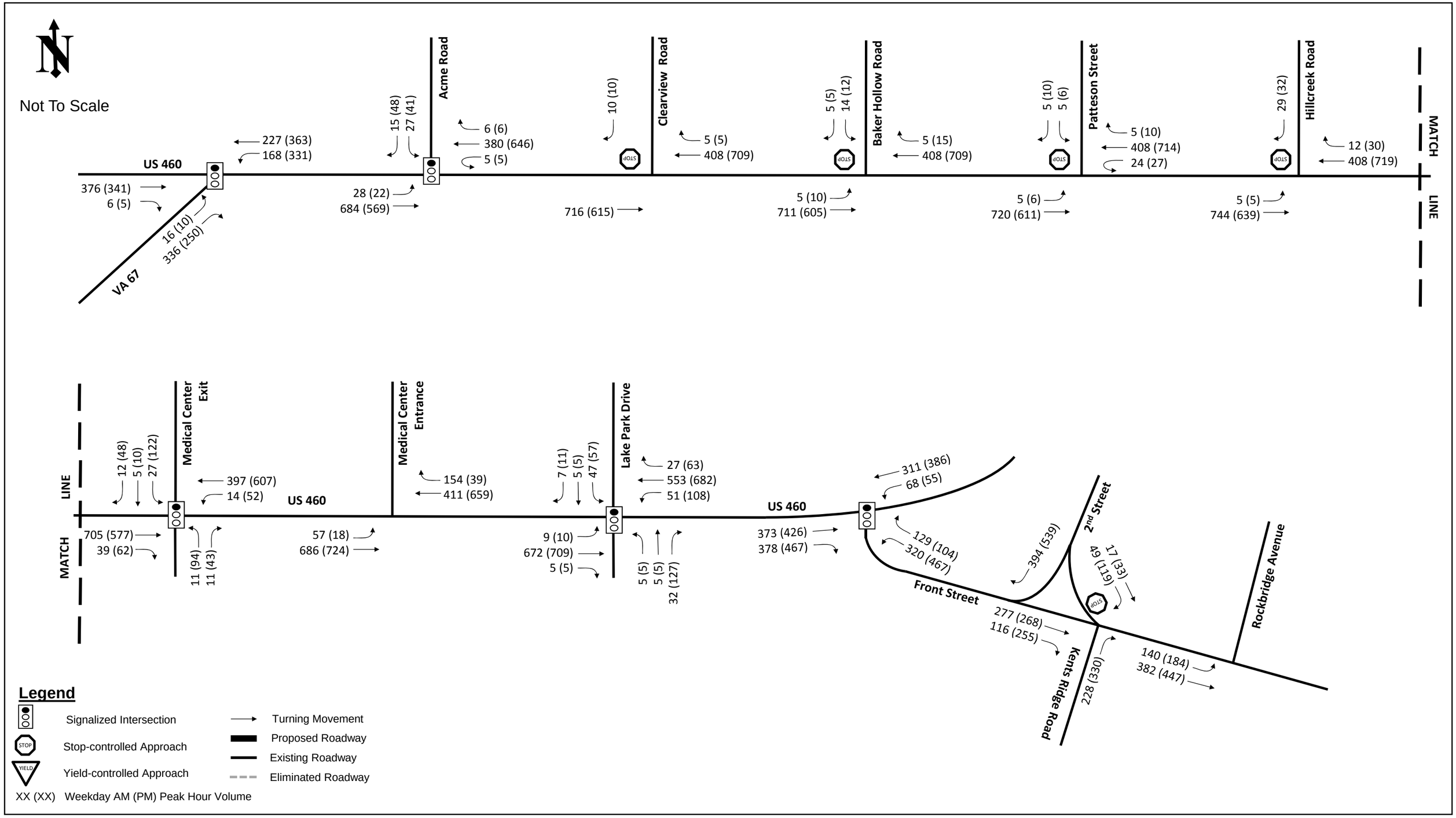


BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 2



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 2

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	28	684	5	380	6	27	15
Future Volume (vph)	28	684	5	380	6	27	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	1.00	0.95		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	1805	3360		1805	1509
Flt Permitted	0.95	1.00	0.36	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	690	3360		1805	1509
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	760	6	422	7	30	17
RTOR Reduction (vph)	0	0	0	1	0	0	13
Lane Group Flow (vph)	31	760	6	428	0	30	4
Heavy Vehicles (%)	0%	5%	0%	7%	17%	0%	7%
Turn Type	Prot	NA	Perm	NA		Prot	pt+ov
Protected Phases	5	2		6		4	4 5
Permitted Phases			6				4
Actuated Green, G (s)	2.1	30.8	22.6	22.6		2.3	10.6
Effective Green, g (s)	2.1	30.8	22.6	22.6		2.3	10.6
Actuated g/C Ratio	0.05	0.69	0.51	0.51		0.05	0.24
Clearance Time (s)	5.9	5.1	5.3	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	85	2384	351	1710		93	360
v/s Ratio Prot	0.02	c0.22		0.13		c0.02	0.00
v/s Ratio Perm			0.01				
v/c Ratio	0.36	0.32	0.02	0.25		0.32	0.01
Uniform Delay, d1	20.5	2.7	5.4	6.1		20.3	12.9
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.9	0.1	0.0	0.1		2.0	0.0
Delay (s)	22.4	2.8	5.4	6.2		22.3	12.9
Level of Service	C	A	A	A		C	B
Approach Delay (s)		3.5		6.2		18.9	
Approach LOS		A		A		B	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	17.4
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	22	569	5	646	6	41	48
Future Volume (vph)	22	569	5	646	6	41	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	1.00	0.95		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1626	3438	1805	3501		1752	1615
Flt Permitted	0.95	1.00	0.42	1.00		0.95	1.00
Satd. Flow (perm)	1626	3438	798	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	612	5	695	6	44	52
RTOR Reduction (vph)	0	0	0	1	0	0	36
Lane Group Flow (vph)	24	612	5	700	0	44	16
Heavy Vehicles (%)	11%	5%	0%	3%	0%	3%	0%
Turn Type	Prot	NA	Perm	NA		Prot	pt+ov
Protected Phases	5	2		6		4	4 5
Permitted Phases			6				4
Actuated Green, G (s)	3.5	31.7	22.1	22.1		5.3	15.0
Effective Green, g (s)	3.5	31.7	22.1	22.1		5.3	15.0
Actuated g/C Ratio	0.07	0.66	0.46	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	117	2256	365	1601		192	501
v/s Ratio Prot	0.01	c0.18		c0.20		c0.03	0.01
v/s Ratio Perm			0.01				
v/c Ratio	0.21	0.27	0.01	0.44		0.23	0.03
Uniform Delay, d1	21.1	3.5	7.2	8.9		19.6	11.6
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.0	0.2		0.6	0.0
Delay (s)	21.7	3.5	7.2	9.1		20.2	11.6
Level of Service	C	A	A	A		C	B
Approach Delay (s)		4.2		9.1		15.6	
Approach LOS		A		A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBU	WBT	SBL	SBR
Lane Group Flow (vph)	31	760	6	429	30	17
v/c Ratio	0.10	0.26	0.01	0.18	0.10	0.04
Control Delay	16.6	3.0	10.2	7.5	16.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	3.0	10.2	7.5	16.1	4.3
Queue Length 50th (ft)	5	0	0	0	4	0
Queue Length 95th (ft)	25	69	7	76	24	7
Internal Link Dist (ft)		768		348	560	
Turn Bay Length (ft)	140		150		65	
Base Capacity (vph)	764	3438	687	3346	764	822
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.22	0.01	0.13	0.04	0.02

Intersection Summary

Lane Group	EBL	EBT	WBU	WBT	SBL	SBR
Lane Group Flow (vph)	24	612	5	701	44	52
v/c Ratio	0.10	0.26	0.01	0.37	0.16	0.08
Control Delay	20.3	4.3	10.4	10.9	19.8	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	4.3	10.4	10.9	19.8	3.9
Queue Length 50th (ft)	6	32	1	76	10	0
Queue Length 95th (ft)	24	57	6	129	35	15
Internal Link Dist (ft)		768		348	560	
Turn Bay Length (ft)	140		150		65	
Base Capacity (vph)	570	3438	762	3344	614	941
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.18	0.01	0.21	0.07	0.06

Intersection Summary

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	716	408	5	0	10
Future Vol, veh/h	0	716	408	5	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	0	814	464	6	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	773
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	773
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	773
HCM Lane V/C Ratio	-	-	-	0.015
HCM Control Delay (s)	-	-	-	9.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	615	709	5	0	10
Future Vol, veh/h	0	615	709	5	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	50	5	2	0	0	0
Mvmt Flow	0	668	771	5	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	388
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	616
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	616
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	616
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection							
Int Delay, s/veh	0.4						

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	5	720	24	408	5	5	5
Future Vol, veh/h	5	720	24	408	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	138	-	150	-	-	0	-
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89
Heavy Vehicles, %	25	5	0	7	33	0	0
Mvmt Flow	6	809	27	458	6	6	6

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	464	0	590	-	0	931	232
Stage 1	-	-	-	-	-	515	-
Stage 2	-	-	-	-	-	416	-
Critical Hdwy	4.6	-	6.4	-	-	7.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	6.5	-
Follow-up Hdwy	2.45	-	2.5	-	-	3.5	3.3
Pot Cap-1 Maneuver	947	-	615	-	-	225	776
Stage 1	-	-	-	-	-	516	-
Stage 2	-	-	-	-	-	590	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	947	-	615	-	-	224	776
Mov Cap-2 Maneuver	-	-	-	-	-	224	-
Stage 1	-	-	-	-	-	513	-
Stage 2	-	-	-	-	-	586	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0.6	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	947	-	615	-	-	348
HCM Lane V/C Ratio	0.006	-	0.044	-	-	0.032
HCM Control Delay (s)	8.8	-	11.1	-	-	15.7
HCM Lane LOS	A	-	B	-	-	C
HCM 95th %tile Q(veh)	0	-	0.1	-	-	0.1

Intersection							
Int Delay, s/veh	0.4						

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	6	611	27	714	10	6	10
Future Vol, veh/h	6	611	27	714	10	6	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	138	-	150	-	-	-	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94
Heavy Vehicles, %	17	5	4	2	0	0	11
Mvmt Flow	6	650	29	760	11	6	11

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	770	0	475	-	0	1160	385
Stage 1	-	-	-	-	-	822	-
Stage 2	-	-	-	-	-	338	-
Critical Hdwy	4.44	-	6.48	-	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	-	5.8	-
Follow-up Hdwy	2.37	-	2.54	-	-	3.5	3.41
Pot Cap-1 Maneuver	749	-	709	-	-	192	588
Stage 1	-	-	-	-	-	397	-
Stage 2	-	-	-	-	-	700	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	749	-	709	-	-	190	588
Mov Cap-2 Maneuver	-	-	-	-	-	190	-
Stage 1	-	-	-	-	-	397	-
Stage 2	-	-	-	-	-	694	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0.4	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	749	-	709	-	-	588
HCM Lane V/C Ratio	0.009	-	0.041	-	-	0.018
HCM Control Delay (s)	9.8	-	10.3	-	-	11.2
HCM Lane LOS	A	-	B	-	-	B
HCM 95th %tile Q(veh)	0	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	744	408	12	0	29
Future Vol, veh/h	5	744	408	12	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	836	458	13	0	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	-	236
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	1100	-	-	-	0	772
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	-	772
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1100	-	-	-	772
HCM Lane V/C Ratio	0.005	-	-	-	0.042
HCM Control Delay (s)	8.3	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	639	719	30	0	32
Future Vol, veh/h	5	639	719	30	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	5	2	4	0	3
Mvmt Flow	5	687	773	32	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	805	0	-	0	-	403
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.33
Pot Cap-1 Maneuver	828	-	-	-	0	594
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	828	-	-	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	828	-	-	-	594
HCM Lane V/C Ratio	0.006	-	-	-	0.058
HCM Control Delay (s)	9.4	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

ALTERNATIVE 3: TRAFFIC SIGNAL COMMUNICATIONS AND RETIMING IMPROVEMENTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Future Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.89	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3420		1570	3406		1805		1468	1779	1631	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3420		1570	3406		1805		1468	1779	1631	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	766	42	15	432	0	12	0	12	29	5	13
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	12	0	12	0
Lane Group Flow (vph)	0	805	0	15	432	0	12	0	0	29	6	0
Heavy Vehicles (%)	0%	5%	0%	15%	6%	0%	0%	0%	10%	4%	0%	9%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		56.9		2.7	64.8		2.8		2.8	4.7	4.7	
Effective Green, g (s)		56.9		2.7	64.8		2.8		2.8	4.7	4.7	
Actuated g/C Ratio		0.63		0.03	0.72		0.03		0.03	0.05	0.05	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		2162		47	2452		56		45	92	85	
v/s Ratio Prot		c0.24		0.01	c0.13		c0.01		0.00	c0.02	0.00	
v/s Ratio Perm												
v/c Ratio		0.37		0.32	0.18		0.21		0.01	0.32	0.07	
Uniform Delay, d1		8.0		42.7	4.0		42.5		42.3	41.1	40.6	
Progression Factor		1.00		0.63	0.16		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.2		5.2	0.2		1.9		0.1	2.0	0.3	
Delay (s)		8.1		32.1	0.8		44.4		42.3	43.1	40.9	
Level of Service		A		C	A		D		D	D	D	
Approach Delay (s)		8.1			1.9			43.4			42.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Future Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.88	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3394		1805	3505		1805		1568	1796	1680	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3394		1805	3505		1805		1568	1796	1680	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	614	66	55	646	0	100	0	46	130	11	51
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	42	0	45	0
Lane Group Flow (vph)	0	672	0	55	646	0	100	0	4	130	17	0
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%	0%	0%	3%	3%	0%	2%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		44.1		14.0	63.3		8.0		8.0	11.0	11.0	
Effective Green, g (s)		44.1		14.0	63.3		8.0		8.0	11.0	11.0	
Actuated g/C Ratio		0.44		0.14	0.63		0.08		0.08	0.11	0.11	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1496		252	2218		144		125	197	184	
v/s Ratio Prot		c0.20		0.03	c0.18		c0.06		0.00	c0.07	0.01	
v/s Ratio Perm												
v/c Ratio		0.45		0.22	0.29		0.69		0.03	0.66	0.09	
Uniform Delay, d1		19.5		38.1	8.3		44.8		42.4	42.7	40.0	
Progression Factor		1.00		0.50	0.09		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.4		0.6	0.3		13.6		0.1	7.8	0.2	
Delay (s)		19.9		19.6	1.0		58.4		42.5	50.5	40.2	
Level of Service		B		B	A		E		D	D	D	
Approach Delay (s)		19.9			2.5			53.4			47.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	808	15	432	12	12	29	18
v/c Ratio	0.31	0.10	0.16	0.10	0.05	0.21	0.13
Control Delay	8.2	23.9	0.8	40.5	0.4	41.9	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	23.9	0.8	40.5	0.4	41.9	24.3
Queue Length 50th (ft)	48	6	4	7	0	16	3
Queue Length 95th (ft)	238	24	7	23	0	42	23
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	2655	181	2762	186	305	167	164
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.08	0.16	0.06	0.04	0.17	0.11

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	680	55	646	100	46	130	62
v/c Ratio	0.42	0.18	0.29	0.60	0.16	0.66	0.27
Control Delay	22.9	17.7	1.1	58.1	1.2	58.7	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	17.7	1.1	58.1	1.2	58.7	18.1
Queue Length 50th (ft)	201	22	3	62	0	80	6
Queue Length 95th (ft)	237	58	4	116	0	142	45
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	1893	321	2257	185	300	220	251
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.17	0.29	0.54	0.15	0.59	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Future Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3413		1736	3373			1854	1568		1817	1417
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3413		1736	3373			1854	1568		1817	1417
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	715	5	54	588	29	5	5	34	50	5	7
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	32	0	0	6
Lane Group Flow (vph)	10	720	0	54	614	0	0	10	2	0	55	1
Heavy Vehicles (%)	0%	5%	100%	4%	6%	12%	0%	0%	3%	0%	0%	14%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	3	4	4	4
Permitted Phases												
Actuated Green, G (s)	1.6	49.0		5.8	53.0			4.2	4.2		7.0	7.0
Effective Green, g (s)	1.6	49.0		5.8	53.0			4.2	4.2		7.0	7.0
Actuated g/C Ratio	0.02	0.54		0.06	0.59			0.05	0.05		0.08	0.08
Clearance Time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	32	1858		111	1986			86	73		141	110
v/s Ratio Prot	0.01	c0.21		c0.03	0.18			c0.01	0.00		c0.03	0.00
v/s Ratio Perm												
v/c Ratio	0.31	0.39		0.49	0.31			0.12	0.02		0.39	0.00
Uniform Delay, d1	43.7	11.8		40.7	9.3			41.1	40.9		39.5	38.3
Progression Factor	0.64	0.67		1.22	0.49			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	0.2		4.3	0.4			0.6	0.1		1.8	0.0
Delay (s)	35.4	8.1		53.8	4.9			41.7	41.1		41.3	38.3
Level of Service	D	A		D	A			D	D		D	D
Approach Delay (s)		8.5			8.9			41.2			40.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Future Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3502		1770	3469			1685	1599		1816	1468
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3502		1770	3469			1685	1599		1816	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	779	5	119	749	69	5	5	140	63	5	12
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	130	0	0	11
Lane Group Flow (vph)	11	783	0	119	813	0	0	10	10	0	68	1
Heavy Vehicles (%)	0%	3%	0%	2%	3%	0%	20%	0%	1%	0%	0%	10%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		4	4	4	3	3	3
Permitted Phases												
Actuated Green, G (s)	1.7	49.5		12.0	59.6			7.1	7.1		7.4	7.4
Effective Green, g (s)	1.7	49.5		12.0	59.6			7.1	7.1		7.4	7.4
Actuated g/C Ratio	0.02	0.50		0.12	0.60			0.07	0.07		0.07	0.07
Clearance Time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	30	1733		212	2067			119	113		134	108
v/s Ratio Prot	0.01	c0.22		c0.07	0.23			0.01	c0.01		c0.04	0.00
v/s Ratio Perm												
v/c Ratio	0.37	0.45		0.56	0.39			0.08	0.09		0.51	0.01
Uniform Delay, d1	48.6	16.4		41.5	10.7			43.4	43.4		44.5	42.9
Progression Factor	0.45	0.83		1.33	0.39			1.00	1.00		1.00	1.00
Incremental Delay, d2	9.5	0.2		3.7	0.5			0.3	0.3		3.0	0.0
Delay (s)	31.5	13.8		58.8	4.7			43.7	43.8		47.6	42.9
Level of Service	C	B		E	A			D	D		D	D
Approach Delay (s)		14.0			11.5			43.8			46.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

9: Railroad Crossing/Lake Park Drive & US 460

Build Alternative 3 2030 AM Peak

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	10	720	54	617	10	34	55	7
v/c Ratio	0.07	0.34	0.32	0.26	0.07	0.10	0.33	0.02
Control Delay	25.4	9.3	50.6	4.5	39.7	0.6	43.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	9.3	50.6	4.5	39.7	0.6	43.0	0.1
Queue Length 50th (ft)	5	123	31	38	5	0	30	0
Queue Length 95th (ft)	m11	44	m52	72	21	0	65	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	188	2142	189	2343	175	367	176	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.34	0.29	0.26	0.06	0.09	0.31	0.02

Intersection Summary

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

9: Railroad Crossing/Lake Park Drive & US 460

Build Alternative 3 2030 PM Peak

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	11	784	119	818	10	140	68	12
v/c Ratio	0.08	0.44	0.56	0.36	0.08	0.45	0.43	0.04
Control Delay	20.6	14.8	64.7	4.1	45.1	5.9	51.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	14.8	64.7	4.1	45.1	5.9	51.5	0.2
Queue Length 50th (ft)	5	121	78	44	6	0	42	0
Queue Length 95th (ft)	m13	45	m123	83	23	12	85	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	169	1843	215	2274	150	335	167	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.43	0.55	0.36	0.07	0.42	0.41	0.04

Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	373	378	68	311	320	129
Future Volume (vph)	373	378	68	311	320	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3164		1656	3374	3217	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	3164		1656	3374	3217	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	419	425	76	349	360	145
RTOR Reduction (vph)	177	0	0	0	54	0
Lane Group Flow (vph)	667	0	76	349	451	0
Heavy Vehicles (%)	8%	3%	9%	7%	5%	8%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	49.2		7.1	61.9	17.5	
Effective Green, g (s)	49.2		7.1	61.9	17.5	
Actuated g/C Ratio	0.55		0.08	0.69	0.19	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1729		130	2320	625	
v/s Ratio Prot	c0.21		c0.05	0.10	c0.14	
v/s Ratio Perm						
v/c Ratio	0.39		0.58	0.15	0.72	
Uniform Delay, d1	11.7		40.0	4.9	34.0	
Progression Factor	0.72		1.00	1.00	1.00	
Incremental Delay, d2	0.2		4.3	0.1	4.1	
Delay (s)	8.6		44.3	5.0	38.1	
Level of Service	A		D	A	D	
Approach Delay (s)	8.6			12.1	38.1	
Approach LOS	A			B	D	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	426	467	55	386	467	104
Future Volume (vph)	426	467	55	386	467	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3248		1736	3471	3398	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3248		1736	3471	3398	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	479	525	62	434	525	117
RTOR Reduction (vph)	174	0	0	0	21	0
Lane Group Flow (vph)	830	0	62	434	621	0
Heavy Vehicles (%)	4%	1%	4%	4%	1%	3%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	53.6		6.9	66.1	23.3	
Effective Green, g (s)	53.6		6.9	66.1	23.3	
Actuated g/C Ratio	0.54		0.07	0.66	0.23	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1740		119	2294	791	
v/s Ratio Prot	c0.26		c0.04	0.13	c0.18	
v/s Ratio Perm						
v/c Ratio	0.48		0.52	0.19	0.79	
Uniform Delay, d1	14.5		45.0	6.6	36.0	
Progression Factor	0.59		1.00	1.00	1.00	
Incremental Delay, d2	0.3		1.9	0.2	5.2	
Delay (s)	8.8		46.8	6.8	41.2	
Level of Service	A		D	A	D	
Approach Delay (s)	8.8			11.8	41.2	
Approach LOS	A			B	D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

10: Front Street & US 460

Build Alternative 3 2030 AM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	844	76	349	505
v/c Ratio	0.43	0.47	0.15	0.74
Control Delay	5.6	48.6	5.5	36.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.6	48.6	5.5	36.3
Queue Length 50th (ft)	115	42	31	121
Queue Length 95th (ft)	0	85	54	163
Internal Link Dist (ft)	669		798	628
Turn Bay Length (ft)		138		
Base Capacity (vph)	1941	170	2320	833
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	0.43	0.45	0.15	0.61

Intersection Summary

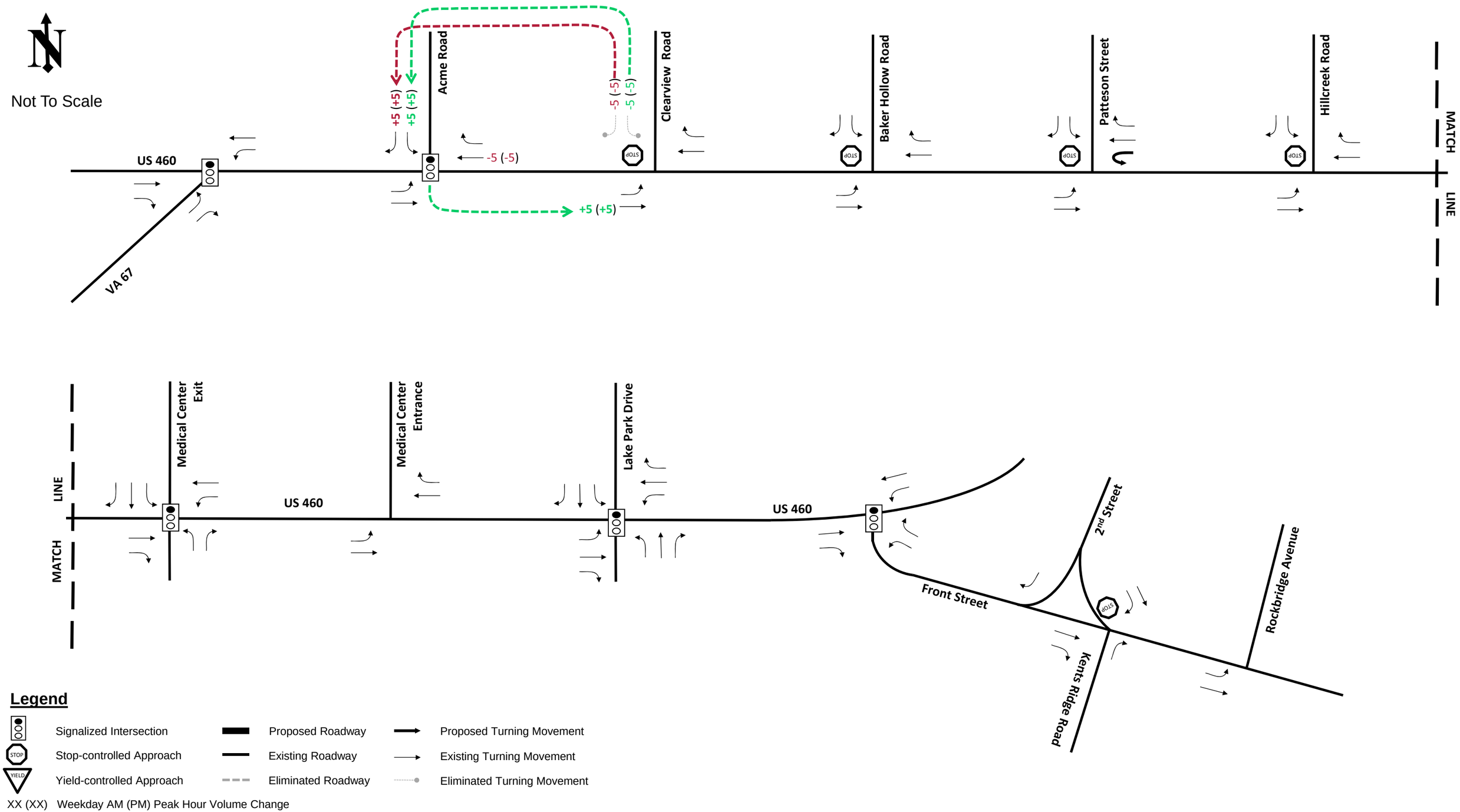
10: Front Street & US 460

Build Alternative 3 2030 PM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	1004	62	434	642
v/c Ratio	0.52	0.42	0.19	0.79
Control Delay	6.6	52.5	7.3	41.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.6	52.5	7.3	41.8
Queue Length 50th (ft)	118	38	51	190
Queue Length 95th (ft)	0	79	81	236
Internal Link Dist (ft)	669		798	625
Turn Bay Length (ft)		138		
Base Capacity (vph)	1949	158	2294	968
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	0.52	0.39	0.19	0.66

Intersection Summary

ALTERNATIVE 4: CONVERSION OF CLEARVIEW ROAD TO ONE-WAY STREET

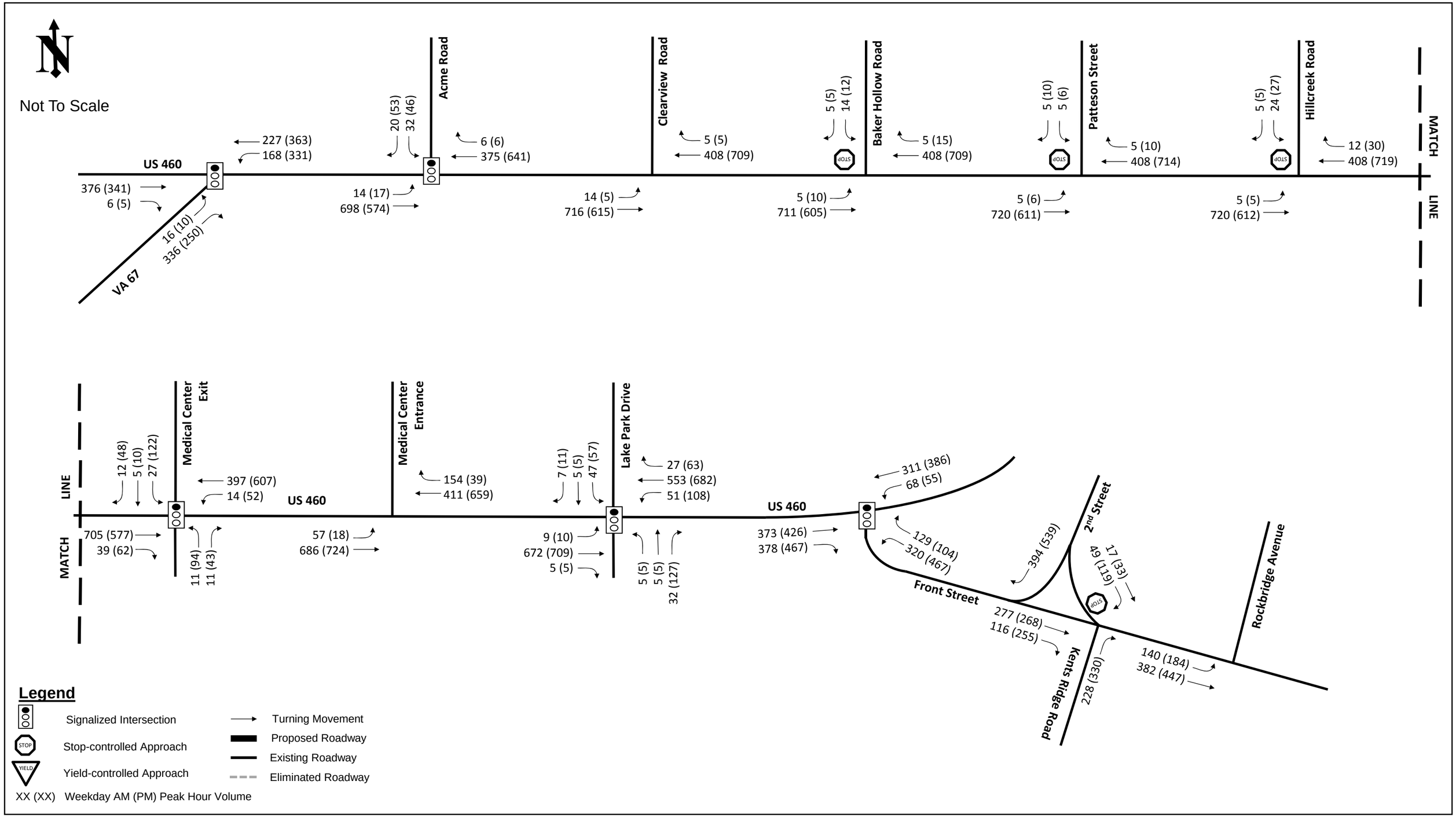


BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 4



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	698	375	6	32	20
Future Volume (vph)	14	698	375	6	32	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3360		1805	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3360		1805	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	776	417	7	36	22
RTOR Reduction (vph)	0	0	1	0	0	16
Lane Group Flow (vph)	16	776	423	0	36	6
Heavy Vehicles (%)	0%	5%	7%	17%	0%	5%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	2.2	30.3	22.0		3.6	12.0
Effective Green, g (s)	2.2	30.3	22.0		3.6	12.0
Actuated g/C Ratio	0.05	0.67	0.49		0.08	0.27
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	87	2304	1635		143	408
v/s Ratio Prot	0.01	c0.23	0.13		c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.18	0.34	0.26		0.25	0.01
Uniform Delay, d1	20.6	3.2	6.8		19.5	12.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1		0.9	0.0
Delay (s)	21.4	3.3	6.9		20.5	12.3
Level of Service	C	A	A		C	B
Approach Delay (s)		3.6	6.9		17.3	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	574	641	6	46	53
Future Volume (vph)	17	574	641	6	46	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3501		1752	1615
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	18	617	689	6	49	57
RTOR Reduction (vph)	0	0	1	0	0	39
Lane Group Flow (vph)	18	617	694	0	49	18
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	3.4	31.5	22.0		5.4	15.0
Effective Green, g (s)	3.4	31.5	22.0		5.4	15.0
Actuated g/C Ratio	0.07	0.65	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	127	2246	1597		196	502
v/s Ratio Prot	0.01	c0.18	c0.20		c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.14	0.27	0.43		0.25	0.04
Uniform Delay, d1	21.0	3.5	8.9		19.6	11.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2		0.7	0.0
Delay (s)	21.4	3.6	9.1		20.2	11.6
Level of Service	C	A	A		C	B
Approach Delay (s)		4.1	9.1		15.6	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	776	424	36	22
v/c Ratio	0.05	0.30	0.20	0.12	0.04
Control Delay	17.1	4.1	8.4	16.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	4.1	8.4	16.9	4.0
Queue Length 50th (ft)	4	43	21	9	0
Queue Length 95th (ft)	16	72	74	26	9
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	725	3438	3341	725	893
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.23	0.13	0.05	0.02

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	18	617	695	49	57
v/c Ratio	0.07	0.26	0.37	0.18	0.09
Control Delay	19.9	4.4	10.9	19.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	4.4	10.9	19.7	3.8
Queue Length 50th (ft)	4	33	76	11	0
Queue Length 95th (ft)	20	58	127	37	16
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	634	3438	3352	616	949
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.18	0.21	0.08	0.06

Intersection Summary

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	716	408	5	0	0
Future Vol, veh/h	14	716	408	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	16	814	464	6	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	469	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	1103	-	-	-	0	773
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1103	-	-	-	-	773
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1103	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	8.3	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

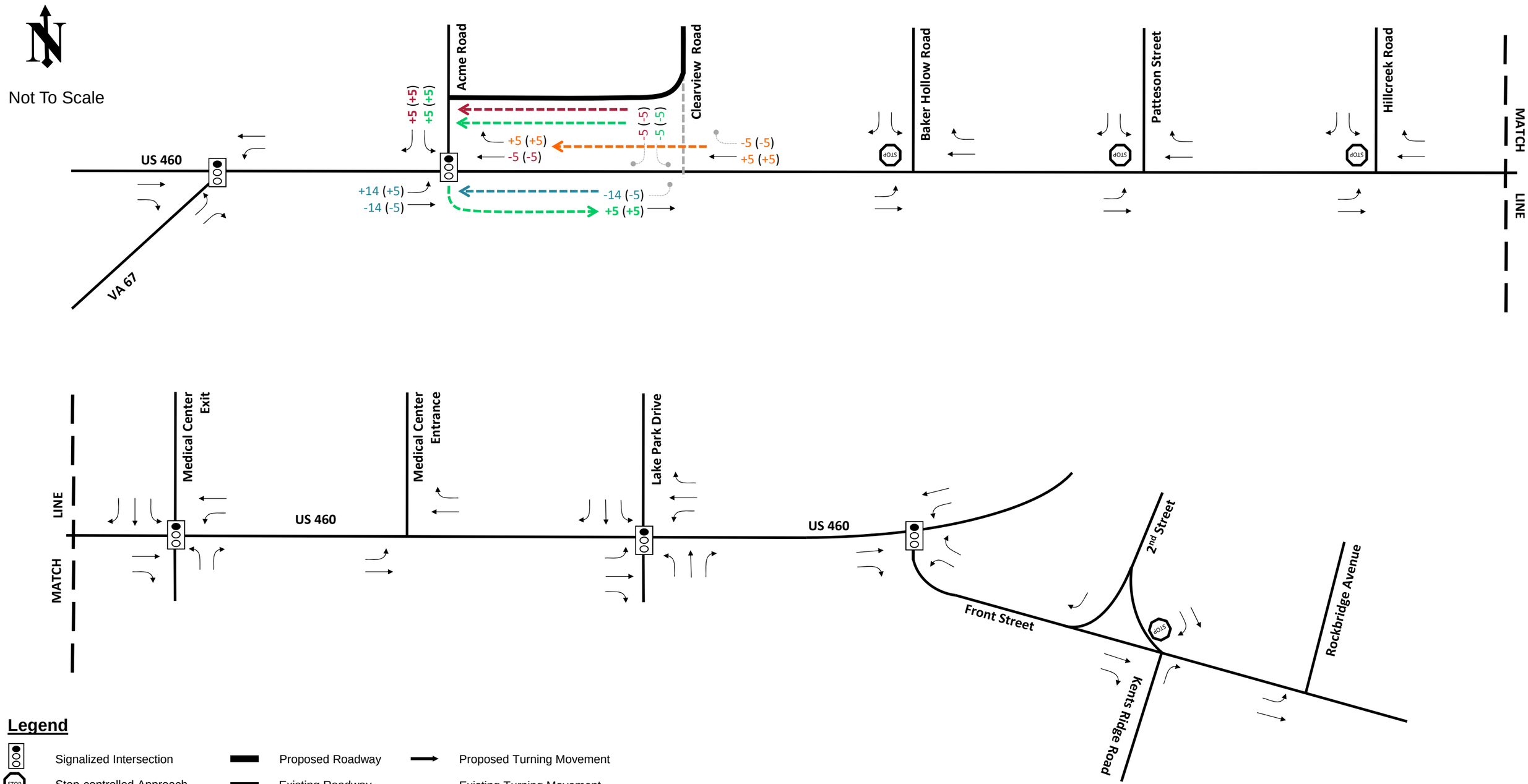
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	615	709	5	0	0
Future Vol, veh/h	5	615	709	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	145	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	5	2	0	0	0
Mvmt Flow	5	676	779	5	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	785	0	-	0	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.7	-	-	-	-	3.3
Pot Cap-1 Maneuver	580	-	-	-	0	613
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	580	-	-	-	-	613
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	580	-	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-
HCM Control Delay (s)	11.3	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

ALTERNATIVE 5: CLEARVIEW ROAD, MUDLICK ROAD, AND ACME ROAD CONNECTION

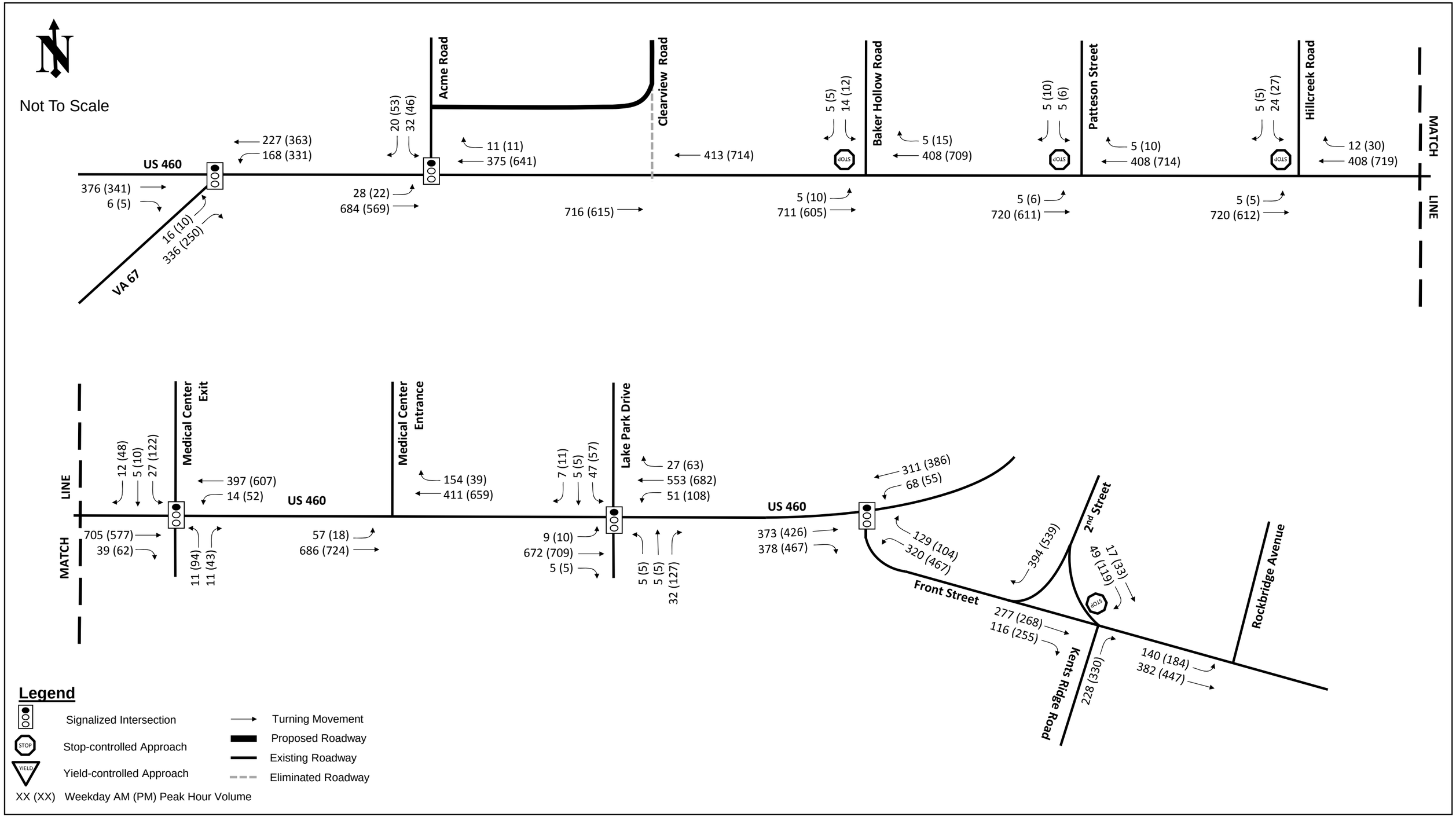


BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 5A,5B



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 5A,5B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	684	375	11	32	20
Future Volume (vph)	28	684	375	11	32	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3358		1805	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3358		1805	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	760	417	12	36	22
RTOR Reduction (vph)	0	0	2	0	0	17
Lane Group Flow (vph)	31	760	427	0	36	5
Heavy Vehicles (%)	0%	5%	7%	9%	0%	5%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	2.1	30.7	22.5		2.4	10.7
Effective Green, g (s)	2.1	30.7	22.5		2.4	10.7
Actuated g/C Ratio	0.05	0.69	0.51		0.05	0.24
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	85	2377	1701		97	370
v/s Ratio Prot	0.02	c0.22	0.13		c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.36	0.32	0.25		0.37	0.01
Uniform Delay, d1	20.5	2.7	6.2		20.3	12.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.9	0.1	0.1		2.4	0.0
Delay (s)	22.4	2.8	6.3		22.7	12.8
Level of Service	C	A	A		C	B
Approach Delay (s)		3.6	6.3		18.9	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	5.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	17.4
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	569	641	11	46	53
Future Volume (vph)	22	569	641	11	46	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1626	3438	3498		1752	1615
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1626	3438	3498		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	612	689	12	49	57
RTOR Reduction (vph)	0	0	2	0	0	39
Lane Group Flow (vph)	24	612	699	0	49	18
Heavy Vehicles (%)	11%	5%	3%	0%	3%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	3.5	31.8	22.2		5.4	15.1
Effective Green, g (s)	3.5	31.8	22.2		5.4	15.1
Actuated g/C Ratio	0.07	0.66	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	117	2254	1601		195	502
v/s Ratio Prot	0.01	c0.18	c0.20		c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.21	0.27	0.44		0.25	0.04
Uniform Delay, d1	21.2	3.5	8.9		19.7	11.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.2		0.7	0.0
Delay (s)	21.8	3.6	9.1		20.4	11.7
Level of Service	C	A	A		C	B
Approach Delay (s)		4.3	9.1		15.7	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

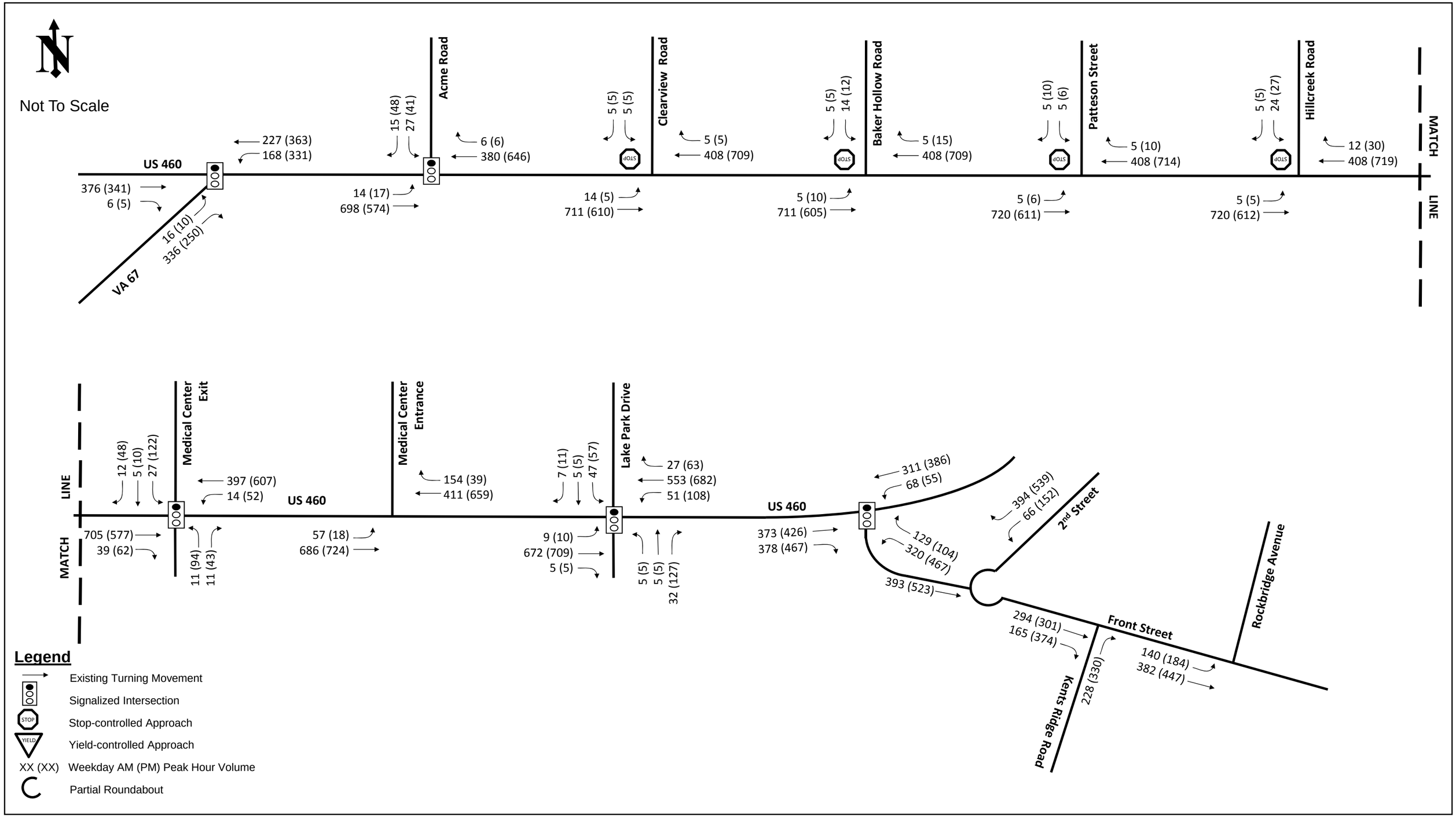
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	31	760	429	36	22
v/c Ratio	0.10	0.27	0.18	0.11	0.05
Control Delay	16.5	3.1	7.6	16.1	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	3.1	7.6	16.1	4.0
Queue Length 50th (ft)	5	0	0	5	0
Queue Length 95th (ft)	25	70	76	27	9
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	765	3438	3339	765	845
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.04	0.22	0.13	0.05	0.03

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	24	612	701	49	57
v/c Ratio	0.10	0.26	0.37	0.18	0.09
Control Delay	20.5	4.4	11.0	20.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	4.4	11.0	20.0	3.8
Queue Length 50th (ft)	6	32	76	11	0
Queue Length 95th (ft)	24	58	130	38	16
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	568	3438	3328	612	943
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.04	0.18	0.21	0.08	0.06

Intersection Summary

ALTERNATIVE 6: FRONT STREET/2ND STREET PARTIAL ROUNDABOUT



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	393	0	0	66	394
Future Volume (Veh/h)	0	393	0	0	66	394
Sign Control		Yield	Yield		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	418	0	0	70	419
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	140	140	140	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	140	140	140	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.2	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.3	
p0 queue free %	100	42	100	100	96	
cM capacity (veh/h)	807	716	721	1091	1585	

Direction, Lane #	EB 1	EB 2	SB 1	SB 2
Volume Total	209	209	70	419
Volume Left	0	0	70	0
Volume Right	0	0	0	419
cSH	716	716	1585	1700
Volume to Capacity	0.29	0.29	0.04	0.25
Queue Length 95th (ft)	30	30	3	0
Control Delay (s)	12.1	12.1	7.4	0.0
Lane LOS	B	B	A	
Approach Delay (s)	12.1		1.1	
Approach LOS	B			

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	523	0	0	152	539
Future Volume (Veh/h)	0	523	0	0	152	539
Sign Control		Yield	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	568	0	0	165	586
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	330	330	330	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	330	330	330	0	0	
tC, single (s)	7.1	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.3	2.2	
p0 queue free %	100	0	100	100	90	
cM capacity (veh/h)	579	530	532	1091	1630	

Direction, Lane #	EB 1	EB 2	SB 1	SB 2
Volume Total	284	284	165	586
Volume Left	0	0	165	0
Volume Right	0	0	0	586
cSH	530	530	1630	1700
Volume to Capacity	0.54	0.54	0.10	0.34
Queue Length 95th (ft)	79	79	8	0
Control Delay (s)	19.4	19.4	7.5	0.0
Lane LOS	C	C	A	
Approach Delay (s)	19.4		1.6	
Approach LOS	C			

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	382	0	0	0	0
Future Volume (Veh/h)	140	382	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	157	429	0	0	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)						
pX, platoon unblocked						
vC, conflicting volume	0				528	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				528	0
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	90				100	100
cM capacity (veh/h)	1593				437	1091

Direction, Lane #	EB 1	EB 2
Volume Total	300	286
Volume Left	157	0
Volume Right	0	0
cSH	1593	1700
Volume to Capacity	0.10	0.17
Queue Length 95th (ft)	8	0
Control Delay (s)	4.3	0.0
Lane LOS	A	
Approach Delay (s)	2.2	
Approach LOS		

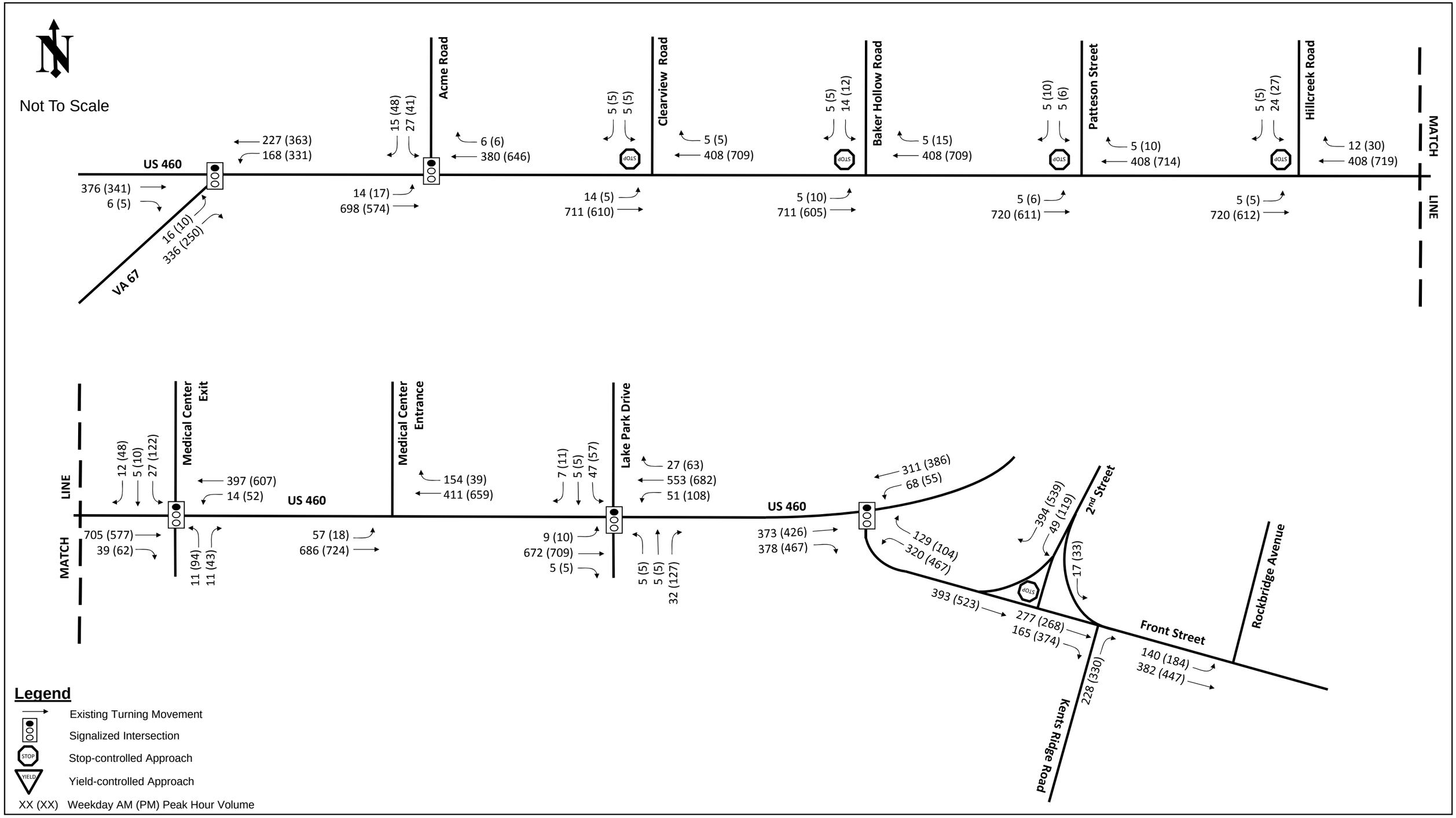
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	184	447	0	0	0	0
Future Volume (Veh/h)	184	447	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	198	481	0	0	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)						
pX, platoon unblocked						
vC, conflicting volume	0				636	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				636	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				100	100
cM capacity (veh/h)	1636				364	1091

Direction, Lane #	EB 1	EB 2
Volume Total	358	321
Volume Left	198	0
Volume Right	0	0
cSH	1636	1700
Volume to Capacity	0.12	0.19
Queue Length 95th (ft)	10	0
Control Delay (s)	4.6	0.0
Lane LOS	A	
Approach Delay (s)	2.4	
Approach LOS		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

ALTERNATIVE 7: REALIGNMENT OF 2ND STREET APPROACH AT FRONT STREET



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 7

Intersection						
Int Delay, s/veh	1.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑			↰	↱
Traffic Vol, veh/h	0	393	0	0	49	394
Future Vol, veh/h	0	393	0	0	49	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	215	-	-	-	0	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	11	4
Mvmt Flow	0	427	0	0	53	428

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	214	-
Stage 1	-	-	0	-
Stage 2	-	-	214	-
Critical Hdwy	-	-	7.02	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.02	-
Follow-up Hdwy	-	-	3.61	-
Pot Cap-1 Maneuver	0	-	730	0
Stage 1	0	-	-	0
Stage 2	0	-	775	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	730	-
Mov Cap-2 Maneuver	-	-	710	-
Stage 1	-	-	-	-
Stage 2	-	-	775	-

Approach	EB	SB
HCM Control Delay, s	0	10.5
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SBLn1	SBLn2
Capacity (veh/h)	-	710	-
HCM Lane V/C Ratio	-	0.075	-
HCM Control Delay (s)	-	10.5	0
HCM Lane LOS	-	B	A
HCM 95th %tile Q(veh)	-	0.2	-

Intersection						
Int Delay, s/veh	2.1					

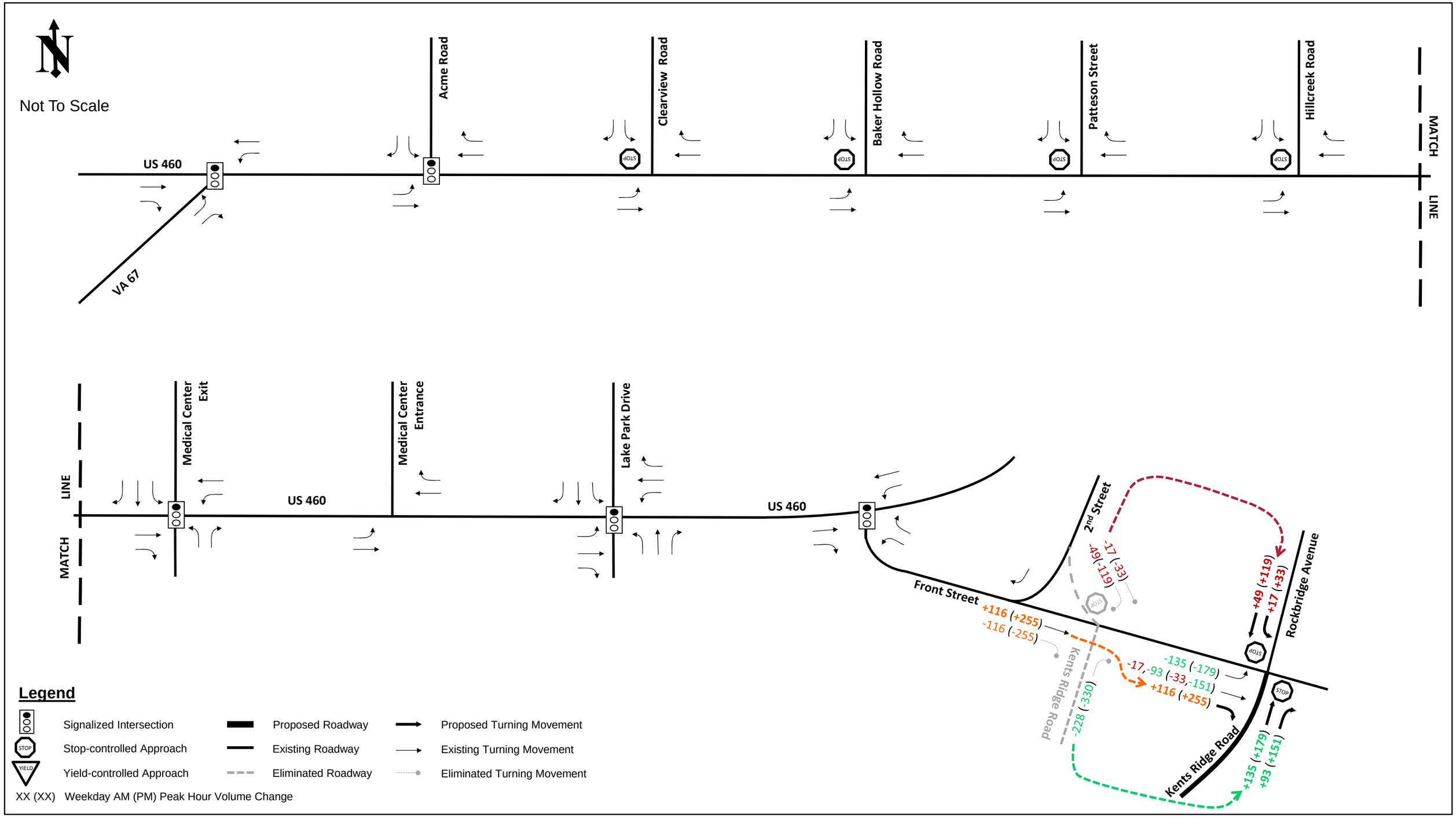
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑			↰	↱
Traffic Vol, veh/h	0	523	0	0	119	539
Future Vol, veh/h	0	523	0	0	119	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	215	-	-	-	0	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	0	0	1	1
Mvmt Flow	0	556	0	0	127	573

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	278	-
Stage 1	-	-	0	-
Stage 2	-	-	278	-
Critical Hdwy	-	-	6.82	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.82	-
Follow-up Hdwy	-	-	3.51	-
Pot Cap-1 Maneuver	0	-	692	0
Stage 1	0	-	-	0
Stage 2	0	-	747	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	692	-
Mov Cap-2 Maneuver	-	-	686	-
Stage 1	-	-	-	-
Stage 2	-	-	747	-

Approach	EB	SB
HCM Control Delay, s	0	11.4
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SBLn1	SBLn2
Capacity (veh/h)	-	686	-
HCM Lane V/C Ratio	-	0.185	-
HCM Control Delay (s)	-	11.4	0
HCM Lane LOS	-	B	A
HCM 95th %tile Q(veh)	-	0.7	-

ALTERNATIVE 8: ROCKBRIDGE AVENUE RAILROAD CROSSING

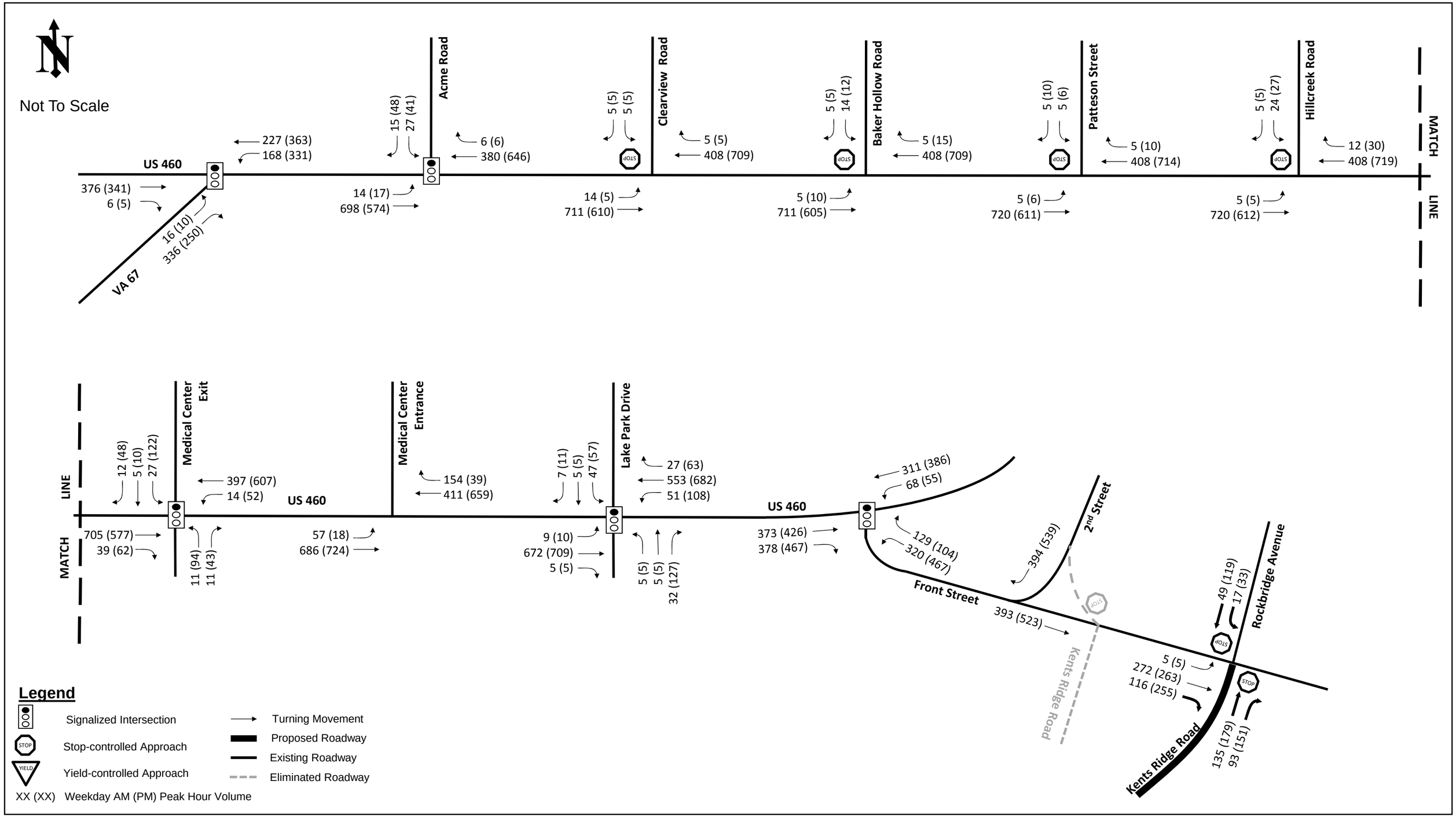


BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 8



BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

ALTERNATIVE 8

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑				↱
Traffic Vol, veh/h	0	393	0	0	0	394
Future Vol, veh/h	0	393	0	0	0	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	3	0	0	0	4
Mvmt Flow	0	423	0	0	0	424

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	-
Pot Cap-1 Maneuver	0	-	0	0
Stage 1	0	-	0	0
Stage 2	0	-	0	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	0	0
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑				↱
Traffic Vol, veh/h	0	523	0	0	0	539
Future Vol, veh/h	0	523	0	0	0	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	2	0	0	0	1
Mvmt Flow	0	575	0	0	0	592

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	-
Pot Cap-1 Maneuver	0	-	0	0
Stage 1	0	-	0	0
Stage 2	0	-	0	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	0	0
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	272	116	0	0	0	0	135	93	17	49	0
Future Vol, veh/h	5	272	116	0	0	0	0	135	93	17	49	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	4	0	0	0	2	5	5	0	11	0
Mvmt Flow	6	302	129	0	0	0	0	150	103	19	54	0

Major/Minor	Major1				Minor1			Minor2		
Conflicting Flow All	0	0	0		-	313	151	237	313	-
Stage 1	-	-	-		-	313	-	0	0	-
Stage 2	-	-	-		-	0	-	237	313	-
Critical Hdwy	4.1	-	-		-	6.6	7	7.5	6.72	-
Critical Hdwy Stg 1	-	-	-		-	5.6	-	-	-	-
Critical Hdwy Stg 2	-	-	-		-	-	-	6.5	5.72	-
Follow-up Hdwy	2.2	-	-		-	4.05	3.35	3.5	4.11	-
Pot Cap-1 Maneuver	-	-	-		0	594	859	703	581	0
Stage 1	-	-	-		0	648	-	-	-	0
Stage 2	-	-	-		0	-	-	751	634	0
Platoon blocked, %		-	-							
Mov Cap-1 Maneuver	-	-	-		-	594	859	498	581	-
Mov Cap-2 Maneuver	-	-	-		-	594	-	498	581	-
Stage 1	-	-	-		-	648	-	-	-	-
Stage 2	-	-	-		-	-	-	508	634	-

Approach	EB	NB	SB
HCM Control Delay, s		13.4	12.4
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	680	-	-	-	557
HCM Lane V/C Ratio	0.373	-	-	-	0.132
HCM Control Delay (s)	13.4	-	-	-	12.4
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	1.7	-	-	-	0.5

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	263	255	0	0	0	0	179	151	33	119	0
Future Vol, veh/h	5	263	255	0	0	0	0	179	151	33	119	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	215	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0	0	1	1	0	1	0
Mvmt Flow	5	280	271	0	0	0	0	190	161	35	127	0

Major/Minor	Major1				Minor1			Minor2		
Conflicting Flow All	0	0	0		-	290	140	246	290	-
Stage 1	-	-	-		-	290	-	0	0	-
Stage 2	-	-	-		-	0	-	246	290	-
Critical Hdwy	4.1	-	-		-	6.52	6.92	7.5	6.52	-
Critical Hdwy Stg 1	-	-	-		-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-		-	-	-	6.5	5.52	-
Follow-up Hdwy	2.2	-	-		-	4.01	3.31	3.5	4.01	-
Pot Cap-1 Maneuver	-	-	-		0	621	886	693	621	0
Stage 1	-	-	-		0	673	-	-	-	0
Stage 2	-	-	-		0	-	-	742	673	0
Platoon blocked, %		-	-							
Mov Cap-1 Maneuver	-	-	-		-	621	886	433	621	-
Mov Cap-2 Maneuver	-	-	-		-	621	-	433	621	-
Stage 1	-	-	-		-	673	-	-	-	-
Stage 2	-	-	-		-	-	-	436	673	-

Approach	EB	NB	SB
HCM Control Delay, s		14.7	13.8
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	719	-	-	-	568
HCM Lane V/C Ratio	0.488	-	-	-	0.285
HCM Control Delay (s)	14.7	-	-	-	13.8
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	2.7	-	-	-	1.2

APPENDIX E-5: ALTERNATIVE PLANNING-LEVEL COST ESTIMATES

US 460 Corridor Improvement Study
Planning Level Cost Estimate Summary
(2017 Dollars)

Improvement	Low Cost				High Cost			
	PE*	RW**	CN***	Total	PE*	RW**	CN***	Total
Alternative #1: Access Management - Median Opening Spacing Full Compliance	$ 275,000	$ -	$ 953,000	$ 1,228,000	$ 275,000	$ -	$ 1,492,000	$ 1,767,000
Alternative #2: Access Management - Median Opening Spacing Partial Compliance	$ 200,000	$ -	$ 668,000	$ 868,000	$ 200,000	$ -	$ 1,045,000	$ 1,245,000
Alternative #3: Traffic Signal Communications and Retiming	$ 30,000	$ 15,000	$ 125,000	$ 170,000	$ 30,000	$ 31,000	$ 188,000	$ 249,000
Alternative #4: Clearview Road - Convert to One-Way Street	$ 100,000	$ -	$ 114,000	$ 214,000	$ 100,000	$ -	$ 145,000	$ 245,000
Alternative #5A: Clearview Road, Mudlick Road, and Acme Road Connection (Option A)	$ 450,000	$ 305,000	$ 1,806,000	$ 2,561,000	$ 450,000	$ 735,000	$ 3,142,000	$ 4,327,000
Alternative #5B: Clearview Road, Mudlick Road, and Acme Road Connection (Option B)	$ 500,000	$ 344,000	$ 2,036,000	$ 2,880,000	$ 500,000	$ 818,000	$ 3,486,000	$ 4,804,000
Alternative #6: Front Street/2nd Street - Partial Roundabout	$ 575,000	$ 278,000	$ 1,509,000	$ 2,362,000	$ 575,000	$ 546,000	$ 2,105,000	$ 3,226,000
Alternative #7: Realign 2nd Street Approach at Front Street	$ 200,000	$ 132,000	$ 719,000	$ 1,051,000	$ 200,000	$ 277,000	$ 1,077,000	$ 1,554,000
Alternative #8: Rockbridge Avenue Railroad Crossing	$ 500,000	$ 427,000	$ 2,131,000	$ 3,058,000	$ 500,000	$ 867,000	$ 3,096,000	$ 4,463,000
Alternative #9: New Frontage Road Bridge	$ 1,100,000	$ 721,000	$ 7,424,000	$ 9,245,000	$ 1,100,000	$ 1,514,000	$ 10,917,000	$ 13,531,000
Alternative #10: Clinch Street Railroad Crossings Improvements	$ 325,000	$ 230,000	$ 1,254,000	$ 1,809,000	$ 325,000	$ 484,000	$ 1,869,000	$ 2,678,000
Alternative #11: Flashing Speed Limit Signs	$ 10,000	$ 5,000	$ 26,000	$ 41,000	$ 10,000	$ 19,000	$ 73,000	$ 102,000

Notes:

* Preliminary Engineering (PE) cost estimated based on PCES and engineering judgement. Same Preliminary Engineering cost estimated for both low and high cost opinions.

** R/W & Utility Relocation (RW) cost estimated as percent of base roadway cost per 2015 VDOT Transportation & Mobility Planning Division Statewide Planning Level Cost Estimate Spreadsheet (rural location) for projects with anticipated R/W & utility components.

*** Construction (CN) cost based on unit costs developed from 2015 VDOT TMPD Planning Level Cost Estimates Spreadsheet and engineering judgement where TMPD costs were not available.

US 460 Corridor Improvement Study
Planning Level Cost Estimates
(2017 Dollars)

Item	Unit	Quantity	Unit Cost		Low Cost						High Cost					
					Roadway Cost (RD)	Construction Engineering Inspection (CEI)*	Total Construction (CN)	R/W & Utility Relocation (RW)**	Preliminary Engineering (PE)***	Total Cost Opinion	Roadway Cost (RD)	Construction Engineering Inspection (CEI)*	Total Construction (CN)	R/W & Utility Relocation (RW)**	Preliminary Engineering (PE)***	Total Cost Opinion
			Low	High		25% of RD	RD + CEI	25% of RD		CN + RW + PE		25% of RD	RD + CEI	35% of CN		CN + RW + PE
Alternative #1: Access Management - Median Opening Spacing Full Compliance																
Remove existing pavement for median opening and left-turn lane at Clearview Road	SY	540	$ 80	$ 115	$ 43,200			$ -			$ 62,100			$ -		
Mill and overlay adjacent lanes to proposed median at Clearview Road	SY	800	$ 15	$ 30	$ 12,000			$ -			$ 24,000			$ -		
Construct proposed median at Clearview Road (assumed to be MS-2 grass median)	LF	300	$ 40	$ 50	$ 12,000			$ -			$ 15,000			$ -		
Construct directional median at crossover (Patteson Street, Hillcreek Road, Clinch Valley Medical Center Entrance)	EA	3	$ 210,000	$ 332,000	$ 630,000			$ -			$ 996,000			$ -		
Mobilization & construction surveying					$ 64,472						$ 95,971					
				Alternative #1 Total	$ 761,672	$ 190,418	$ 952,090	$ -	$ 275,000	$ 1,227,090	$ 1,193,071	$ 298,268	$ 1,491,339	$ -	$ 275,000	$ 1,766,339
Alternative #2: Access Management - Median Opening Spacing Partial Compliance																
Remove existing pavement for median opening and left-turn lane at Clearview Road	SY	540	$ 80	$ 115	$ 43,200			$ -			$ 62,100			$ -		
Mill and overlay adjacent lanes to proposed median at Clearview Road	SY	800	$ 15	$ 30	$ 12,000			$ -			$ 24,000			$ -		
Construct proposed median at Clearview Road (assumed to be MS-2 grass median)	LF	300	$ 40	$ 50	$ 12,000			$ -			$ 15,000			$ -		
Construct directional median at crossover (Hillcreek Road, Clinch Valley Medical Center Entrance)	EA	2	$ 210,000	$ 332,000	$ 420,000			$ -			$ 664,000			$ -		
Mobilization & construction surveying					$ 46,872						$ 70,151					
				Alternative #2 Total	$ 534,072	$ 133,518	$ 667,590	$ -	$ 200,000	$ 867,590	$ 835,251	$ 208,813	$ 1,044,064	$ -	$ 200,000	$ 1,244,064
Alternative #3: Traffic Signal Communications and Retiming																
Retime US 460 signals (Front Street, Lake Park Drive, Clinch Valley Medical Center Exit)	EA	3	$ 11,000	$ 16,000	$ 33,000	$ 8,250	$ 41,250	$ -	$ -	$ 41,250	$ 48,000	$ 12,000	$ 60,000	$ -	$ -	$ 60,000
Install traffic signal communication infrastructure	EA	3	$ 19,000	$ 29,000	$ 57,000	$ 14,250	$ 71,250	$ 14,250	$ -	$ 85,500	$ 87,000	$ 21,750	$ 108,750	$ 30,450	$ -	$ 139,200
Mobilization & construction surveying					$ 9,900						$ 14,850					
				Alternative #3 Total	$ 99,900	$ 24,975	$ 124,875	$ 14,250	$ 30,000	$ 169,125	$ 149,850	$ 37,463	$ 187,313	$ 30,450	$ 30,000	$ 247,763
Alternative #4: Clearview Road - Convert to One-Way Street																
Convert two-way street to one-way street	LF	650	$ 125	$ 160	$ 81,250	$ 20,313	$ 101,563	$ -	$ -	$ 101,563	$ 104,000	$ 26,000	$ 130,000	$ -	$ -	$ 130,000
Mobilization & construction surveying					$ 9,313						$ 11,540					
				Alternative #4 Total	$ 90,563	$ 22,641	$ 113,203	$ -	$ 100,000	$ 213,203	$ 115,540	$ 28,885	$ 144,425	$ -	$ 100,000	$ 244,425
Alternative #5A: Clearview Road, Mudlick Road, and Acme Road Connection (Option A)																
Remove existing pavement for median opening and left-turn lane at Clearview Road	SY	540	$ 80	$ 115	$ 43,200			$ -			$ 62,100			$ -		
Mill and overlay adjacent lanes to proposed median at Clearview Road	SY	800	$ 15	$ 30	$ 12,000			$ -			$ 24,000			$ -		
Construct proposed median at Clearview Road (assumed to be MS-2 grass median)	LF	300	$ 40	$ 50	$ 12,000			$ -			$ 15,000			$ -		
Construct westbound right-turn lane at Mudlick Road to 100' parallel/100' taper	EA	1	$ 110,000	$ 230,000	$ 110,000			$ 27,500			$ 230,000			$ 80,500		
Construct two-lane roadway between Clearview Road and Acme Road (400' x 40')	MILE	0.08	$ 5,250,000	$ 7,890,000	$ 420,000			$ 105,000			$ 631,200			$ 220,920		
Remove existing bridge	LS	1	$ 150,000	$ 300,000	$ 150,000			$ -			$ 300,000			$ -		
Construct new bridge (50' x 55')	SF	2,750	$ 250	$ 450	$ 687,500			$ 171,875			$ 1,237,500			$ 433,125		
Remove existing roadway (Clearview Road)	SY	120	$ 80	$ 115	$ 9,600			$ -			$ 13,800			$ -		
Mobilization & construction surveying					$ 116,943						$ 181,136					
				Alternative #5A Total	$ 1,444,300	$ 361,075	$ 1,805,375	$ 304,375	$ 450,000	$ 2,559,750	$ 2,513,600	$ 628,400	$ 3,142,000	$ 734,545	$ 450,000	$ 4,326,545
Alternative #5B: Clearview Road, Mudlick Road, and Acme Road Connection (Option B)																
Remove existing pavement for median opening and left-turn lane at Clearview Road	SY	540	$ 80	$ 115	$ 43,200			$ -			$ 62,100			$ -		
Mill and overlay adjacent lanes to proposed median at Clearview Road	SY	800	$ 15	$ 30	$ 12,000			$ -			$ 24,000			$ -		
Construct proposed median at Clearview Road (assumed to be MS-2 grass median)	LF	300	$ 40	$ 50	$ 12,000			$ -			$ 15,000			$ -		
Construct westbound right-turn lane at Mudlick Road to 100' parallel/100' taper	EA	1	$ 110,000	$ 230,000	$ 110,000			$ 27,500			$ 230,000			$ 80,500		
Construct two-lane roadway between Clearview Road and Acme Road (550' x 40')	MILE	0.11	$ 5,250,000	$ 7,890,000	$ 577,500			$ 144,375			$ 867,900			$ 303,765		
Remove existing bridge	LS	1	$ 150,000	$ 300,000	$ 150,000			$ -			$ 300,000			$ -		
Construct new bridge (50' x 55')	SF	2,750	$ 250	$ 450	$ 687,500			$ 171,875			$ 1,237,500			$ 433,125		
Remove existing roadway (Clearview Road)	SY	450	$ 80	$ 115	$ 36,000			$ -			$ 51,750			$ -		
Mobilization & construction surveying					$ 127,782						$ 197,383					
				Alternative #5B Total	$ 1,628,200	$ 407,050	$ 2,035,250	$ 343,750	$ 500,000	$ 2,879,000	$ 2,788,250	$ 697,063	$ 3,485,313	$ 817,390	$ 500,000	$ 4,802,703
Alternative #6: Front Street/2nd Street - Partial Roundabout																
Partial roundabout	EA	1	$ 1,110,000	$ 1,560,000	$ 1,110,000			$ 277,500			$ 1,560,000			$ 546,000		
Mobilization & construction surveying					$ 96,600						$ 123,600					
				Alternative #6 Total	$ 1,206,600	$ 301,650	$ 1,508,250	$ 277,500	$ 575,000	$ 2,360,750	$ 1,683,600	$ 420,900	$ 2,104,500	$ 546,000	$ 575,000	$ 3,225,500
Alternative #7: Realign 2nd Street Approach at Front Street																
Construct new intersection (two-lane roadway, 500' x 40')	MILE	0.10	$ 5,250,000	$ 7,890,000	$ 525,000			$ 131,250			$ 789,000			$ 276,150		
Mobilization & construction surveying					$ 49,750						$ 72,390					
				Alternative #7 Total	$ 574,750	$ 143,688	$ 718,438	$ 131,250	$ 200,000	$ 1,049,688	$ 861,390	$ 215,348	$ 1,076,738	$ 276,150	$ 200,000	$ 1,552,888
Alternative #8: Rockbridge Avenue Railroad Crossing																
Remove existing pavement for Kents Ridge Road (railroad crossing and south of S. Front Street)	SY	810	$ 80	$ 115	$ 64,800			$ 16,200			$ 93,150			$ 32,603		
Construct new two-lane roadway that connects Kents Ridge Road with Rockbridge Avenue (400' x 40')	MILE	0.08	$ 5,250,000	$ 7,890,000	$ 420,000			$ 105,000			$ 631,200			$ 220,920		
Reconstruct Rockbridge Avenue, 2nd Street, and Front Street (860' x 40')	MILE	0.17	$ 5,250,000	$ 7,890,000	$ 892,500			$ 223,125			$ 1,341,300			$ 469,455		
Install railroad warning lights & gates with pedestrians	EA	1	$ 297,000	$ 371,000	$ 297,000			$ 74,250			$ 371,000			$ 129,850		
Demolish fire station	SF	4,000	$ 8	$ 10	$ 30,000			$ 7,500			$ 40,000			$ 14,000		
Mobilization & construction surveying					$ 132,543						$ 178,767					
				Alternative #8 Total	$ 1,704,300	$ 426,075	$ 2,130,375	$ 426,075	$ 500,000	$ 3,056,450	$ 2,476,650	$ 619,163	$ 3,095,813	$ 866,828	$ 500,000	$ 4,462,640
Alternative #9: New Frontage Road Bridge																
Construct new bridge (50' x 220')	SF	11,000	$ 200	$ 300	$ 2,200,000			$ 550,000			$ 3,300,000			$ 1,155,000		
Construct new two-lane roadway that connects Clinch Street with S. Front Street (650' x 40')	MILE	0.13	$ 5,250,000	$ 7,890,000	$ 682,500			$ 170,625			$ 1,025,700			$ 358,995		
Mobilization & construction surveying					$ 203,325						$ 289,757					
				Alternative #9 Total	$ 5,938,843	$ 1,484,711	$ 7,423,554	$ 720,625	$ 1,100,000	$ 9,244,179	$ 8,733,417	$ 2,183,354	$ 10,916,771	$ 1,513,995	$ 1,100,000	$ 13,530,766
Alternative #10: Clinch Street Railroad Crossings Improvements																
Reconstruct railroad crossings at Clinch Valley Medical Center Exit and Lake Park Drive (250' x 48')	MILE	0.05	$ 7,120,000	$ 10,690,000	$ 356,000			$ 89,000			$ 534,500			$ 187,075		
Reconstuct Front Street at Clinch Valley Medical Center Exit and Lake Park Drive (400' x 40')	MILE	0.08	$ 5,250,000	$ 7,890,000	$ 420,000			$ 105,000			$ 631,200			$ 220,920		
Railroad crossing "No Turn" indications on Clinch Street	EA	4	$ 36,000	$ 54,000	$ 144,000			$ 36,000			$ 216,000			$ 75,600		
Mobilization & construction surveying					$ 83,200						$ 113,317					
				Alternative #10 Total	$ 1,003,200	$ 250,800	$ 1,254,000	$ 230,000	$ 325,000	$ 1,809,000	$ 1,495,017	$ 373,754	$ 1,868,771	$ 483,595	$ 325,000	$ 2,677,366
Alternative #11: Flashing Speed Limit Signs																
Flashing speed limit signs	EA	2	$ 9,000	$ 26,000	$ 18,000			$ 4,500			$ 52,000			$ 18,200		
Mobilization & construction surveying					$ 2,180						$ 6,020					
				Alternative #11 Total	$ 20,180	$ 5,045	$ 25,225	$ 4,500	$ 10,000	$ 39,725	$ 58,020	$ 14,505	$ 72,525	$ 18,200	$ 10,000	$ 100,725

Notes:
* Construction, Engineering, and Inspection estimated as 25% of base roadway cost
** R/W & Utility Relocation cost estimated as percent of base roadway cost per 2015 VDOT Transportation & Mobility Planning Division Statewide Planning Level Cost Estimate Spreadsheet (rural location) for projects with anticipated R/W & utility components
*** Preliminary Engineering cost estimated based on PCES and past experience. Same Preliminary Engineering cost estimated for both low and high cost opinions.

APPENDIX E-6: ALTERNATIVE SCREENING SUMMARY AND PROJECT SELECTION

MEETING SUMMARY –ALTERNATIVE SCREENING SUMMARY

Meeting Subject: Alternative Screening

Meeting Date: Thursday, January 19, 2017

Meeting Time: 1:00 p.m. to 2:30 p.m.

Meeting Location: Online Meeting/Conference Call

Summary of Screened Alternatives

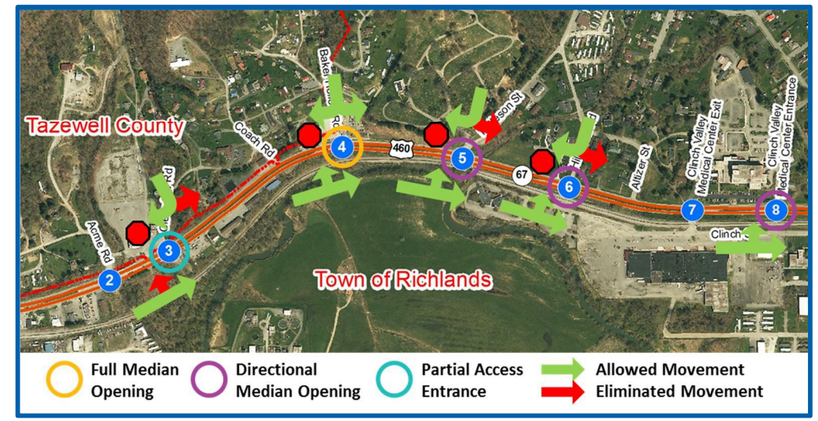
The following table provides a summary of the screened alternatives discussed during the meeting. The table provides the governing locality and the preliminary planning level cost estimate ranges for each alternative. The table also indicates whether the alternative was selected for further consideration and refinement based on meeting discussion. Additional details on the alternatives and selection for further consideration are provided in the following sections of this summary.

Alternative	Governing Locality	Preliminary Cost Estimate Range ($M)	Further Consideration? (YES/NO)	Preferred Build Model? (YES/NO)
1. Access Management – Median Opening Spacing Full Compliance	Town of Richlands	$1.2 - $1.8	NO	- -
2. Access Management – Median Opening Spacing Partial Compliance**	Town of Richlands	$0.9 - $1.2	YES	YES
3. Traffic Signal Communications and Retiming	Town of Richlands	$0.17 - $0.25	YES	YES
4. Clearview Road – Convert to One-Way Street	Tazewell County	$0.21 - $0.25	YES	YES
5A. Clearview Road, Mudlick Road, and Acme Road Connection (Option A)	Tazewell County	$2.6 - $4.3	NO	- -
5B. Clearview Road, Mudlick Road, and Acme Road Connection (Option B)	Tazewell County	$2.9 - $4.8	NO	- -
6. Front Street/2nd Street – Partial Roundabout	Town of Richlands	$2.4 - $3.2	NO	- -
7. Realign 2nd Street Approach at Front Street	Town of Richlands	$1.1 - $1.6	YES	NO*
8. Rockbridge Avenue Railroad Crossing	Town of Richlands	$3.1 - $4.5	YES	YES*
9. New Frontage Road Bridge	Town of Richlands	$9.2 - $13.5	YES	NO
10. Clinch Street Railroad Crossings Improvements	Town of Richlands	$1.8 - $2.7	YES	NO
11. Flashing Speed Limit Signs***	Town of Richlands	***	YES	NO

* Alternative 7 and 8 will both be considered further; however, only one of these alternatives can go in the preferred build model.
** Alternative 2 improvement at Clearview Road to be modified to accommodate Alternative 4 (convert Clearview to one-way street)
*** Based on SWG discussion, controller actuated beacons (CABs) to be evaluated instead of pole mounted speed display signs. Cost to be updated to reflect design modifications.

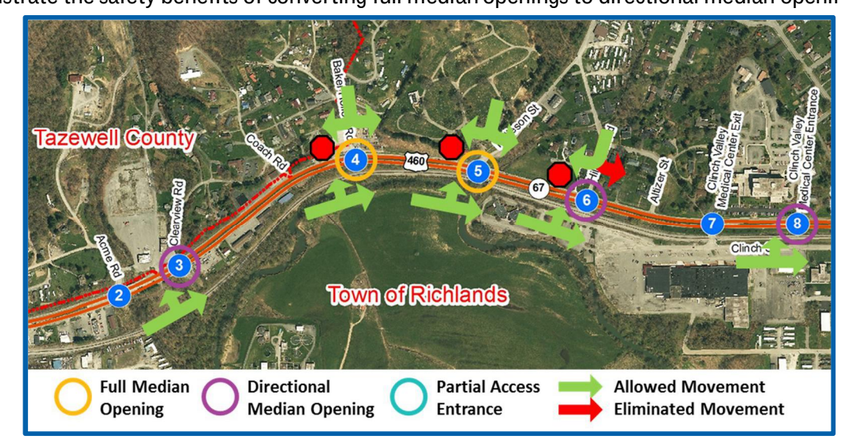
1. Access Management – Median Opening Spacing Full Compliance – REMOVED

- Alternative 1 was removed from further consideration
- SWG Discussion: Alternative 1 was removed because of concerns with the safety of allowing U-turns at Baker Hollow Road and with reduction in access (no left-turn permitted) for vehicles turning onto US 460 from Patteson Street



2. Access Management – Median Opening Spacing Partial Compliance – CONSIDERED FURTHER

- Maintain Baker Hollow Road and Patteson Street with full median openings
- Convert Clearview Road*, Hillcreek Road and Clinch Valley Medical Center entrance to directional median openings
  - *Clearview Road modified in this improvement to directional median opening to align with improvements from Alternative 4 (convert Clearview to one-way street)
- SWG Discussion: Alternative 2 removes the safety concern with U-turns at Baker Hollow Road that was present in Alternative 1. Kimley-Horn will provide conflict diagrams to Town of Richlands to illustrate the safety benefits of converting full median openings to directional median openings.

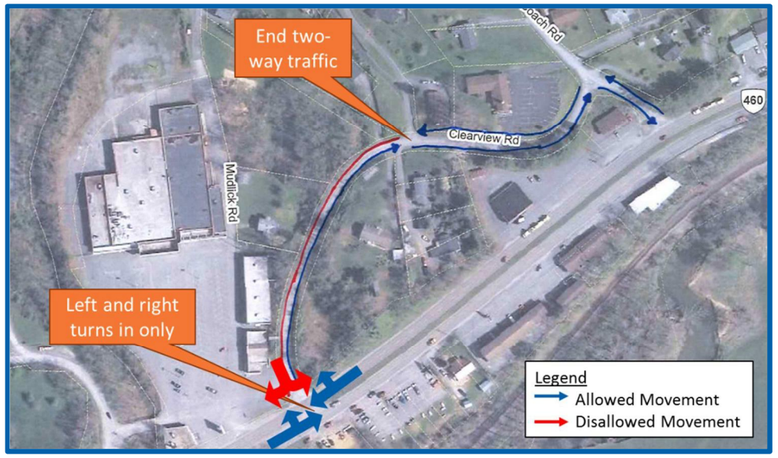


3. Traffic Signal Communications and Retiming – CONSIDERED FURTHER

- Provide interconnect communications between three traffic signals (Front Street, Lake Park Drive, and Clinch Valley Medical Center Exit) on US 460
- Town of Richlands has existing fiber that can be used for communications; therefore, fiber cost was not included in preliminary cost estimate
- Retime the traffic signals to improve corridor progression
- SWG Discussion: The District previously considered coordination of these traffic signals and had difficulty with progression. Kimley-Horn to perform additional operational analysis using SimTraffic to review progression and resulting potential queuing impacts on side streets.

4. Clearview Road – Convert to One-Way Street – CONSIDERED FURTHER

- Convert Clearview Road to one-way operations between US 460 and Stage Road
- Vehicles would be permitted to turn left and right onto Clearview from US 460, but would not be permitted to turn left or right from Clearview onto US 460
- SWG Discussion: This improvement is in Tazewell County and would need buy-in from the County.



5. Clearview Road, Mudlick Road, and Acme Road Connection – REMOVED

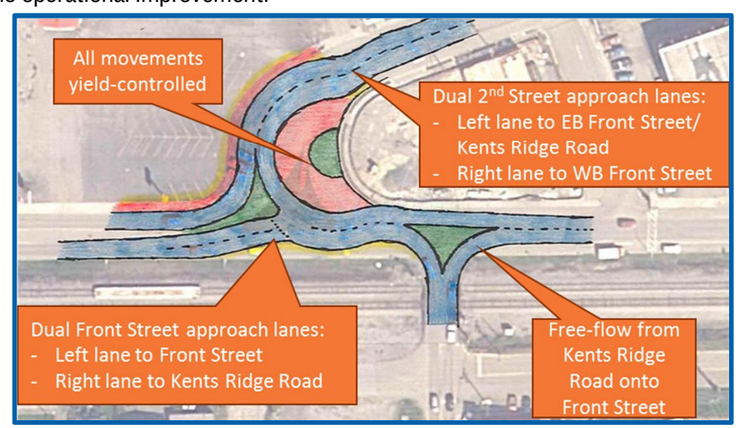
- Alternative 5 (both options 5A and 5B) were removed from further consideration
- SWG Discussion: Based on Tazewell County parcel information, Acme Road and the existing bridge are owned by the Coal Creek Coal Company. Alternative was eliminated because bridge locations are outside of VDOT right-of-way.

Option 5A

Option 5B

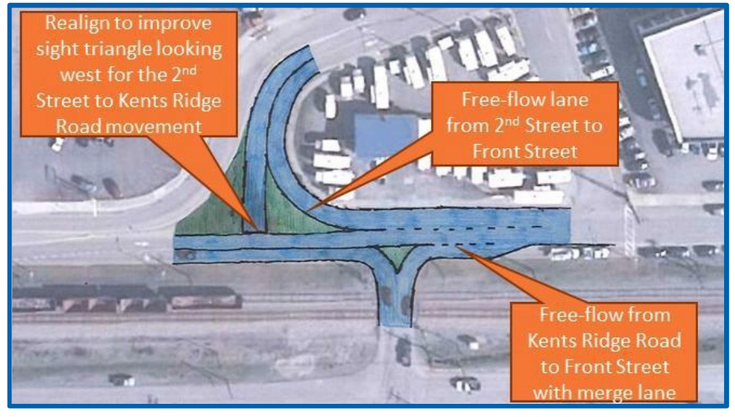
6. Front Street/2nd Street – Partial Roundabout – REMOVED

- Alternative 6 removed from further consideration
- SWG Discussion: This alternative has significant right-of-way impacts and resulting cost but provides little to no operational improvement.



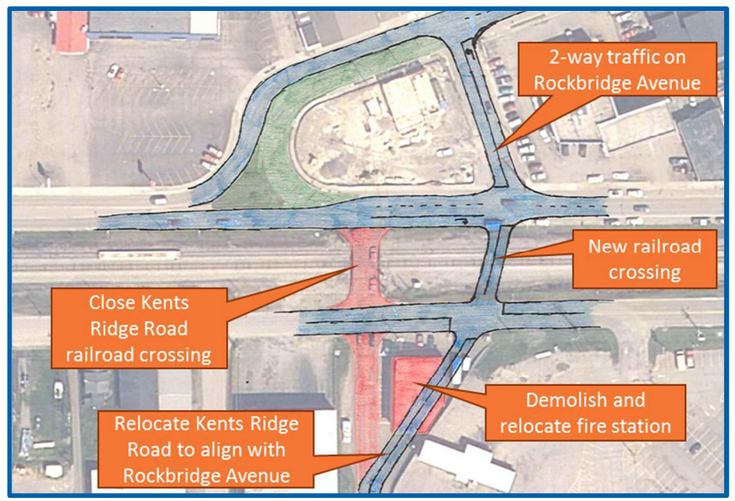
7. Realign 2nd Street Approach at Front Street – CONSIDERED FURTHER

- Realign the Front Street and 2nd Street intersection to improve the sight triangle looking west for the 2nd Street to Kents Ridge Road movement
- SWG Discussion: Improvement stays within existing right-of-way and improves safety for southbound 2nd Street to Kents Ridge Road movement.



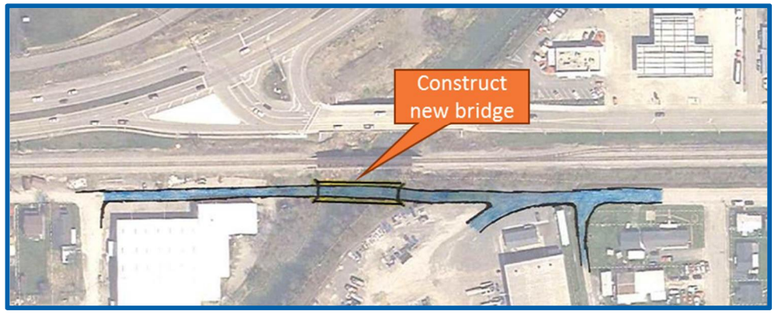
8. Rockbridge Avenue Railroad Crossing – CONSIDERED FURTHER

- Close existing railroad crossing and construct a new at-grade railroad crossing at Rockbridge Avenue
- Realign Kents Ridge Road to create a 4-way intersection at Rockbridge Avenue
  - Requires demolition and relocation of existing fire station
- Convert Rockbridge Avenue to a two-way street
- SWG Discussion: This alternative will require significant coordination time with the railroad. The preliminary cost estimate includes demolition of existing fire station but does not include the cost of a new fire station.



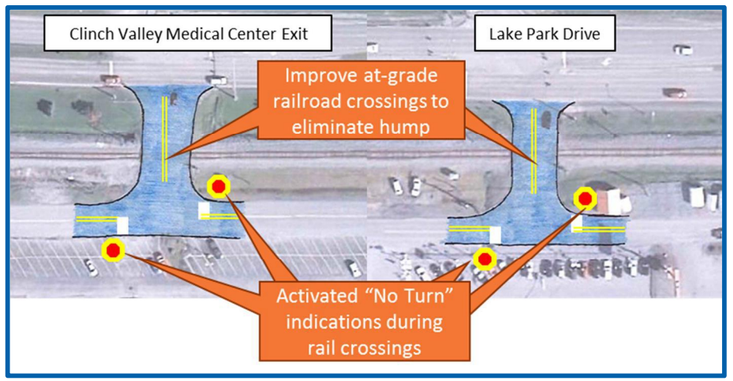
9. New Frontage Road Bridge – FURTHER CONSIDERATION

- Construct a new bridge over the Clinch River that connects the two frontage roads (Clinch Street and S. Front Street)
- SWG Discussion: Improvement will require right-of-way and coordination with Spandeck Inc (Crane Company). This alternative will be further considered but is anticipated to be a long-term improvement.



10. Clinch Street Railroad Crossings Improvements – CONSIDERED FURTHER

- Raise the grade of Clinch Street to improve the two at-grade railroad crossings (Clinch Valley Medical Center Exit and Lake Park Drive)
- Install "No-Turn" indications to be activated during rail crossing with activation tied to preemption of adjacent US 460 traffic signals
- SWG Discussion: This alternative will require coordination time with the railroad. Concern was expressed that the "No-Turn" indications may not provide the desired safety improvement since the railroad gates would also keep vehicles off the tracks. SWG decided to keep the "No-Turn" indications in the alternative and cost estimate for the time being.



11. Flashing Speed Limit Signs – CONSIDERED FURTHER

- Preliminary cost estimate was based on pole-mounted speed display sign alternative
- SWG Discussion and Study Team Follow-Up: Controller actuated beacons (CABs) may be a more effective alternative to the pole mounted speed display.
  - TE Memorandum on Traffic Signal Controller Actuate Warning Beacons (dated 5/5/2007) requires the following minimum criteria be met to consider the use of CABs:
    - Posted speed limit of 45 mph or greater
    - Drivers do not have continuous view of at least 2 signal faces for the "Minimum Sight Distance" as specified in the MUTCD
    - Other countermeasures have been used at the location in question without remedy of the crash concern
  - The speed limit on US 460 drops from 55 MPH to 35 MPH in the westbound direction of US 460 prior to Front Street
    - To comply with the TE Memorandum, the CABs may need to be placed in the 55 MPH zone
  - Flashing beacon signs exist in the 35 MPH zone in advance of the signal (shown below)
    - Possibility to modify/use power from existing flashing beacon signs for CABs

APPENDIX F – PREFERRED BUILD CONDITIONS

APPENDIX F-1: SYNCHRO MODELING INPUTS AND ASSUMPTIONS

US 460 Corridor Improvement Study – Synchro Preferred Build (2030) Conditions Modeling Inputs and Assumptions

The preferred build 2030 AM and PM peak hour Synchro models were developed based on the no-build (2030) Synchro models. The following inputs and assumptions were used in both the AM and PM peak hour preferred build Synchro models.

Geometric Inputs

- The full median openings on US 460 at Clearview Road and Hillcreek Road were converted to directional median openings. Left turn movements from the side streets were not allowed.
- Rockbridge Avenue was converted from a one-way street to a two-way street. Southbound through and left-turn movements on 2nd street at Front Street were rerouted to a new southbound shared through-left lane on Rockbridge Avenue at Front Street.
- Kents Ridge Road was realigned to intersect Front Street at Rockbridge Avenue. A channelized, free-flow right-turn movement was provided for the northbound Kents Ridge Road approach. All northbound vehicles were required to turn right.
- Eastbound Front Street was configured to have a shared through-left lane and a right-turn lane at the new intersection of Front Street at Kents Ridge Road/Rockbridge Avenue.

Signal Timing Inputs

- Signal timing inputs for the intersections of US 460 at Route 67 and Acme Road were based on the existing signal timings provided by VDOT. No changes were made to signal timing splits or cycle length at these intersections.
- The signals at the intersections of US 460 and the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street were changed to operate as actuated-coordinated.
    - A cycle length of 90 seconds in the AM peak hour and 100 seconds in the PM peak hour was applied to the three signals in the actuated-coordinated system.
    - Phase splits for the signals in the actuated-coordinated system were modified to accommodate the preferred build volumes and the new cycle lengths. Yellow and red intervals remained the same as under existing conditions.
- The westbound left-turn phase at the intersection of US 460 and the Clinch Valley Medical Center exit was changed from leading to lagging.
- The left-turn phasing at the intersection of US 460 and Lake Park Drive was changed from leading eastbound and westbound left turns to a leading westbound left turn and a lagging eastbound left turn.
- No phasing changes were made to the signal at the intersection of US 460 and Front Street.

Traffic Volume Inputs

- Projected, rerouted preferred build 2030 traffic volumes were input in the preferred build AM and PM peak hour Synchro models.
    - Southbound Clearview Road left and right turns were rerouted to southbound Acme Road.
    - Southbound Hillcreek Road left turns were rerouted to southbound Patteson Street.
    - All northbound Kents Ridge Road movements were required to turn right at Front Street.
    - All southbound 2nd Street movements were rerouted to southbound Rockbridge Avenue.
- Heavy vehicle percentages were based on the existing (2016) and no-build (2030) percentages but were updated at locations of rerouting.
- Peak hour factors were based on the no-build (2030) percentages but were updated at locations of rerouting.

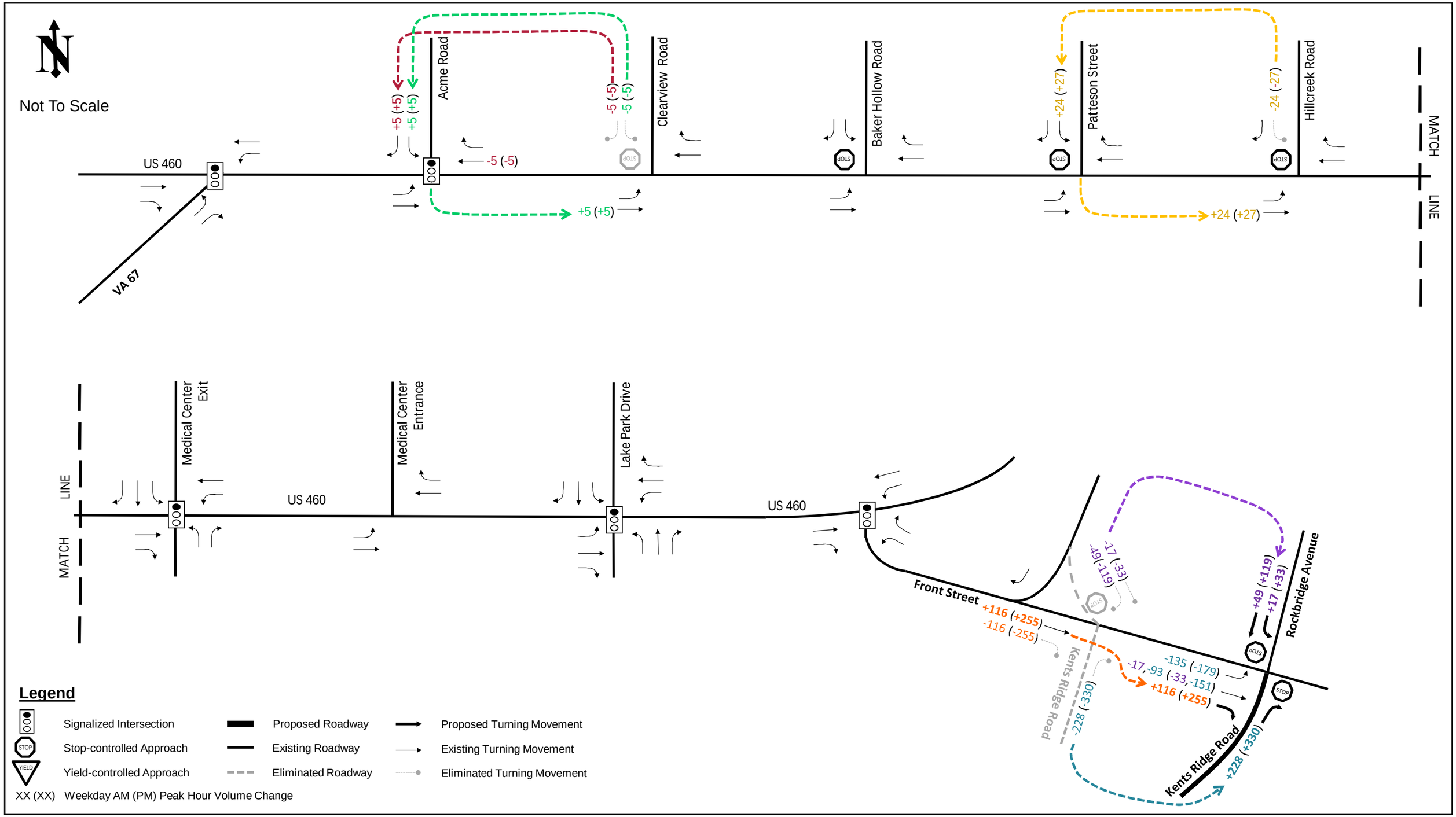
Synchro Analysis Method

The same analysis methods used for existing and no-build conditions were used for preferred build analysis. HCM 2010 methodologies were used for analysis of all unsignalized intersections in the study corridor. Due to the limitations of the HCM 2010 methodologies to analyze intersections with split phasing and turning movements with shared and exclusive lanes, HCM 2000 methodologies were used for the analysis of the signalized intersections.

Synchro 95th Percentile Queue Length Results

The same analysis methods used for existing and no-build conditions were used for preferred build analysis. Synchro 95th percentile queue length results were reported from different sources for signalized and unsignalized intersections:

- For signalized intersections, 95th percentile queue lengths, measured in feet, were taken from Synchro queue reports. Synchro 50th percentile queue lengths were reported for some movements, when Synchro reported 95th percentile queues as 0 feet.
- Synchro does not provide a queue report for unsignalized intersections. For unsignalized intersections, the 95th percentile queue lengths, measured in vehicles, were taken from the HCM 2010 reports. An average vehicle length of 25 feet was assumed to convert the queue lengths in the HCM 2010 reports from vehicles to feet.

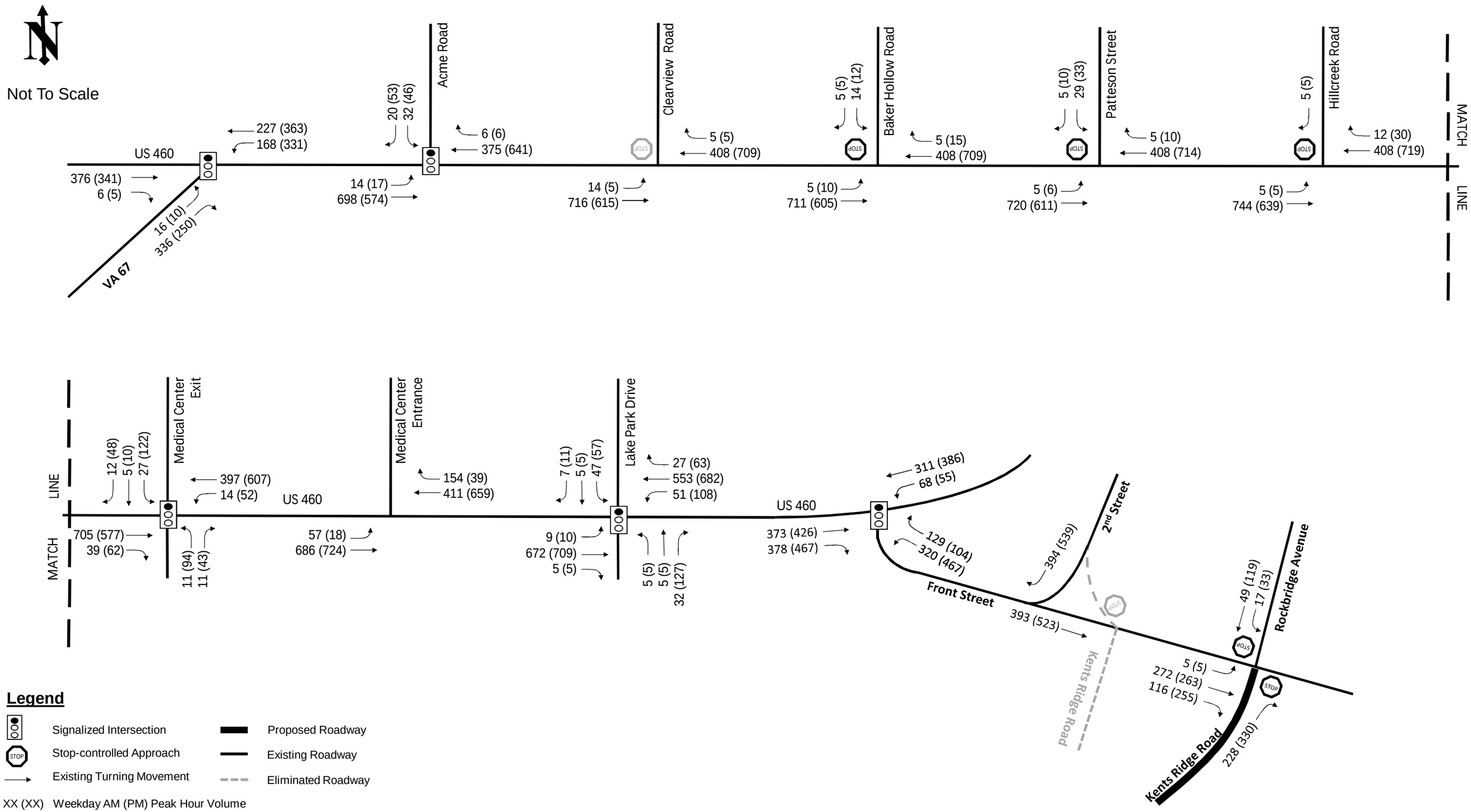


PREFERRED BUILD (2030) PEAK HOUR VOLUME CHANGE

US 460 Corridor Improvement Study

Tazewell County, VA

PREFERRED BUILD

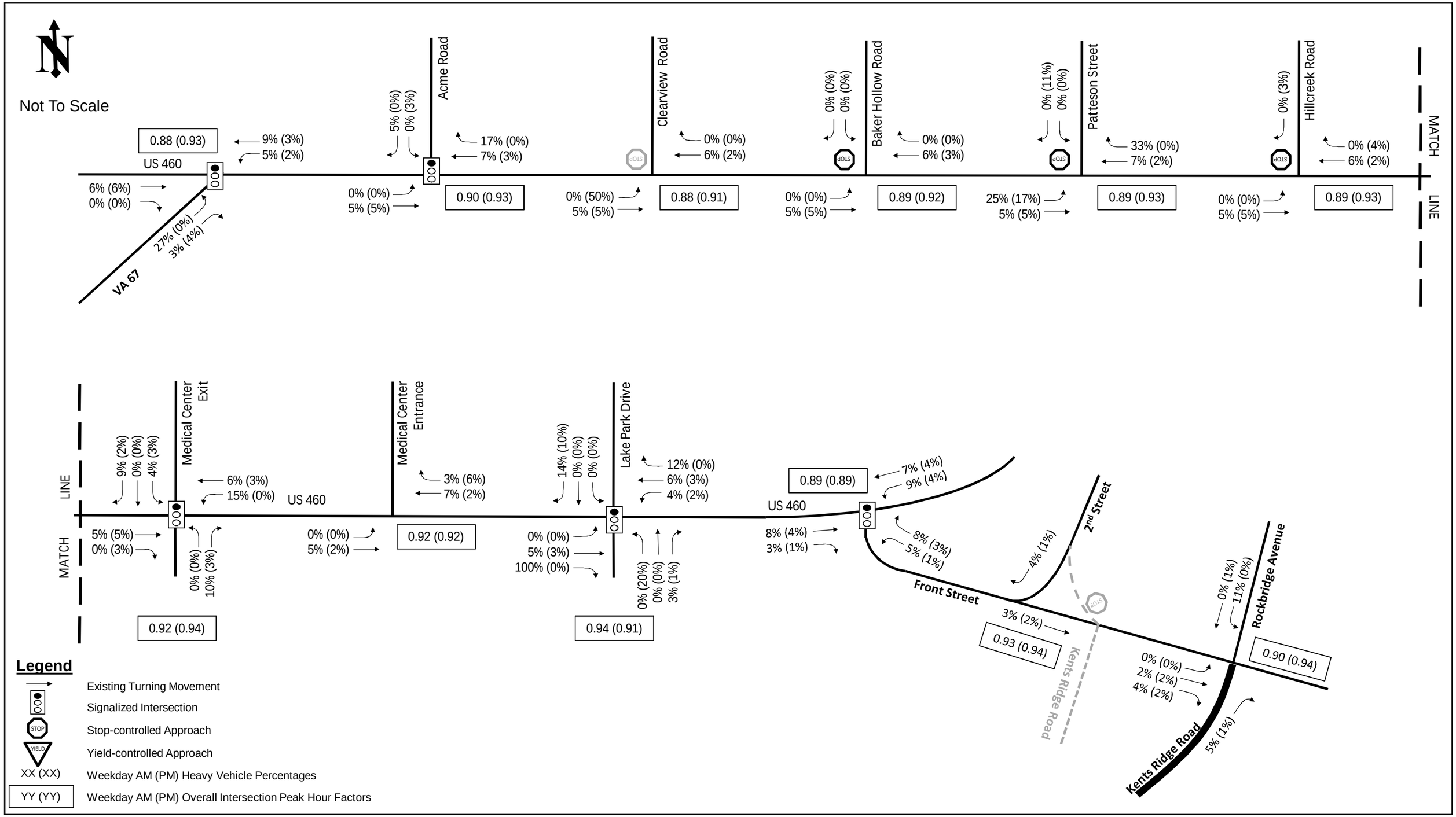


PREFERRED BUILD (2030) PEAK HOUR VOLUMES

US 460 Corridor Improvement Study

Tazewell County, VA

PREFERRED BUILD



VDOT STARS
Virginia Department of Transportation

PREFERRED BUILD HEAVY VEHICLE PERCENTAGES & PEAK HOUR FACTORS

US 460 Corridor Improvement Study

Tazewell County, VA

PREFERRED BUILD

APPENDIX F-2: SYNCHRO DELAY & LEVEL OF SERVICE SUMMARY

SYNCHRO CAPACITY ANALYSIS - INTERSECTION LEVEL OF SERVICE SUMMARY
US 460 Corridor Improvement Study
2030 Preferred Build Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound				Westbound				Northbound				Southbound				Overall	
			AM		PM		AM		PM		AM		PM		AM		PM			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1 US 460 at Route 67			US 460				US 460				Route 67									
	Signal	Left	--	--	--	--	19.2	B	19.3	B	18.0	B	21.6	C	--	--	--	--	Delay	Delay
		Through	18.2	B	21.7	C	4.8	A	4.1	A	--	--	--	--	--	--	--	--	12.4	13.1
		Right	--	--	--	--	--	--	--	--	7.2	A	5.6	A	--	--	--	--	LOS	LOS
		Approach	18.2	B	21.7	C	10.9	B	11.4	B	7.7	A	6.2	A	--	--	--	--	B	B
2 US 460 at Acme Road			US 460				US 460								Acme Road					
	Signal	Left	21.4	C	21.4	C	--	--	--	--	--	--	--	--	20.5	C	20.2	C	Delay	Delay
		Through	3.3	A	3.6	A	6.9	A	9.1	A	--	--	--	--	--	--	--	--	5.3	7.4
		Right	--	--	--	--	--	--	--	--	--	--	--	--	12.3	B	11.6	B	LOS	LOS
		Approach	3.6	A	4.1	A	6.9	A	9.1	A	--	--	--	--	17.3	B	15.6	B	A	A
3 US 460 at Clearview Road			US 460				US 460								Clearview Road					
	One-Way Stop	Left	8.3	A	11.3	B	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4 US 460 at Baker Hollow Road			US 460				US 460								Baker Hollow Road					
	One-Way Stop	Left	8.3	A	9.3	A	--	--	--	--	--	--	--	--	16.0	C	20.8	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	16.0	C	20.8	C	--	--
5 US 460 at Patteson Street			US 460				US 460								Patteson Street					
	One-Way Stop	Left	8.8	A	9.9	A	--	--	--	--	--	--	--	--	17.8	C	23.6	C	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	17.8	C	23.6	C	--	--
6 US 460 at Hillcreek Road			US 460				US 460								Hillcreek Road					
	One-Way Stop	Left	8.3	A	9.4	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	11.1	B	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	9.7	A	11.1	B	--	--
7 US 460 at Clinch Valley Medical Center Exit			US 460				US 460				Railroad Crossing				Medical Center Exit					
	Signal	Left	--	--	--	--	32.1	C	19.6	B	44.4	D	58.4	E	43.1	D	50.5	D	Delay	Delay
		Through	8.1	A	19.9	B	0.8	A	1.0	A	--	--	--	--	40.9	D	40.2	D	7.9	18.7
		Right	--	--	--	--	--	--	--	--	42.3	D	42.5	D	--	--	--	--	LOS	LOS
		Approach	8.1	A	19.9	B	1.9	A	2.5	A	43.4	D	53.4	D	42.2	D	47.2	D	A	B
8 US 460 at Clinch Valley Medical Center Entrance			US 460				US 460								Medical Center Entrance					
	One-Way Stop	Left	8.9	A	9.3	A	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	†	†	†	†	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9 US 460 at Lake Park Drive			US 460				US 460				Railroad Crossing				Lake Park Drive					
	Signal	Left	35.4	D	31.5	C	53.8	D	58.8	E	--	--	--	--	--	--	--	--	Delay	Delay
		Through	8.1	A	13.8	B	4.9	A	4.7	A	41.7	D	43.7	D	41.3	D	47.6	D	10.9	16.5
		Right	--	--	--	--	--	--	--	--	41.1	D	43.8	D	38.3	D	42.9	D	LOS	LOS
		Approach	8.5	A	14.0	B	8.9	A	11.5	B	41.2	D	43.8	D	40.9	D	46.9	D	B	B
10 US 460 at Front Street			US 460				US 460				Front Street									
	Signal	Left	--	--	--	--	44.3	D	46.8	D	38.1	D	41.2	D	--	--	--	--	Delay	Delay
		Through	8.6	A	8.8	A	5.0	A	6.8	A	--	--	--	--	--	--	--	--	17.8	19.2
		Right	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	LOS	LOS
		Approach	8.6	A	8.8	A	12.1	B	11.8	B	38.1	D	41.2	D	--	--	--	--	B	B
11 Fronst Street at 2nd Street/Kents Ridge Road			Front Street												2nd Street					
	Free Flow	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Right	--	--	--	--	--	--	--	--	--	--	--	--	†	†	†	†	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12 Front Street at Rockbridge Avenue			Front Street								Kents Ridge Road				Rockbridge Avenue					
	Two-Way Stop	Left	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Delay	Delay
		Through	†	†	†	†	--	--	--	--	--	--	--	--	11.8	B	12.7	B	--	--
		Right	†	†	†	†	--	--	--	--	†	†	†	†	--	--	--	--	LOS	LOS
		Approach	--	--	--	--	--	--	--	--	--	--	--	--	11.8	B	12.7	B	--	--

HCM 2000 results reported for signalized intersections and HCM 2010 results reported for unsignalized intersections.
NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.
† SYNCHRO does not provide level of service or delay for movements with no conflicting volumes.

APPENDIX F-3: SYNCHRO 95TH PERCENTILE QUEUE LENGTH SUMMARY

SYNCHRO CAPACITY ANALYSIS - 95th PERCENTILE QUEUE LENGTH SUMMARY
US 460 Corridor Improvement Study
2030 Preferred Build Volumes

Intersection Number and Description	Type of Control	Lane Group	Eastbound			Westbound			Northbound			Southbound		
			Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)		Effective Storage Length (feet)	95th Percentile Queue (feet)	
				AM	PM		AM	PM		AM	PM		AM	PM
1 US 460 at Route 67				US 460			US 460			Route 67				
	Signal	Left		--	--	425	120	200	38	22	18		--	--
		Through		117	113		31	36		--	--		--	--
		Right		--	--		--	--		65	26		--	--
2 US 460 at Acme Road				US 460			US 460						Acme Road	
	Signal	Left	140	16	20		--	--		--	--	65	26	37
		Through		72	58		74	127		--	--		--	--
		Right		--	--		--	--		--	--		9	16
3 US 460 at Clearview Road				US 460			US 460						Clearview Road	
	One-Way Stop	Left	150	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
4 US 460 at Baker Hollow Road				US 460			US 460						Baker Hollow Road	
	One-Way Stop	Left	135	0	0		--	--		--	--		5	5
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
5 US 460 at Patteson Street				US 460			US 460						Patteson Street	
	One-Way Stop	Left	138	0	0		--	--		--	--		10	18
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
6 US 460 at Hillcreek Road				US 460			US 460						Hillcreek Road	
	One-Way Stop	Left	150	0	0		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		0	0
7 US 460 at Clinch Valley Medical Center Exit				US 460			US 460			Railroad Crossing			Medical Center Exit	
	Signal	Left		--	--	140	24	58		23	116		42	142
		Through		238	237		7	4		--	--		23	45
		Right		--	--		--	--		0	0		--	--
8 US 460 at Clinch Valley Medical Center Entrance				US 460			US 460						Medical Center Entrance	
	One-Way Stop	Left	150	5	3		--	--		--	--		--	--
		Through		†	†		†	†		--	--		--	--
		Right		--	--		--	--		--	--		--	--
9 US 460 at Lake Park Drive				US 460			US 460			Railroad Crossing			Lake Park Drive	
	Signal	Left	138	11	13	150	52	123		--	--		--	--
		Through		44	45		72	83		21	23		65	85
		Right		--	--		--	--		0	12		0	0
10 US 460 at Front Street				US 460			US 460			Front Street				
	Signal	Left		--	--	138	85	79		163	236		--	--
		Through		115*	118*		54	81		--	--		--	--
		Right		--	--		--	--		--	--		--	--
11 Front Street at 2nd Street/Kents Ridge Road				Front Street									2nd Street	
	Free Flow	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		--	--
		Right		--	--		--	--		--	--		†	†
12 Front Street at Rockbridge Avenue				Front Street						Kents Ridge Road			Rockbridge Avenue	
	Two-Way Stop	Left		--	--		--	--		--	--		--	--
		Through		†	†		--	--		--	--		10	25
		Right	375	†	†		--	--		†	†		--	--

Synchro 95th percentile queue length results reported for signalized intersections. HCM 2010 95th percentile queue length results, assuming an average vehicle length of 25 feet, reported for unsignalized intersections.

NOTE: Lane configurations with a shared through lane shown as "through" lane group. Lane configurations with shared left-right lane shown as "left" lane group.

† SYNCHRO does not provide queue length for movements with no conflicting volumes.

* Synchro 50th percentile queue length results were reported for these movements due to software limitations. 95th percentile queue lengths were reported as 0 feet.

APPENDIX F-4: SYNCHRO OUTPUT SHEETS

HCM 2000 SIGNALIZED INTERSECTION OUTPUT SHEETS

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	376	6	168	227	16	336
Future Volume (vph)	376	6	168	227	16	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1604	3312	1421	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1604	3312	1421	1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	427	7	191	258	18	382
RTOR Reduction (vph)	1	0	0	0	0	110
Lane Group Flow (vph)	433	0	191	258	18	272
Heavy Vehicles (%)	6%	0%	5%	9%	27%	3%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	13.9		13.3	33.2	11.0	30.0
Effective Green, g (s)	13.9		13.3	33.2	11.0	30.0
Actuated g/C Ratio	0.25		0.24	0.60	0.20	0.54
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	857		387	1995	283	853
v/s Ratio Prot	c0.13		c0.12	0.08	0.01	c0.17
v/s Ratio Perm						
v/c Ratio	0.51		0.49	0.13	0.06	0.32
Uniform Delay, d1	17.7		18.0	4.7	17.9	6.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		1.2	0.0	0.1	0.3
Delay (s)	18.2		19.2	4.8	18.0	7.2
Level of Service	B		B	A	B	A
Approach Delay (s)	18.2			10.9	7.7	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	16.9
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	698	375	6	32	20
Future Volume (vph)	14	698	375	6	32	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3360		1805	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3360		1805	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	776	417	7	36	22
RTOR Reduction (vph)	0	0	1	0	0	16
Lane Group Flow (vph)	16	776	423	0	36	6
Heavy Vehicles (%)	0%	5%	7%	17%	0%	5%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	2.2	30.3	22.0		3.6	12.0
Effective Green, g (s)	2.2	30.3	22.0		3.6	12.0
Actuated g/C Ratio	0.05	0.67	0.49		0.08	0.27
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	87	2304	1635		143	408
v/s Ratio Prot	0.01	c0.23	0.13		c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.18	0.34	0.26		0.25	0.01
Uniform Delay, d1	20.6	3.2	6.8		19.5	12.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1		0.9	0.0
Delay (s)	21.4	3.3	6.9		20.5	12.3
Level of Service	C	A	A		C	B
Approach Delay (s)		3.6	6.9		17.3	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

7: Railroad Crossing/Medical Center Exit & US 460

Preferred Build 2030 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Future Volume (vph)	0	705	39	14	397	0	11	0	11	27	5	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.89	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3420		1570	3406		1805		1468	1779	1631	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3420		1570	3406		1805		1468	1779	1631	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	766	42	15	432	0	12	0	12	29	5	13
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	12	0	12	0
Lane Group Flow (vph)	0	805	0	15	432	0	12	0	0	29	6	0
Heavy Vehicles (%)	0%	5%	0%	15%	6%	0%	0%	0%	10%	4%	0%	9%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		56.9		2.7	64.8		2.8		2.8	4.7	4.7	
Effective Green, g (s)		56.9		2.7	64.8		2.8		2.8	4.7	4.7	
Actuated g/C Ratio		0.63		0.03	0.72		0.03		0.03	0.05	0.05	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		2162		47	2452		56		45	92	85	
v/s Ratio Prot		c0.24		0.01	c0.13		c0.01		0.00	c0.02	0.00	
v/s Ratio Perm												
v/c Ratio		0.37		0.32	0.18		0.21		0.01	0.32	0.07	
Uniform Delay, d1		8.0		42.7	4.0		42.5		42.3	41.1	40.6	
Progression Factor		1.00		0.63	0.16		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.2		5.2	0.2		1.9		0.1	2.0	0.3	
Delay (s)		8.1		32.1	0.8		44.4		42.3	43.1	40.9	
Level of Service		A		C	A		D		D	D	D	
Approach Delay (s)		8.1			1.9			43.4			42.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

9: Railroad Crossing/Lake Park Drive & US 460

Preferred Build 2030 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Future Volume (vph)	9	672	5	51	553	27	5	5	32	47	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3413		1736	3373			1854	1568		1817	1417
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3413		1736	3373			1854	1568		1817	1417
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	715	5	54	588	29	5	5	34	50	5	7
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	32	0	0	6
Lane Group Flow (vph)	10	720	0	54	614	0	0	10	2	0	55	1
Heavy Vehicles (%)	0%	5%	100%	4%	6%	12%	0%	0%	3%	0%	0%	14%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	3	4	4	4
Permitted Phases												
Actuated Green, G (s)	1.6	49.0		5.8	53.0			4.2	4.2		7.0	7.0
Effective Green, g (s)	1.6	49.0		5.8	53.0			4.2	4.2		7.0	7.0
Actuated g/C Ratio	0.02	0.54		0.06	0.59			0.05	0.05		0.08	0.08
Clearance Time (s)	5.6	5.1		5.3	5.0			6.5	6.5		7.1	7.1
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	32	1858		111	1986			86	73		141	110
v/s Ratio Prot	0.01	c0.21		c0.03	0.18			c0.01	0.00		c0.03	0.00
v/s Ratio Perm												
v/c Ratio	0.31	0.39		0.49	0.31			0.12	0.02		0.39	0.00
Uniform Delay, d1	43.7	11.8		40.7	9.3			41.1	40.9		39.5	38.3
Progression Factor	0.64	0.67		1.22	0.49			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	0.2		4.3	0.4			0.6	0.1		1.8	0.0
Delay (s)	35.4	8.1		53.8	4.9			41.7	41.1		41.3	38.3
Level of Service	D	A		D	A			D	D		D	D
Approach Delay (s)		8.5			8.9			41.2			40.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	373	378	68	311	320	129
Future Volume (vph)	373	378	68	311	320	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3164		1656	3374	3217	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	3164		1656	3374	3217	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	419	425	76	349	360	145
RTOR Reduction (vph)	177	0	0	0	54	0
Lane Group Flow (vph)	667	0	76	349	451	0
Heavy Vehicles (%)	8%	3%	9%	7%	5%	8%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	49.2		7.1	61.9	17.5	
Effective Green, g (s)	49.2		7.1	61.9	17.5	
Actuated g/C Ratio	0.55		0.08	0.69	0.19	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1729		130	2320	625	
v/s Ratio Prot	c0.21		c0.05	0.10	c0.14	
v/s Ratio Perm						
v/c Ratio	0.39		0.58	0.15	0.72	
Uniform Delay, d1	11.7		40.0	4.9	34.0	
Progression Factor	0.72		1.00	1.00	1.00	
Incremental Delay, d2	0.2		4.3	0.1	4.1	
Delay (s)	8.6		44.3	5.0	38.1	
Level of Service	A		D	A	D	
Approach Delay (s)	8.6			12.1	38.1	
Approach LOS	A			B	D	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	341	5	331	363	10	250
Future Volume (vph)	341	5	331	363	10	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12
Total Lost time (s)	6.2		5.0	5.2	5.7	5.7
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1652	3505	1805	1553
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1652	3505	1805	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	367	5	356	390	11	269
RTOR Reduction (vph)	1	0	0	0	0	108
Lane Group Flow (vph)	371	0	356	390	11	161
Heavy Vehicles (%)	6%	0%	2%	3%	0%	4%
Turn Type	NA		Prot	NA	Prot	pt+ov
Protected Phases	2		1	6	4	4 1
Permitted Phases						
Actuated Green, G (s)	13.4		21.0	40.4	10.1	36.8
Effective Green, g (s)	13.4		21.0	40.4	10.1	36.8
Actuated g/C Ratio	0.22		0.34	0.66	0.16	0.60
Clearance Time (s)	6.2		5.0	5.2	5.7	
Vehicle Extension (s)	3.5		3.5	3.5	3.5	
Lane Grp Cap (vph)	742		565	2306	296	930
v/s Ratio Prot	c0.11		c0.22	0.11	0.01	c0.10
v/s Ratio Perm						
v/c Ratio	0.50		0.63	0.17	0.04	0.17
Uniform Delay, d1	21.1		16.9	4.0	21.6	5.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		2.4	0.0	0.1	0.1
Delay (s)	21.7		19.3	4.1	21.6	5.6
Level of Service	C		B	A	C	A
Approach Delay (s)	21.7			11.4	6.2	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	16.9
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	17	574	641	6	46	53
Future Volume (vph)	17	574	641	6	46	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.1	5.3		6.2	6.2
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1805	3438	3501		1752	1615
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1805	3438	3501		1752	1615
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	18	617	689	6	49	57
RTOR Reduction (vph)	0	0	1	0	0	39
Lane Group Flow (vph)	18	617	694	0	49	18
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	5	2	6		4	4 5
Permitted Phases						4
Actuated Green, G (s)	3.4	31.5	22.0		5.4	15.0
Effective Green, g (s)	3.4	31.5	22.0		5.4	15.0
Actuated g/C Ratio	0.07	0.65	0.46		0.11	0.31
Clearance Time (s)	5.9	5.1	5.3		6.2	
Vehicle Extension (s)	2.5	3.0	3.0		3.0	
Lane Grp Cap (vph)	127	2246	1597		196	502
v/s Ratio Prot	0.01	c0.18	c0.20		c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.14	0.27	0.43		0.25	0.04
Uniform Delay, d1	21.0	3.5	8.9		19.6	11.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2		0.7	0.0
Delay (s)	21.4	3.6	9.1		20.2	11.6
Level of Service	C	A	A		C	B
Approach Delay (s)		4.1	9.1		15.6	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	17.4
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Future Volume (vph)	0	577	62	52	607	0	94	0	43	122	10	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-5%	
Total Lost time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00	1.00	1.00	
Frt		0.99		1.00	1.00		1.00		0.85	1.00	0.88	
Flt Protected		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3394		1805	3505		1805		1568	1796	1680	
Flt Permitted		1.00		0.95	1.00		0.95		1.00	0.95	1.00	
Satd. Flow (perm)		3394		1805	3505		1805		1568	1796	1680	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	614	66	55	646	0	100	0	46	130	11	51
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	42	0	45	0
Lane Group Flow (vph)	0	672	0	55	646	0	100	0	4	130	17	0
Heavy Vehicles (%)	0%	5%	3%	0%	3%	0%	0%	0%	3%	3%	0%	2%
Turn Type		NA		Prot	NA		Prot		Prot	Split	NA	
Protected Phases		6		5	2		4		4	3	3	
Permitted Phases												
Actuated Green, G (s)		44.1		14.0	63.3		8.0		8.0	11.0	11.0	
Effective Green, g (s)		44.1		14.0	63.3		8.0		8.0	11.0	11.0	
Actuated g/C Ratio		0.44		0.14	0.63		0.08		0.08	0.11	0.11	
Clearance Time (s)		5.1		5.4	5.3		5.7		5.7	6.7	6.7	
Vehicle Extension (s)		4.5		4.0	4.5		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		1496		252	2218		144		125	197	184	
v/s Ratio Prot		c0.20		0.03	c0.18		c0.06		0.00	c0.07	0.01	
v/s Ratio Perm												
v/c Ratio		0.45		0.22	0.29		0.69		0.03	0.66	0.09	
Uniform Delay, d1		19.5		38.1	8.3		44.8		42.4	42.7	40.0	
Progression Factor		1.00		0.50	0.09		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.4		0.6	0.3		13.6		0.1	7.8	0.2	
Delay (s)		19.9		19.6	1.0		58.4		42.5	50.5	40.2	
Level of Service		B		B	A		E		D	D	D	
Approach Delay (s)		19.9			2.5			53.4			47.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Future Volume (vph)	10	709	5	108	682	63	5	5	127	57	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3502		1770	3469			1685	1599		1816	1468
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3502		1770	3469			1685	1599		1816	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	779	5	119	749	69	5	5	140	63	5	12
RTOR Reduction (vph)	0	1	0	0	5	0	0	0	130	0	0	11
Lane Group Flow (vph)	11	783	0	119	813	0	0	10	10	0	68	1
Heavy Vehicles (%)	0%	3%	0%	2%	3%	0%	20%	0%	1%	0%	0%	10%
Turn Type	Prot	NA		Prot	NA		Split	NA	Prot	Split	NA	Prot
Protected Phases	5	2		1	6		4	4	4	3	3	3
Permitted Phases												
Actuated Green, G (s)	1.7	49.5		12.0	59.6			7.1	7.1		7.4	7.4
Effective Green, g (s)	1.7	49.5		12.0	59.6			7.1	7.1		7.4	7.4
Actuated g/C Ratio	0.02	0.50		0.12	0.60			0.07	0.07		0.07	0.07
Clearance Time (s)	5.6	5.1		5.3	5.0			7.1	7.1		6.5	6.5
Vehicle Extension (s)	4.0	3.5		4.0	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	30	1733		212	2067			119	113		134	108
v/s Ratio Prot	0.01	c0.22		c0.07	0.23			0.01	c0.01		c0.04	0.00
v/s Ratio Perm												
v/c Ratio	0.37	0.45		0.56	0.39			0.08	0.09		0.51	0.01
Uniform Delay, d1	48.6	16.4		41.5	10.7			43.4	43.4		44.5	42.9
Progression Factor	0.45	0.83		1.33	0.39			1.00	1.00		1.00	1.00
Incremental Delay, d2	9.5	0.2		3.7	0.5			0.3	0.3		3.0	0.0
Delay (s)	31.5	13.8		58.8	4.7			43.7	43.8		47.6	42.9
Level of Service	C	B		E	A			D	D		D	D
Approach Delay (s)		14.0			11.5			43.8			46.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.2
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	426	467	55	386	467	104
Future Volume (vph)	426	467	55	386	467	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2		5.9	5.5	5.1	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	3248		1736	3471	3398	
Flt Permitted	1.00		0.95	1.00	0.96	
Satd. Flow (perm)	3248		1736	3471	3398	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	479	525	62	434	525	117
RTOR Reduction (vph)	174	0	0	0	21	0
Lane Group Flow (vph)	830	0	62	434	621	0
Heavy Vehicles (%)	4%	1%	4%	4%	1%	3%
Turn Type	NA		Prot	NA	Prot	
Protected Phases	2		1	6	3	
Permitted Phases						
Actuated Green, G (s)	53.6		6.9	66.1	23.3	
Effective Green, g (s)	53.6		6.9	66.1	23.3	
Actuated g/C Ratio	0.54		0.07	0.66	0.23	
Clearance Time (s)	5.2		5.9	5.5	5.1	
Vehicle Extension (s)	4.0		2.0	4.0	3.0	
Lane Grp Cap (vph)	1740		119	2294	791	
v/s Ratio Prot	c0.26		c0.04	0.13	c0.18	
v/s Ratio Perm						
v/c Ratio	0.48		0.52	0.19	0.79	
Uniform Delay, d1	14.5		45.0	6.6	36.0	
Progression Factor	0.59		1.00	1.00	1.00	
Incremental Delay, d2	0.3		1.9	0.2	5.2	
Delay (s)	8.8		46.8	6.8	41.2	
Level of Service	A		D	A	D	
Approach Delay (s)	8.8			11.8	41.2	
Approach LOS	A			B	D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 UNSIGNALIZED INTERSECTION OUTPUT SHEETS

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	716	408	5	0	0
Future Vol, veh/h	14	716	408	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	16	814	464	6	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	469	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	1103	-	-	-	0	773
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1103	-	-	-	-	773
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1103	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	8.3	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	711	408	5	14	5
Future Vol, veh/h	5	711	408	5	14	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	799	458	6	16	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	872	232
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1108	-	-	-	294	776
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	643	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1108	-	-	-	292	776
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1108	-	-	-	349
HCM Lane V/C Ratio	0.005	-	-	-	0.061
HCM Control Delay (s)	8.3	-	-	-	16
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	720	408	5	29	5
Future Vol, veh/h	5	720	408	5	29	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	25	5	7	33	0	0
Mvmt Flow	6	809	458	6	33	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	464	0	-	0	877	232
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.6	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.45	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	947	-	-	-	292	776
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	947	-	-	-	290	776
Mov Cap-2 Maneuver	-	-	-	-	290	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	947	-	-	-	319
HCM Lane V/C Ratio	0.006	-	-	-	0.12
HCM Control Delay (s)	8.8	-	-	-	17.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	744	408	12	0	5
Future Vol, veh/h	5	744	408	12	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	5	6	0	0	0
Mvmt Flow	6	836	458	13	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	-	236
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	1100	-	-	-	0	772
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	-	772
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1100	-	-	-	772
HCM Lane V/C Ratio	0.005	-	-	-	0.007
HCM Control Delay (s)	8.3	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	686	411	154	0	0
Future Vol, veh/h	57	686	411	154	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	7	3	0	0
Mvmt Flow	62	746	447	167	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	614	0	-	0	-	307
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	975	-	-	-	0	744
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	-	744
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	-
HCM Lane V/C Ratio	0.064	-	-	-	-
HCM Control Delay (s)	8.9	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	393	0	0	0	394
Future Vol, veh/h	0	393	0	0	0	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	92	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	3	0	0	0	4
Mvmt Flow	0	423	0	0	0	424

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	-
Pot Cap-1 Maneuver	0	-	0	0
Stage 1	0	-	0	0
Stage 2	0	-	0	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	0	0
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	272	116	0	0	0	0	0	228	17	49	0
Future Vol, veh/h	5	272	116	0	0	0	0	0	228	17	49	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	4	0	0	0	0	0	5	0	11	0
Mvmt Flow	6	302	129	0	0	0	0	0	253	19	54	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	-	-	313	313	-
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	313	313	-
Critical Hdwy	4.1	-	-	-	-	-	7.1	6.61	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.61	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4.099	-
Pot Cap-1 Maneuver	-	-	-	0	0	0	643	588	0
Stage 1	-	-	-	0	0	0	-	-	0
Stage 2	-	-	-	0	0	0	702	641	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	643	588	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	643	588	-
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	702	641	-

Approach	EB	NB	SB
HCM Control Delay, s		0	11.8
HCM LOS		A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	-	-	-	-	601
HCM Lane V/C Ratio	-	-	-	-	0.122
HCM Control Delay (s)	0	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	-	0.4

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	615	709	5	0	0
Future Vol, veh/h	5	615	709	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	5	-5	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	50	5	2	0	0	0
Mvmt Flow	5	676	779	5	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	785	0	-	0	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.1	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.7	-	-	-	-	3.3
Pot Cap-1 Maneuver	580	-	-	-	0	613
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	580	-	-	-	-	613
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	580	-	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-
HCM Control Delay (s)	11.3	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	605	709	15	12	5
Future Vol, veh/h	10	605	709	15	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	135	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-3	3	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	3	0	0	0
Mvmt Flow	11	658	771	16	13	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	787	0	-	0	1130	393
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	841	-	-	-	201	612
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	690	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	841	-	-	-	198	612
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	841	-	-	-	247
HCM Lane V/C Ratio	0.013	-	-	-	0.075
HCM Control Delay (s)	9.3	-	-	-	20.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	611	714	10	33	10
Future Vol, veh/h	6	611	714	10	33	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	138	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	17	5	2	0	0	11
Mvmt Flow	6	657	768	11	35	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	778	0	-	0	1114	389
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	4.44	-	-	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.37	-	-	-	3.5	3.41
Pot Cap-1 Maneuver	744	-	-	-	205	585
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	744	-	-	-	203	585
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	692	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	744	-	-	-	239
HCM Lane V/C Ratio	0.009	-	-	-	0.193
HCM Control Delay (s)	9.9	-	-	-	23.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	639	719	30	0	5
Future Vol, veh/h	5	639	719	30	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	5	2	4	0	3
Mvmt Flow	5	687	773	32	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	805	0	-	0	-	403
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.33
Pot Cap-1 Maneuver	828	-	-	-	0	594
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	828	-	-	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	828	-	-	-	594
HCM Lane V/C Ratio	0.006	-	-	-	0.009
HCM Control Delay (s)	9.4	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	724	659	39	0	0
Future Vol, veh/h	18	724	659	39	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	-8	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	6	0	0
Mvmt Flow	20	787	716	42	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	759	0	-	0	-	379
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	6.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	3.3
Pot Cap-1 Maneuver	862	-	-	-	0	679
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	862	-	-	-	-	679
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	862	-	-	-	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	9.3	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑				↱
Traffic Vol, veh/h	0	523	0	0	0	539
Future Vol, veh/h	0	523	0	0	0	539
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	96	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	0	0	0	1
Mvmt Flow	0	556	0	0	0	573

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	-
Pot Cap-1 Maneuver	0	-	0	0
Stage 1	0	-	0	0
Stage 2	0	-	0	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	0	0
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱						↱		↰	
Traffic Vol, veh/h	5	263	255	0	0	0	0	0	330	33	119	0
Future Vol, veh/h	5	263	255	0	0	0	0	0	330	33	119	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	0	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0	0	1	1	0	1	0
Mvmt Flow	5	280	271	0	0	0	0	0	351	35	127	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	-	-	290	290	-
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	290	290	-
Critical Hdwy	4.1	-	-	-	-	-	7.1	6.51	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.51	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4.009	-
Pot Cap-1 Maneuver	-	-	-	0	0	0	666	622	0
Stage 1	-	-	-	0	0	0	-	-	0
Stage 2	-	-	-	0	0	0	722	674	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	666	622	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	666	622	-
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	722	674	-

Approach	EB	NB	SB
HCM Control Delay, s		0	12.7
HCM LOS		A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	-	-	-	-	631
HCM Lane V/C Ratio	-	-	-	-	0.256
HCM Control Delay (s)	0	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	-	1

SYNCHRO QUEUE OUTPUT SHEETS

1: Route 67 & US 460

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	434	191	258	18	382
v/c Ratio	0.51	0.49	0.13	0.06	0.40
Control Delay	20.8	23.9	4.9	21.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	23.9	4.9	21.6	4.5
Queue Length 50th (ft)	60	51	15	5	20
Queue Length 95th (ft)	117	120	31	22	65
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2824	887	3312	786	1361
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.22	0.08	0.02	0.28

Intersection Summary

2: US 460 & Acme Road

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	776	424	36	22
v/c Ratio	0.05	0.30	0.20	0.12	0.04
Control Delay	17.1	4.1	8.4	16.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	4.1	8.4	16.9	4.0
Queue Length 50th (ft)	4	43	21	9	0
Queue Length 95th (ft)	16	72	74	26	9
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	725	3438	3341	725	893
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.23	0.13	0.05	0.02

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Preferred Build 2030 AM Peak

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	808	15	432	12	12	29	18
v/c Ratio	0.31	0.10	0.16	0.10	0.05	0.21	0.13
Control Delay	8.2	23.9	0.8	40.5	0.4	41.9	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	23.9	0.8	40.5	0.4	41.9	24.3
Queue Length 50th (ft)	48	6	4	7	0	16	3
Queue Length 95th (ft)	238	24	7	23	0	42	23
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	2655	181	2762	186	305	167	164
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.08	0.16	0.06	0.04	0.17	0.11

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Preferred Build 2030 AM Peak

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	10	720	54	617	10	34	55	7
v/c Ratio	0.07	0.34	0.32	0.26	0.07	0.10	0.33	0.02
Control Delay	25.4	9.3	50.6	4.5	39.7	0.6	43.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	9.3	50.6	4.5	39.7	0.6	43.0	0.1
Queue Length 50th (ft)	5	123	31	38	5	0	30	0
Queue Length 95th (ft)	m11	44	m52	72	21	0	65	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	188	2142	189	2343	175	367	176	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.34	0.29	0.26	0.06	0.09	0.31	0.02

Intersection Summary

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

10: Front Street & US 460

Preferred Build 2030 AM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	844	76	349	505
v/c Ratio	0.43	0.47	0.15	0.74
Control Delay	5.6	48.6	5.5	36.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.6	48.6	5.5	36.3
Queue Length 50th (ft)	115	42	31	121
Queue Length 95th (ft)	0	85	54	163
Internal Link Dist (ft)	669		798	628
Turn Bay Length (ft)		138		
Base Capacity (vph)	1941	170	2320	833
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	0.43	0.45	0.15	0.61

Intersection Summary

1: Route 67 & US 460

Preferred Build 2030 PM Peak

Lane Group	EBT	WBL	WBT	NEL	NER
Lane Group Flow (vph)	372	356	390	11	269
v/c Ratio	0.51	0.63	0.17	0.04	0.26
Control Delay	24.5	22.9	4.1	25.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	22.9	4.1	25.7	1.7
Queue Length 50th (ft)	63	108	24	4	0
Queue Length 95th (ft)	113	200	36	18	26
Internal Link Dist (ft)	832		768	718	
Turn Bay Length (ft)		425		38	
Base Capacity (vph)	2519	815	3505	891	1219
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.44	0.11	0.01	0.22

Intersection Summary

2: US 460 & Acme Road

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	18	617	695	49	57
v/c Ratio	0.07	0.26	0.37	0.18	0.09
Control Delay	19.9	4.4	10.9	19.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	4.4	10.9	19.7	3.8
Queue Length 50th (ft)	4	33	76	11	0
Queue Length 95th (ft)	20	58	127	37	16
Internal Link Dist (ft)		768	348	560	
Turn Bay Length (ft)	140			65	
Base Capacity (vph)	634	3438	3352	616	949
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.03	0.18	0.21	0.08	0.06

Intersection Summary

7: Railroad Crossing/Medical Center Exit & US 460

Lane Group	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	680	55	646	100	46	130	62
v/c Ratio	0.42	0.18	0.29	0.60	0.16	0.66	0.27
Control Delay	22.9	17.7	1.1	58.1	1.2	58.7	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	17.7	1.1	58.1	1.2	58.7	18.1
Queue Length 50th (ft)	201	22	3	62	0	80	6
Queue Length 95th (ft)	237	58	4	116	0	142	45
Internal Link Dist (ft)	768		488				467
Turn Bay Length (ft)		140					
Base Capacity (vph)	1893	321	2257	185	300	220	251
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.17	0.29	0.54	0.15	0.59	0.25

Intersection Summary

9: Railroad Crossing/Lake Park Drive & US 460

Preferred Build 2030 PM Peak

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	11	784	119	818	10	140	68	12
v/c Ratio	0.08	0.44	0.56	0.36	0.08	0.45	0.43	0.04
Control Delay	20.6	14.8	64.7	4.1	45.1	5.9	51.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	14.8	64.7	4.1	45.1	5.9	51.5	0.2
Queue Length 50th (ft)	5	121	78	44	6	0	42	0
Queue Length 95th (ft)	m13	45	m123	83	23	12	85	0
Internal Link Dist (ft)		633		669	520		908	
Turn Bay Length (ft)	138		150					
Base Capacity (vph)	169	1843	215	2274	150	335	167	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.43	0.55	0.36	0.07	0.42	0.41	0.04

Intersection Summary

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

10: Front Street & US 460

Preferred Build 2030 PM Peak

Lane Group	EBT	WBL	WBT	NWL
Lane Group Flow (vph)	1004	62	434	642
v/c Ratio	0.52	0.42	0.19	0.79
Control Delay	6.6	52.5	7.3	41.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.6	52.5	7.3	41.8
Queue Length 50th (ft)	118	38	51	190
Queue Length 95th (ft)	0	79	81	236
Internal Link Dist (ft)	669		798	625
Turn Bay Length (ft)		138		
Base Capacity (vph)	1949	158	2294	968
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	0.52	0.39	0.19	0.66

Intersection Summary

APPENDIX G – PLANNING LEVEL COST ESTIMATES

APPENDIX G-1: PLANNING LEVEL COST ESTIMATES

US 460 Corridor Improvement Study
Town of Richlands and Tazewell County, Virginia
Opinion of Probable Construction Cost Summary

Project	Preliminary Engineering *% from PCES*	R/W Acquisition	Utilities	Total R/W & Utility Relocation	CEI *25% of CN*	Construction *CN*	Total Construction	Total Cost Opinion
	Costs in 2017 Dollars							
Alternative 2	$ 30,000	$ -	$ -	$ -	$ 87,000	$ 347,000	$ 434,000	$ 464,000
Alternative 3	$ 40,000	$ -	$ -	$ -	$ 38,000	$ 151,000	$ 189,000	$ 229,000
Alternative 4	$ 30,000	$ -	$ -	$ -	$ 33,000	$ 132,000	$ 165,000	$ 195,000
Alternative 7	$ 35,000	$ -	$ 18,000	$ 18,000	$ 130,000	$ 520,000	$ 650,000	$ 703,000
Alternative 7A	$ 30,000	$ -	$ 18,000	$ 18,000	$ 76,000	$ 304,000	$ 380,000	$ 428,000
Alternative 8	$ 500,000	$ 2,098,000	$ 87,000	$ 2,185,000	$ 522,000	$ 2,089,000	$ 2,611,000	$ 5,296,000
Alternative 9	$ 1,857,000	$ 1,459,000	$ 210,000	$ 1,669,000	$ 1,238,000	$ 4,952,000	$ 6,190,000	$ 9,716,000
Alternative 10	$ 798,000	$ 326,000	$ 35,000	$ 361,000	$ 713,000	$ 2,850,000	$ 3,563,000	$ 4,722,000
Alternative 11	$ 50,000	$ -	$ -	$ -	$ 28,000	$ 113,000	$ 141,000	$ 191,000
Totals	$ 3,370,000	$ 3,883,000	$ 368,000	$ 4,251,000	$ 2,865,000	$ 11,458,000	$ 14,323,000	$ 21,944,000

Project Description

Alternative 2 - Access Management Improvements
Alternative 3 - Traffic Signal Communications and Retiming Improvements
Alternative 4 - Conversion of Clearview Road to One-Way Street
Alternative 7 - Realignment of 2nd Street Approach at Front Street
Alternative 7A - Realignment of 2nd Street Approach at Front Street
Alternative 8 - Rockbridge Avenue Railroad Crossing
Alternative 9 - New Frontage Road Bridge
Alternative 10 - Clinch St Railroad Crossing Improvements
Alternative 11 - Controller-Actuated Warning Beacons

APPENDIX H – PROJECT SUMMARY SHEETS

APPENDIX H-1: PROJECT SUMMARY SHEETS

ALTERNATIVE 2 – ACCESS MANAGEMENT IMPROVEMENTS

US 460 AT CLEARVIEW ROAD, HILLCREEK ROAD, AND CLINCH VALLEY MEDICAL CENTER ENTRANCE

Project Description

This project improves access management on US 460 between Route 67 and Front Street by converting three of the five existing full median openings to directional median openings. Converting full median openings to directional median openings enhances safety on the corridor by reducing the number and severity of potential conflict points.

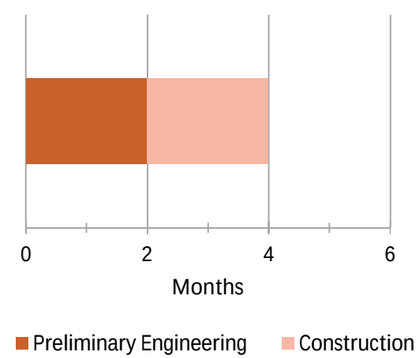
- Convert full median openings to directional median openings on US 460 at:
  - Clearview Road
  - Hillcreek Road
  - Clinch Valley Medical Center entrance
- Maintain full median openings at Baker Hollow Road and Patteson Street

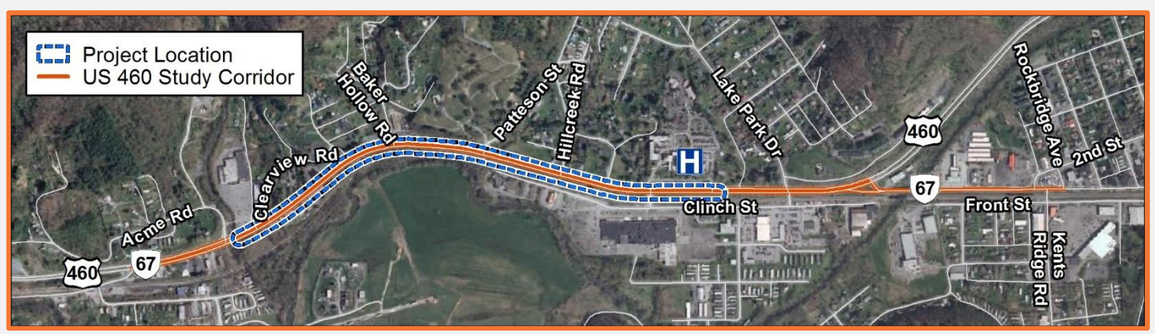
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering*	$30,000
ROW and Utility Relocation	-
Construction	$434,000
Total Cost =	$464,000

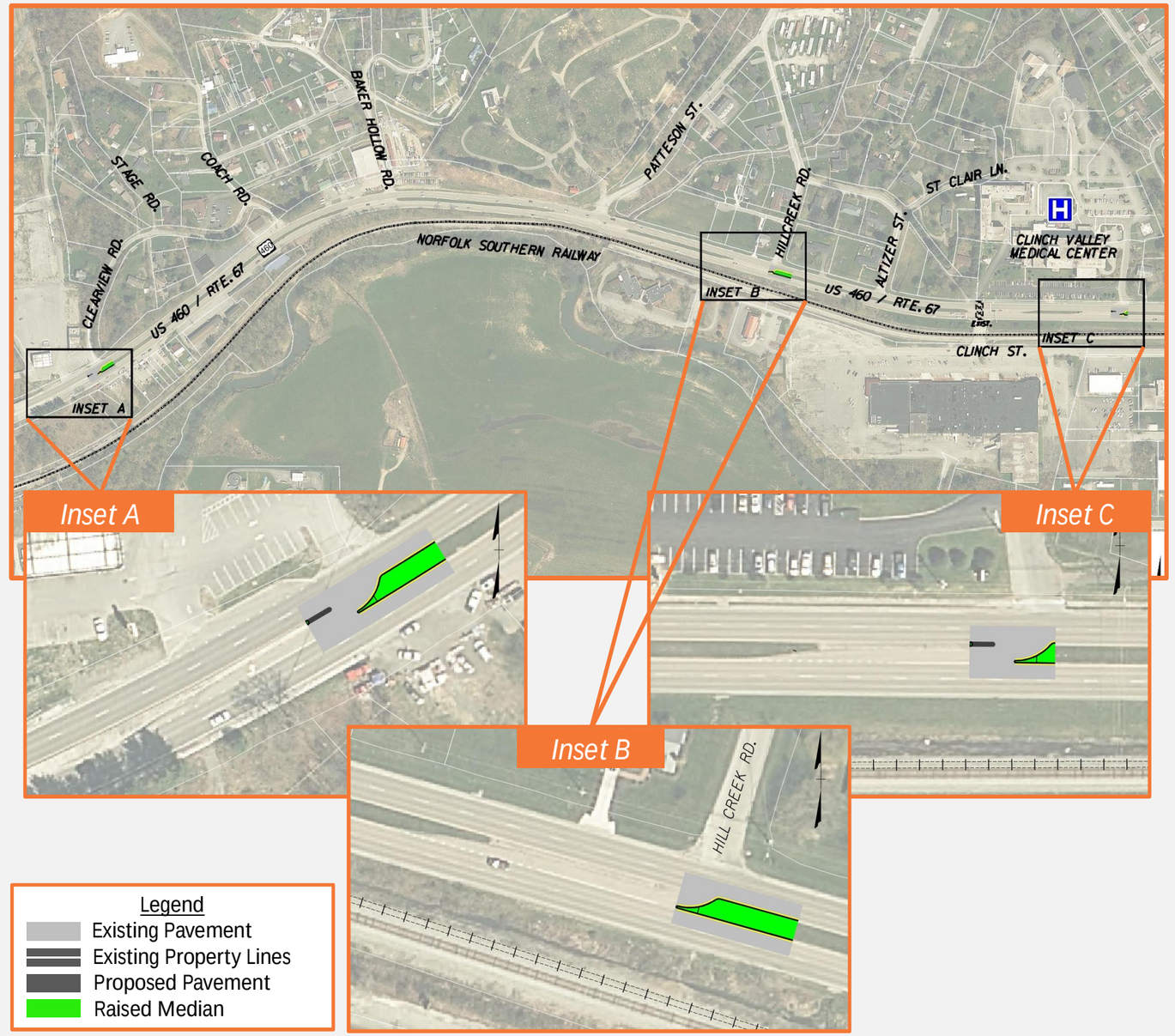
Note: Cost estimates reported in 2017 dollars
*Preliminary Engineering assumes "No-Plan" project

Project Schedule





Conceptual Design Layout



ALTERNATIVE 3 – TRAFFIC SIGNAL COMMUNICATIONS AND RETIMING IMPROVEMENTS

US 460 BETWEEN CLINCH VALLEY MEDICAL CENTER EXIT AND FRONT STREET

Project Description

This project improves the operations of US 460 between the Clinch Valley Medical Center exit and Front Street by providing traffic signal communication and by retiming three existing traffic signals. Coordinated timing plans will be implemented for the three signals to reduce the number of back-to-back stops and improve corridor progression.

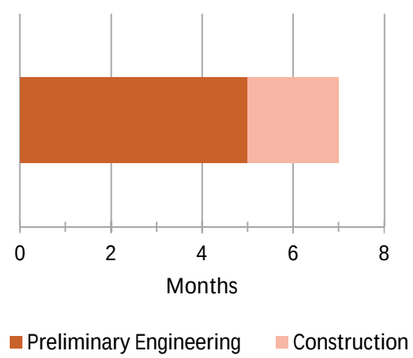
- Provide communication to traffic signals on US 460 at the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street using existing fiber optic network
- Retime and coordinate the traffic signals on US 460 at the Clinch Valley Medical Center exit, Lake Park Drive, and Front Street

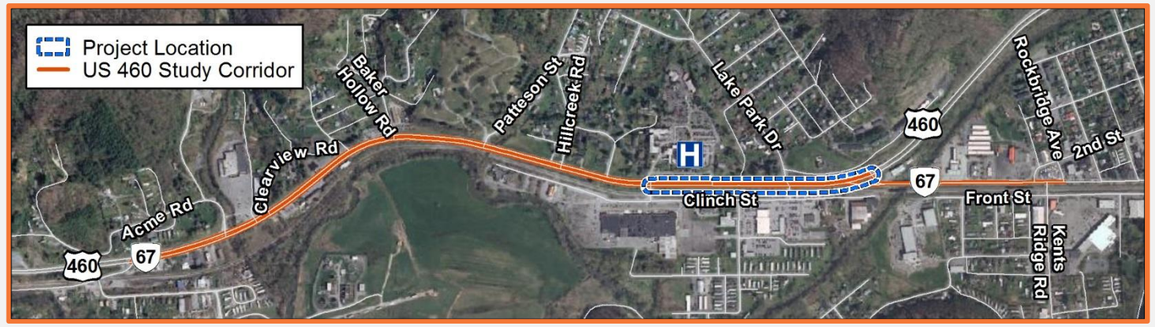
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering	$40,000
ROW and Utility Relocation	-
Construction	$189,000
Total Cost =	$229,000

Note: Cost estimates reported in 2017 dollars

Project Schedule





Conceptual Design Layout

US 460 at Clinch Valley Medical Center Exit

US 460 at Lake Park Drive

ALTERNATIVE 4 – CONVERSION OF CLEARVIEW ROAD TO ONE-WAY STREET

CLEARVIEW ROAD BETWEEN US 460 AND STAGE ROAD

Project Description

This project improves safety at the intersection of US 460 and Clearview Road by eliminating southbound Clearview Road movements and converting Clearview Road to a one-way street. Under existing conditions, the southbound Clearview Road approach has limited sight distance, which increases the potential for crashes.

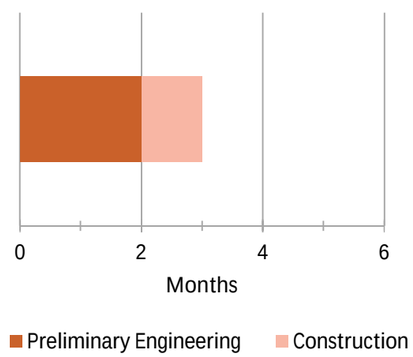
- Convert Clearview Road to a one-way street between US 460 and Stage Road
- Maintain Clearview Road as a two-way street between Stage Road and Coach Road
- Convert full median opening to directional median opening on US 460 at Clearview Road
- Eliminate southbound left- and right-turn movements from Clearview Road to US 460

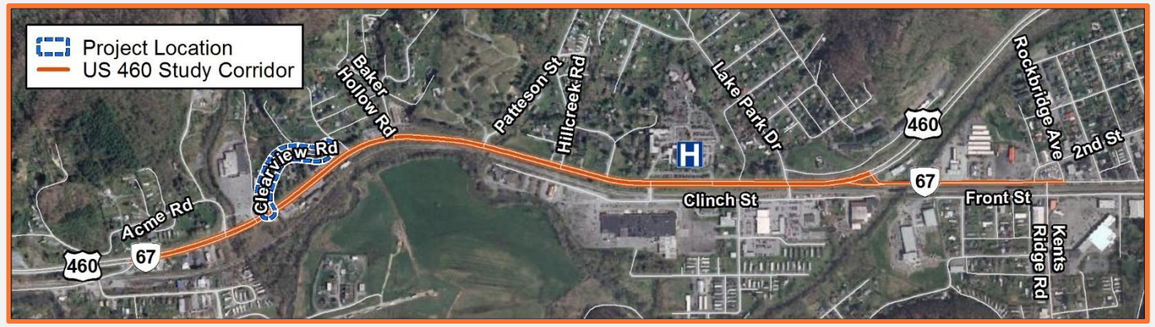
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering*	$30,000
ROW and Utility Relocation	-
Construction	$165,000
Total Cost =	$195,000

Note: Cost estimates reported in 2017 dollars
*Preliminary Engineering assumes "No-Plan" project

Project Schedule





Conceptual Design Layout

ALTERNATIVE 7 – REALIGNMENT OF 2ND STREET APPROACH AT FRONT STREET

2ND STREET/KENTS RIDGE ROAD AT FRONT STREET

Project Description

This project improves safety and reduces driver confusion at the intersection of 2nd Street and Front Street by realigning the southbound 2nd Street approach. The realignment improves the sight triangle looking west for the 2nd Street to Kents Ridge Road movement and provides southbound left-turn and northbound right-turn free-flow movements to eastbound Front Street.

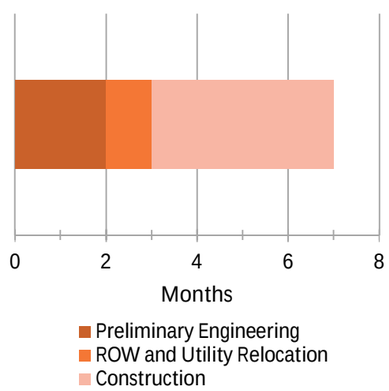
- Realign southbound 2nd Street inner lane to be perpendicular with Front Street
- Provide free-flow movement from southbound 2nd Street to eastbound Front Street
- Provide receiving lane for free-flow movement from northbound Kents Ridge Road to eastbound Front Street

Planning Level Cost Estimate

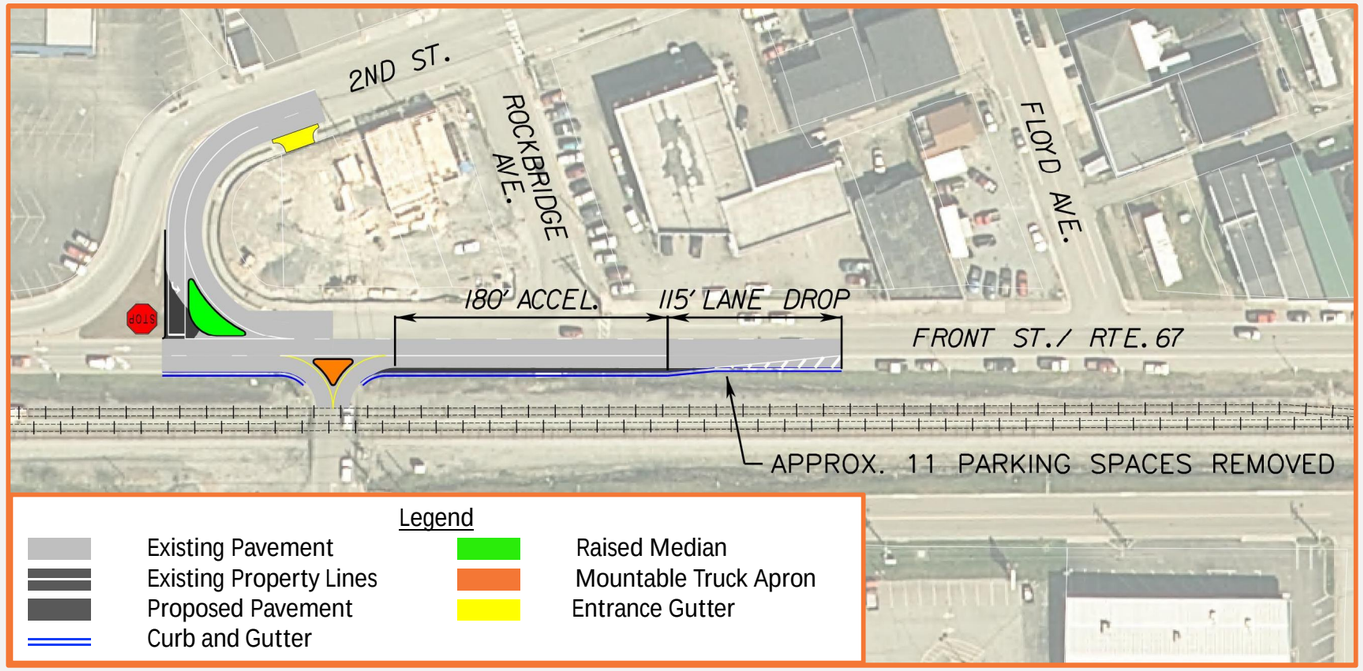
Phase	Planning Level Cost Estimate
Preliminary Engineering*	$35,000
ROW and Utility Relocation	$18,000
Construction	$650,000
Total Cost =	$703,000

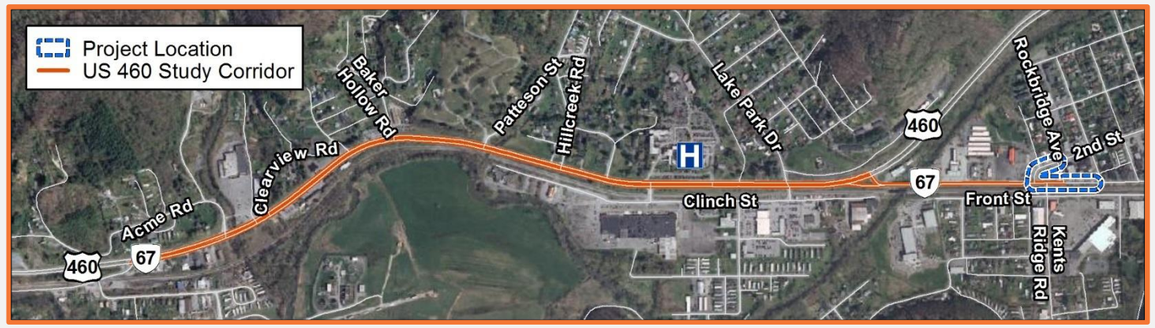
Note: Cost estimates reported in 2017 dollars
*Preliminary Engineering assumes "No-Plan" project

Project Schedule



Conceptual Design Layout





Southbound Approach on 2nd Street

Northbound Approach on Kents Ridge Road

ALTERNATIVE 7A – REALIGNMENT OF 2ND STREET APPROACH AT FRONT STREET

2ND STREET/KENTS RIDGE ROAD AT FRONT STREET

Project Description

This project improves safety and reduces driver confusion at the intersection of 2nd Street and Front Street by realigning the southbound 2nd Street approach. The realignment improves the sight triangle looking west for the 2nd Street to Kents Ridge Road movement.

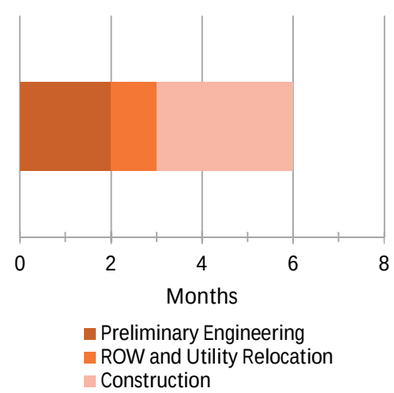
- Realign southbound 2nd Street inner lane to be perpendicular with Front Street

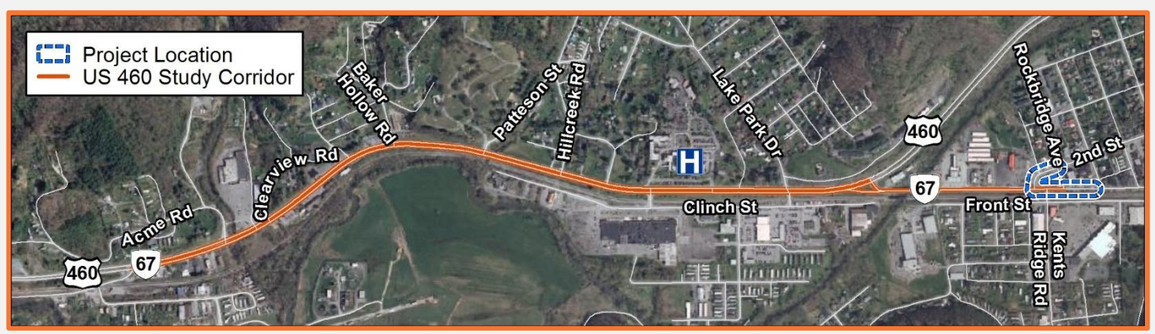
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering*	$30,000
ROW and Utility Relocation	$18,000
Construction	$380,000
Total Cost =	$428,000

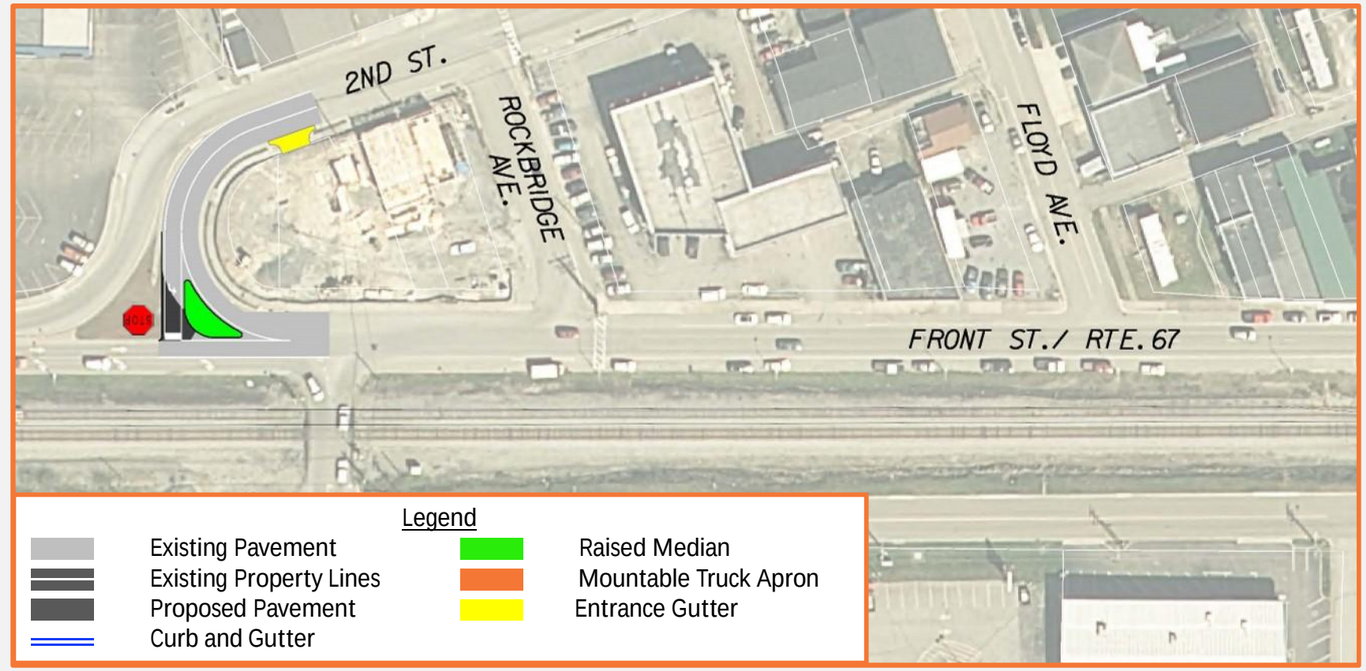
Note: Cost estimates reported in 2017 dollars
*Preliminary Engineering assumes "No-Plan" project

Project Schedule





Conceptual Design Layout



Southbound Approach on 2nd Street

Southbound Approach on 2nd Street

ALTERNATIVE 8 – ROCKBRIDGE AVENUE RAILROAD CROSSING

ROCKBRIDGE AVENUE AT FRONT STREET

Project Description

This project improves safety and reduces driver confusion at the railroad crossing between Front Street and S. Front Street by constructing a new at-grade railroad crossing that aligns with Rockbridge Avenue. This project also:

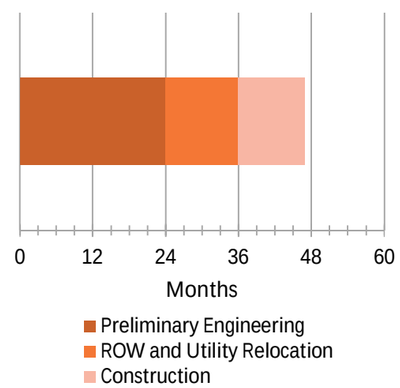
- Realigns Kents Ridge Road to create a four-leg intersection with Rockbridge Avenue
- Constructs new at-grade railroad crossing at Rockbridge Avenue
- Provides northbound free-flow right-turn with eastbound Front Street receiving lane
- Converts Rockbridge Avenue to a two-way street
- Provides additional eastbound Front Street right-turn lane storage at railroad crossing
- Demolishes and relocates existing fire station and existing Kents Ridge railroad crossing

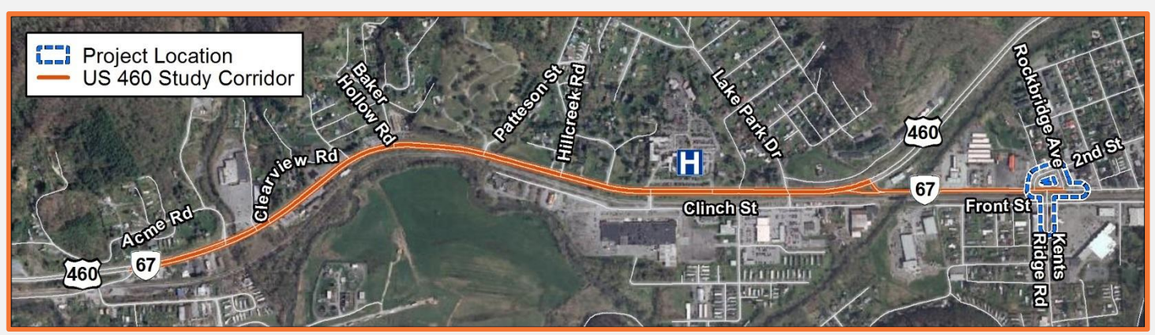
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering	$500,000
ROW and Utility Relocation	$2,185,000
Construction	$2,611,000
Total Cost =	$5,296,000

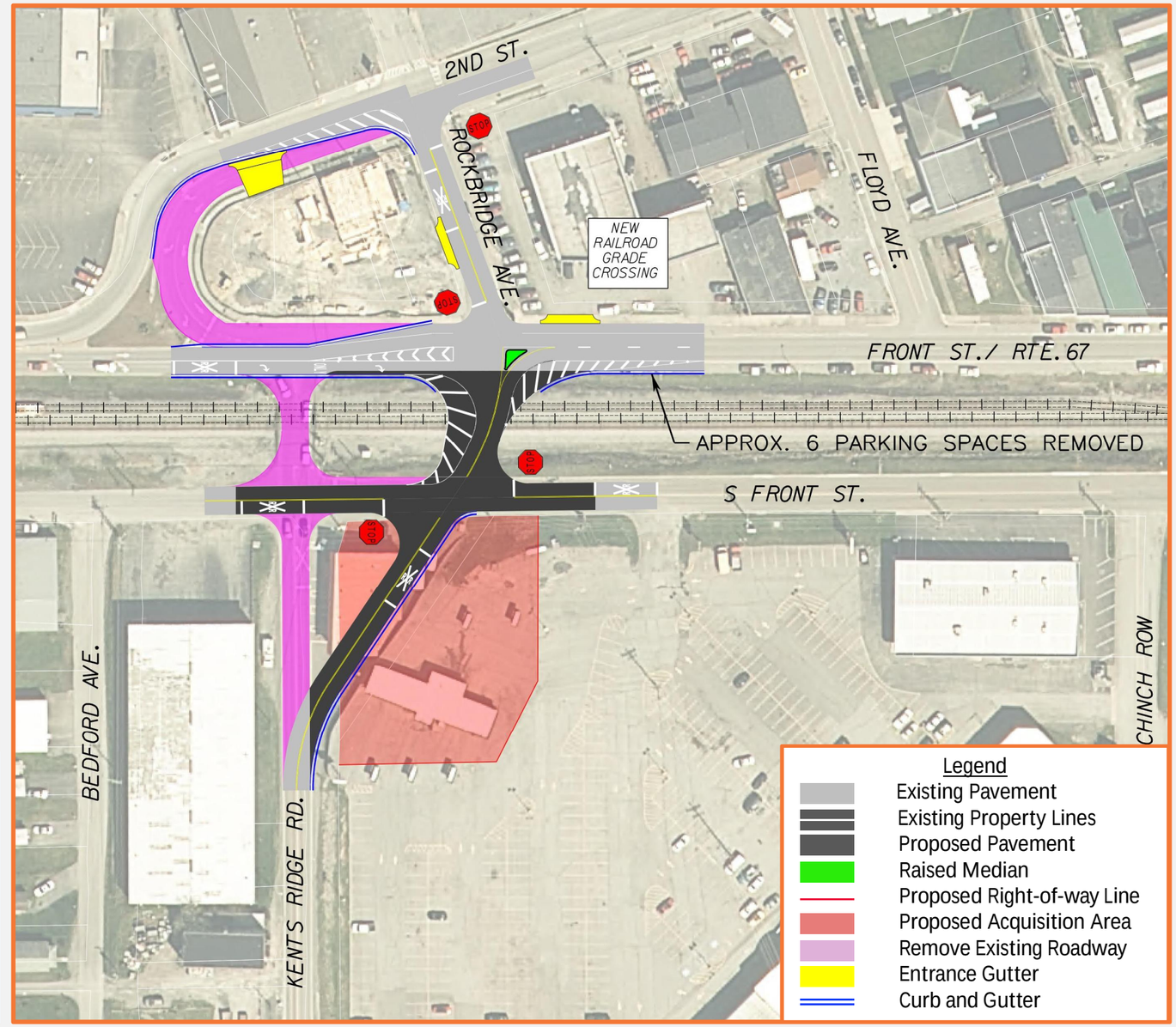
Note: Cost estimates reported in 2017 dollars

Project Schedule





Conceptual Design Layout



ALTERNATIVE 9 – NEW FRONTAGE ROAD BRIDGE
ACROSS THE CLINCH RIVER BETWEEN CLINCH STREET AND S. FRONT STREET

Project Description

This project improves access to properties south of the Norfolk Southern Railway tracks by constructing a new bridge over the Clinch River. The proposed bridge would connect Clinch Street on the west side of the Clinch River to S. Front Street on the east side of the Clinch River.

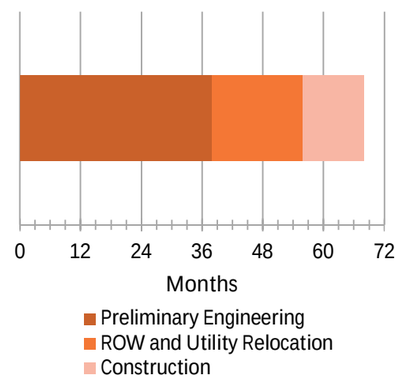
- Construct new bridge over the Clinch River to connect Clinch Street to S. Front Street
- Reconstruct and provide new pavement on Clinch Street and S. Front Street approaches to the new bridge

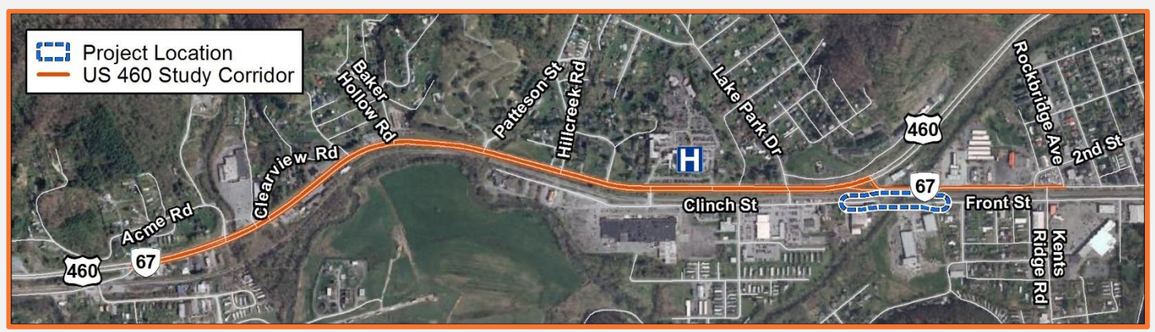
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering	$1,857,000
ROW and Utility Relocation	$1,669,000
Construction	$6,190,000
Total Cost =	$9,716,000

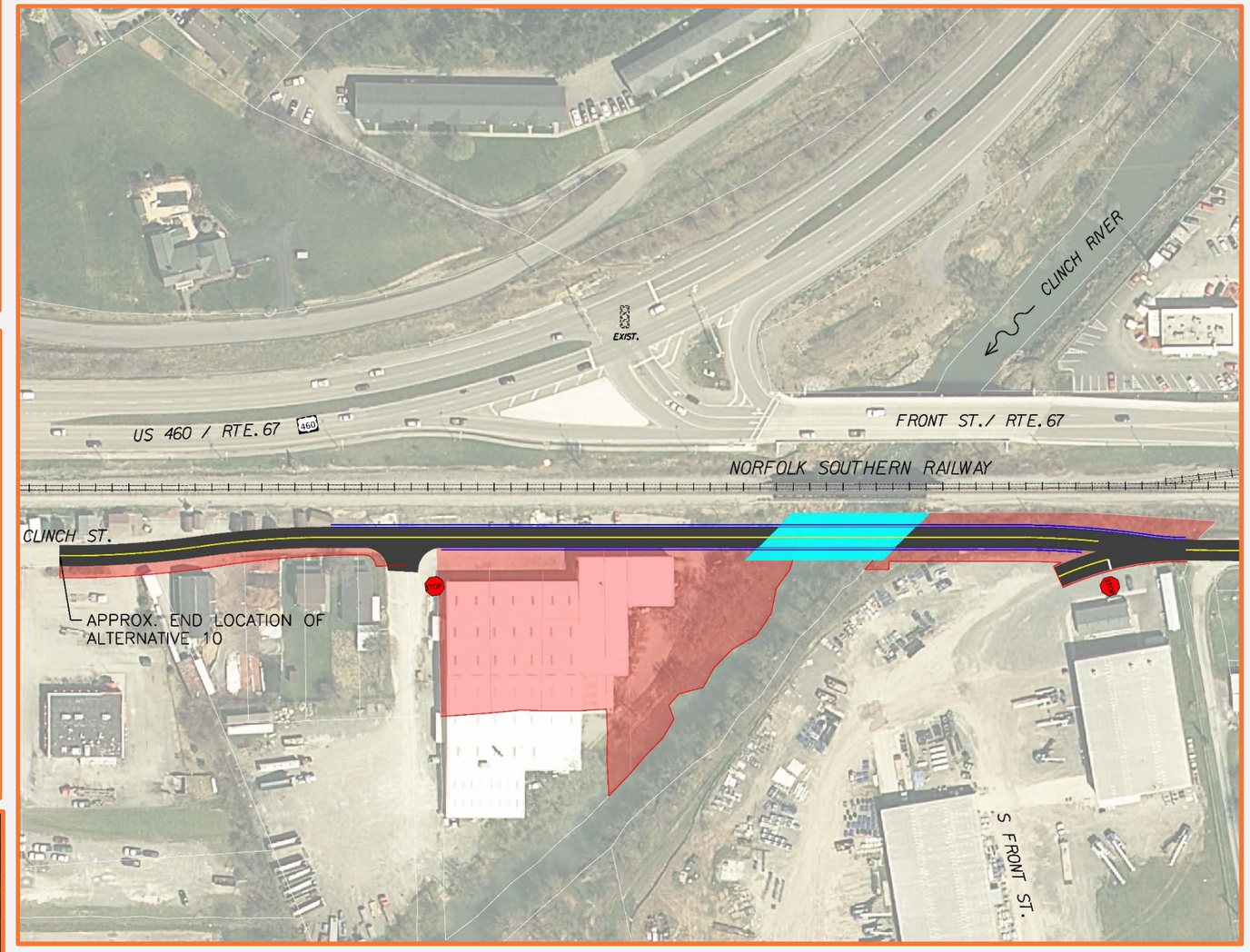
Note: Cost estimates reported in 2017 dollars

Project Schedule





Conceptual Design Layout



Legend

- Existing Pavement
- Proposed Right-of-way Line
- Curb and Gutter
- Existing Property Lines
- Proposed Acquisition Area
- Proposed Pavement
- Proposed Bridge Construction

ALTERNATIVE 10 – CLINCH STREET RAILROAD CROSSING IMPROVEMENTS

US 460 AT CLINCH VALLEY MEDICAL CENTER EXIT AND LAKE PARK DRIVE

Project Description

This project improves the geometry and safety at the Cinch Valley Medical Center exit and Lake Park Drive railroad crossings by improving the at-grade crossings and providing "No Turn" indications on Clinch Street that will activate during rail crossings. The grade on Clinch Street south of the railroad tracks will be raised to reduce the grade change over the tracks and remove the humped crossings.

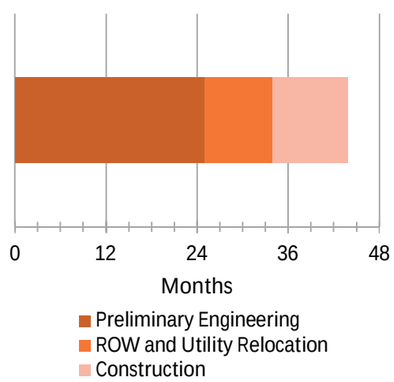
- Raise the grade of Clinch Street to improve the at-grade railroad crossings at the Clinch Valley Medical Center exit and Lake Park Drive
- Provide "No-Turn" signs on eastbound and westbound Clinch Street at both railroad crossings that will activate during rail crossing when preempted by traffic signals

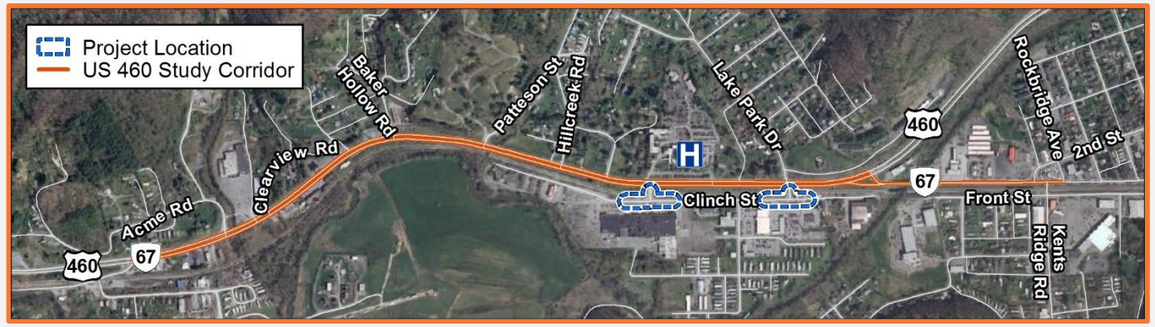
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering	$798,000
ROW and Utility Relocation	$361,000
Construction	$3,563,000
Total Cost =	$4,722,000

Note: Cost estimates reported in 2017 dollars

Project Schedule





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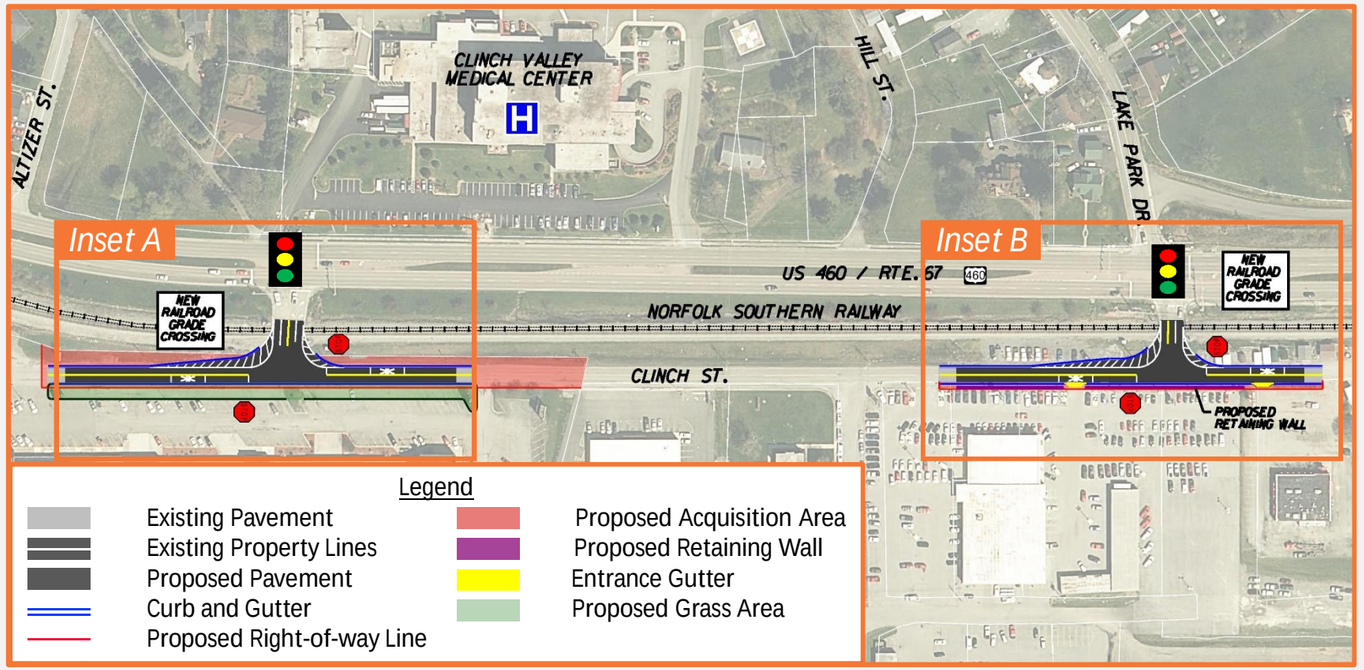
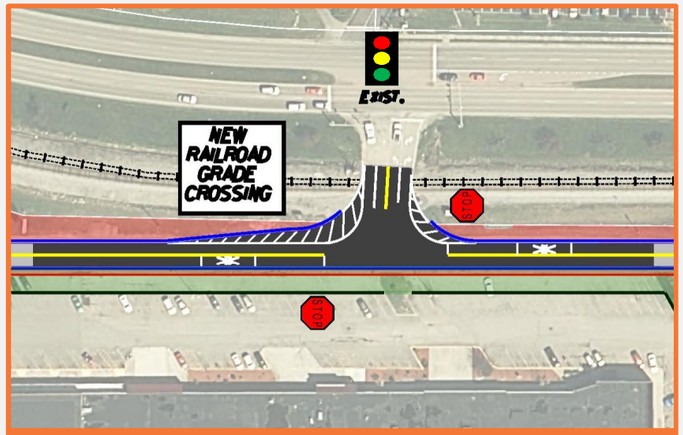
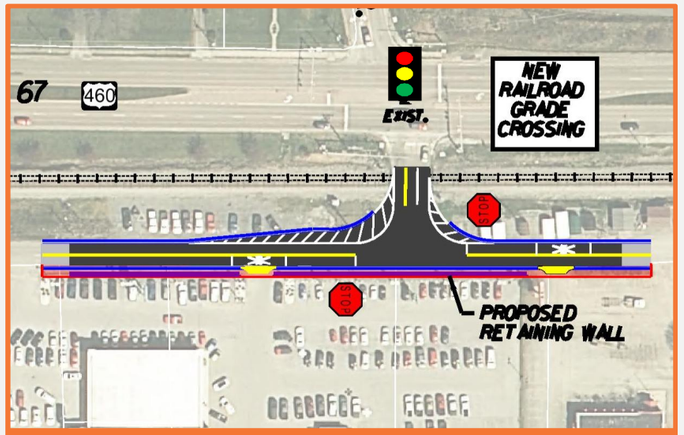




Inset A: Clinch Valley Medical Center Crossing



Inset B: Lake Park Drive Crossing

ALTERNATIVE 11 – CONTROLLER-ACTUATED WARNING BEACONS
WESTBOUND US 460 EAST OF FRONT STREET

Project Description

This project will improve safety on westbound US 460 east of Front Street by installing controller-actuated warning beacons in advance of the Front Street intersection. At this location, westbound US 460 is a limited-access highway with a speed limit reduction from 55 MPH to 35 MPH prior to the Front Street intersection. The Front Street intersection is located on a curve and the controller-actuated beacons would provide additional warning to motorists that they are approaching a signalized intersection.

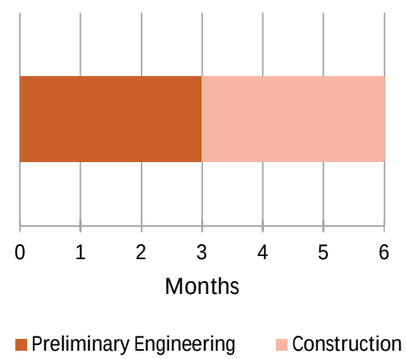
- Install controller-actuated warning beacons on westbound US 460 east of the Front Street intersection

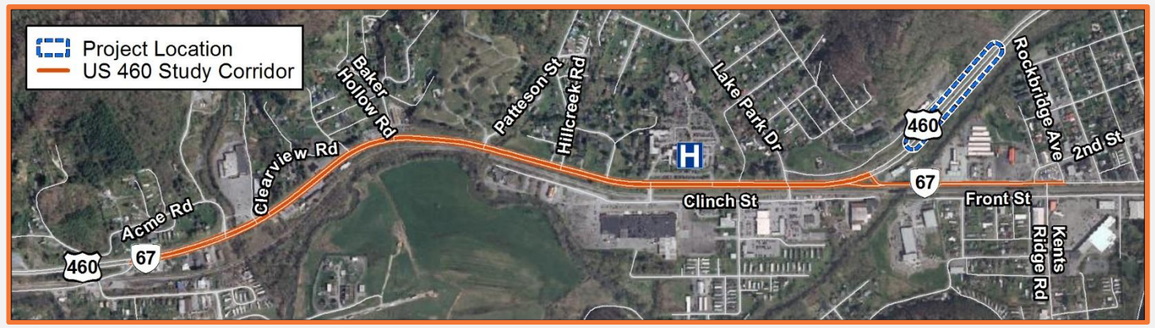
Planning Level Cost Estimate

Phase	Planning Level Cost Estimate
Preliminary Engineering	$50,000
ROW and Utility Relocation	-
Construction	$141,000
Total Cost =	$191,000

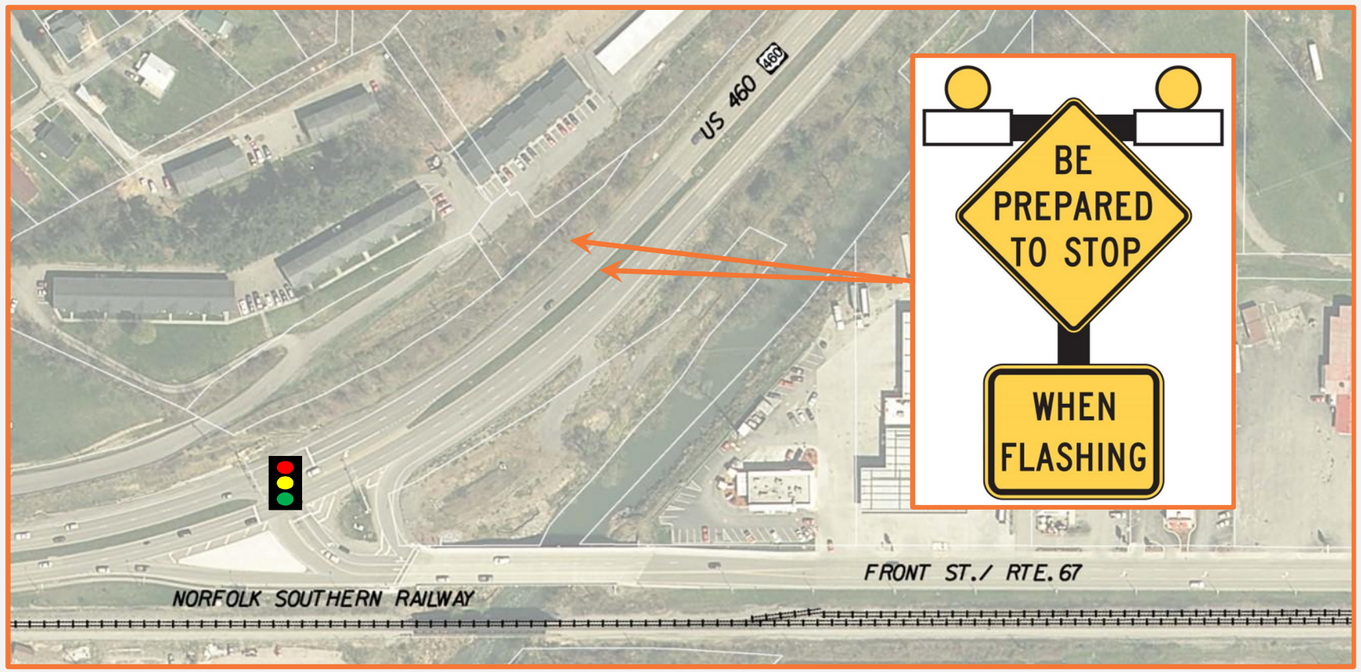
Note: Cost estimates reported in 2017 dollars

Project Schedule





Conceptual Design Layout



Westbound US 460 East of Front Street

Westbound US 460 East of Front Street